

**MINUTES OF THE 9<sup>TH</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 20<sup>TH</sup> MARCH 2024 FROM 10:30 AM – 02:30 PM THROUGH VIDEO CONFERENCE.**

The 9<sup>th</sup> meeting of the 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 20<sup>th</sup> March, 2024 through virtual (online) mode, under the Chairmanship of Prof. G. J. Chakrapani. The list of Members present in the meeting is at **Annexure**.

**Agenda No. 9.1:**

Confirmation of Minutes of 8<sup>th</sup> EAC meeting held on 28<sup>th</sup> February, 2024

**Agenda No. 9.2**

**Shahpur Pumped Storage Project (1800 MW) in an area of 624.905 Ha located at Kaloni, Baint and Mungawali villages, Shahabad Tehsil, District Baran, (Rajasthan) by M/s Greenko Energies Private Limited – Reconsideration for Environmental Clearance (EC) – reg.**

**[Proposal No. IA/RJ/RIV/416873/2023; F. No. J-12011/02/2020-IA.I]**

**9.2.1:** The project proponent vide email dated 18.03.2024 (after uploading of the Agenda on PARIVESH Portal) informed that due to non-availability of senior management to present the proposal before EAC, it was requested to defer the proposal.

Accordingly, the proposal was *deferred* on above lines.

**Agenda No. 9.3**

**Chichlik Pumped Storage Hydro Project (1560 MW) in an area of 325.3 Ha located at Village Argarh, Chichli, Khuraila and Pokharriya, Sub District Robertsganj, District Sonbhadra (Uttar Pradesh) by M/s Avaada Waterbattery Private Limited - Terms of References (TOR) – reg.**

**[Proposal No. IA/UP/RIV/459501/2024; F. No. J-12011/08/2024-IA-I(R)]**

**9.3.1** The proposal is for grant of Terms of References (ToR) to the project for Chichlik Pumped Storage Hydro Project (1560 MW) in an area of 325.3 Ha located at Village Argarh, Chichli, Khuraila and Pokharriya, Sub District Robertsganj, District Sonbhadra (Uttar Pradesh) by M/s Avaada Waterbattery Private Limited.

**9.3.2** 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 Chichlik Off-Stream Closed Loop Pumped Storage project (OCPSP) is proposed between two reservoirs i.e., Chichlik Upper & Lower Reservoirs (both to be constructed newly) and onetime water will be pumped from Sone River to fill up the lower reservoir.
- ii. The project area is located to the south of Chichlik and west of Bashuhari villages, falling in Robertsganj tehsil of Sonbhadra district situated in south-east part of the Uttar Pradesh.
- iii. The formation of upper & lower reservoir will involve construction of CFRD for creation of 11.83 MCM & 13.66 MCM gross capacities respectively. One-time water will be pumped from the Sone River by laying a 1.4 m diameter, 0.5 km long pipeline to fill up the lower reservoir.
- iv. The proposed Chichlik PSP (5 x 260 MW + 2x 130 MW) envisages following major civil structures:
  - Concrete faced rockfill dam of 1450.25m long & 26.00m high and naturally abutted boundary of 1210.00m length along the intake side forming the upper reservoir.
  - Concrete faced rockfill dam of 1960.00m long & 23.00m high and naturally abutted boundary of 1221.85m length along the intake side forming the lower reservoir.
  - An average of 240.00m long & 148.00m wide concrete lined approach channel at the upstream of upper intake.
  - Six nos. of 60.55m long Diffuser type upper Intake structure with vertical trash rack.
  - Concrete gate shaft housing the stoplog/service gates. > Five nos. of 4.50m dia. Main pressure shaft to feed 5 units of 260MW with One no. of 4.50m dia. Main pressure shaft bifurcate into two nos. of 3.50m dia. Unit Pressure shaft to feed 2 units of 130MW. The maximum length of water conductor system was found to be 1644. 70m with 371.50m long Vertical pressure shaft & 90. 75m long unit pressure shaft.
  - One no. of 6.50 m (W) x 7.50 m (D), D - shaped construction adit of about 570.00 m length for the construction of pressure shaft.
  - A pit type surface powerhouse housing 5 Nos. of reversible (fixed speed) units of 260 MW each & 2 Nos. of reversible (fixed speed) units of 130 MW capacity each.
  - A transformer/ GIS building of size 213.70 m (L) x 16.00 m (W) x 20.00 m (H) & switchyard of 35.15 m width, parallel to the length of powerhouse at the downstream side.
  - One no. of 8.50m Dia. D- shaped MAT/Escape tunnel of about 855.00 m length for the access of Powerhouse.
  - Five nos. of 5.00 m dia. & 2 Nos. of 3.50m dia. concrete lined tail race tunnel of 163.30 m length each.
  - Seven nos. of 61.55m long diffuser type Lower Intake structure with vertical trash rack.
  - An average of 280.00 m long & 168.65 m wide concrete lined approach channel at the downstream of lower intake structure.
- v. The total land required for the construction of various components and related works for Chichlik PSP is estimated to be around 325.30 ha, out of which 104.55 ha is non-forest land and 220.75 ha is forest land. Diversion of forest land for non-forest purpose will be involved for construction of Chichlik project components. Therefore, Forest Clearance is required to be obtained under Forest Conservation Act. Proposed project is located around 3.92 km

away from boundary of Kaimur WLS boundary. Any impacts on biodiversity due to development of proposed PSP shall be studied as part of EIA studies.

- vi. The estimated project cost is Rs. 7380.90 Crore including IDC. As a preliminary estimate, a construction period of 36 months from the date of award of civil works package has been estimated for this project.
- vii. The major aspects for the project planning, four (4) alternatives for the project layout in an area of about 3110 ha have been developed and studied for choosing the optimal layout of the project. Alternative-2 project layout is the most techno-economically feasible one for the proposed Chichlik Pumped Storage Hydro Project and selected for further studies and development.
- viii. The salient features of the project are as under:

- **Project details:**

Name of the Proposal	Chichlik Pumped Storage Project
Location (Including coordinates)	Lower Reservoir: 83°27'13.34"E; 24°31'37.74"N Upper Reservoir: 83°26'17.09"E; 24°32'27.95"N
Inter- state issue involved	No
Seismic zone	Zone-III

- **Category details:**

Category of the project	A
Provisions	
Capacity / Cultural command area (CCA)	1560 MW
Attracts the General Conditions (Yes/No)	Yes
Additional information (if any)	Nil

- **Electricity generation capacity:**

Powerhouse Installed Capacity	1560 MW
Generation of Electricity Annually	3539.4 MU
No. of Units	7 nos. (5X260 MW+2X130 MW)
Additional information (if any)	Nil

- **ToR/EC Details:**

Cost of project	7380.90 Cr.
Total area of Project	325.30 ha
Height of Dam from River Bed (EL)	Lower Dam – 23.0 m Upper Dam – 26.0 m

Length of Tunnel/Channel	1014.0 m
Details of Submergence area	184.30 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	Not Applicable, as this is Off-Stream Closed Loop Pumped Storage Project (PSP)
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)	80.0 Ha Non-Forest 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:**

Private Land	104.55 ha
Government land/Forest Land	220.75 ha
Submergence area/Reservoir area	184.30 ha
Land required for project components	141.00 ha
Additional information (if any)	Nil

- **Presence of Environmentally Sensitive areas in the study area**

<b>Forest Land/ Protected Area/ Environmental Sensitivity Zone</b>	<b>Detail of Certificate / letter/ Remarks</b>
Reserve Forest/Protected Forest Land	Distance from nearest protected area (Kaimur WLS; Bihar) is 3.92 Km, however, proposed project is outside the notified ESZ boundary of the sanctuary.
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

- **Miscellaneous**

Particulars	Details
Details of consultant	<p>M/s. R S Envirolink Technologies Pvt. Ltd. (RSET) (NABET Accredited Consultant Organization)</p> <p>Certificate No : NABET/EIA/2225/RA0274</p> <p>Validity : August 15, 2025</p> <p>Contact Person : Mr. Ravinder Bhatia</p> <p>Name of Sector : River Valley and Hydroelectric Projects</p> <p>Category : A</p> <p>MoEF Schedule : I(C)</p> <p>Address : 403, Bestech Chambers, Block-B, Sushant Lok Phase I, Sector 43, Gurugram, Haryana - 122009</p> <p>E-mail : ravi@rstechnologies.co.in</p> <p>Land Line : (0124) 4295383</p> <p>Cellular : (+91) 9810136853</p>
Project Benefits	<p>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.</p> <p>Further, pumped storage projects are critical to the national economy and overall energy reliability because it's:</p> <ul style="list-style-type: none"> <li>o Least expensive source of electricity, not requiring fossil fuel for generation</li> </ul>

	<ul style="list-style-type: none"> <li>o An emission-free renewable source</li> <li>o Balancing grid for demand driven variations</li> <li>o Balancing generation driven variations</li> <li>o Voltage support and grid stability</li> </ul> <p>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.</p>
Status of other statutory clearances	Forest Clearance - Online application seeking forest diversion for around 220.75 Ha after receipt of ToR Approval, alongwith 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

**9.3.3** 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 (ToR) for conducting EIA study of the project for setting up of Chichlik Pumped Storage Hydro Project (1560 MW) in an area of 325.3 Ha located at Village Argarh, Chichli, Khuraila and Pokharriya, Sub District Robertsganj, District Sonbhadra (Uttar Pradesh) by M/s Avaada Waterbattery 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.
- Both of the reservoirs are located away from river/stream/nallah, therefore the project is titled as closed loop pumped Storage. Onetime water will be pumped from Sone River to fill up the lower reservoir. There are two protected areas in vicinity of the project. Closest distance of project site from Kaimur Wildlife Sanctuary from Bihar side and Kaimur Wildlife Sanctuary towards Uttar Pradesh is about 3.92 km and 31.20km.
- MoU with Invest UP for development of Chichlik PSP has been signed for 1120 MW installed capacity on 27-09-2023. However, the proposal submitted with installed capacity to 1560 MW.

**9.3.3** The EAC after detailed deliberations observed that the proposal is for grant of ToR to greenfield project of Pump Storage. It was observed that muck disposal site is proposed on both side of the National Highway, for which necessary permission and safety measures is required to be taken. Further, upon reviewing drone footage of the project site and project details, the EAC observed that the total forest land required for the project is 220.75 ha and seems to be in densely populated forest area characterized by a high canopy of dry deciduous trees. Additionally, the EAC expressed apprehension about the cumulative effect of multiple projects already proposed

within the region on the same river. Further, PP shall submit the corrected/revised MoU with capacity from State Government as proposed during ToR.

Based on detailed submissions of PP and observations of EAC, it was opined that further details regarding the project is required on following points:

- i. PP shall further analyse the alternative site downstream of the river wherein forest area can be reduced or with revised layout with minimum forest area even with slight change in power capacity.
- ii. PP shall submit MoU signed with the State concerned department for setting up the proposed project of 1560 MW capacity and availability of water for the project.
- iii. Secondary data of presence/occurrence of wildlife in consultation in forest department and local people shall be provided. Further, Categorisation of the forest land and Land use land cover of the study area based on FSI data shall be provided
- iv. CEA letter confirming project layout is not conflicting with any other planned project in the proposed area.

The project was *deferred* till submission of the above documents/issues.

#### **Agenda No. 9.4**

**Bodwad Parisar Sinchan Yojana on river Tapi and Purna (CCA:53025 Ha) in an area 1729.64 Ha located at Village Bodwad and Muktainagar, Sub District Muktainagar (Edlabad), District Jalgaon (Maharashtra) by M/s Tapi Irrigation Development Corporation - Validity Extension of EC –reg.**

**[Proposal No. IA/MH/RIV/456472/2024; F. No. J-12011/3/2009-IA.I]**

**9.4.1** The proposal is for grant of extension of validity to Environmental Clearance of Bodwad Parisar Sinchan Yojana on river Tapi and Purna (CCA:53025 Ha) in an area 1729.64 Ha located at Village Bodwad and Muktainagar, Sub District Muktainagar (Edlabad), District Jalgaon (Maharashtra) by M/s Tapi Irrigation Development Corporation.

**9.4.2** The EAC during deliberations noted the following:

The Project Proponent along with consultant M/s Mantec Consultants Pvt Ltd, made a detailed presentation on the salient features of the project and informed that:

- i. Bodwad Parisar Lift Irrigation Project is proposed to lift back water of flood of Hatnur Dam during monsoon season on Purna river near village Kamkhede Tal Bodwad Dist Jalgaon. The water is to be stored in the Junone and Jamathi reservoirs/ tanks which will be constructed under this scheme.
- ii. The scheme is designed in two stages to achieve maximum economy and to use both part of the scheme to the extent of optimum efficiency. There will be headwork, pumping machinery, rising main, and main distribution chamber for storage tank. The pump house is

located in the backwater of the Hatnur Dam on left flank of Purna River at village Khamkhede. The pump house of lift irrigation scheme is located at U/S of the Khamkhede Bridge on Purna River, 12km from Hatnur Dam along the river.

iii. Diversion of 507.31 ha forest land for construction of Bodwad Parisar Sinchan Yojana Stage-I (Junone Lift Irrigation scheme) in District Jalgaon, Maharashtra was granted on 17.07.2001 (Inprincipal Approval) and Final Clearance on 11.03.2002.

iv. Chronology of the project

- Environment clearance granted on 19.04.2010, valid for 10 years
- EC Extension granted on 23.06.2020, valid for 3years.
- During the Covid surge during 2020, Ministry of Environment, Forest and Climate Change, New Delhi Notification S.O. 221 (E) dated 18th January, 2021
- As per Notification at Sl. No. 1 which states as:

(ii) For paragraph 9A, the following paragraph shall be substituted namely:-

*“9A. Notwithstanding anything contained in this notification, 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) and subsequent lockdowns (total or partial) declared for its control, however, all activities undertaken during this period in respect of the Environmental Clearance granted shall be treated as valid.”.*

v. As per the above excerpts from the Notification the period from 1st April 2020 to 31st March, 2021 shall not be considered for calculation of the period of Prior Environment Clearance. Therefore, the EC Validity for Bodwad project shall be calculated till 18.04.2024.

vi. As per Ministry’s Notification S.O. 1807(E) dated 12<sup>th</sup> April, 2022, the Validity of Environment Clearance for River Valley Projects are mentioned below:

*(a) thirteen years in the case of River Valley projects or activities [item 1(c) of the Schedule]*

Further,

*(iii) In the case of Area Development projects and Townships [item 8(b)], the validity period of ten years shall be limited only to such activities as may be the responsibility of the applicant as a developer: Provided that the period of validity of Environmental Clearance with respect to the Projects and Activities listed in this sub- paragraph and sub-paragraphs*

*(ii) may be extended in respect of valid Environmental Clearance, by the regulatory authority concerned by a maximum period of two years in the case of River Valley projects, five years in the case of Nuclear power projects and processing of nuclear fuel and one year in the case of all other projects, if an application is made in the laid down proforma to the regulatory authority by the applicant within the validity period of the existing Environment Clearance: Provided further that the regulatory authority may also consult the concerned Expert Appraisal Committee before grant of such extension.*

vii. Also, according to the Office Memorandum F. No. 1A3-22/22/28/2022 - 1A.111 [181584] dated 13.12.2022. With reference to the Validity Extension After (10+3) = 13 years, further



validity of EC granted for River Valley Projects is extendable for another 2 years (10+3+2) without considering the project as denovo.

viii. Current Status of Project Components being constructed:

**Stage 1:** The Stage 1 is further divided in two sub stages

- **Stage 1A:** Under this stage water is to be lifted through jackwell near Kamkhede Bridge from R.L.207 to 270.3m consisting of eight (8) water lift pumps of 2485 HP capacity each, having rising main of 2500 mm diameter in two rows and the length of this stage will be 5310m. The total discharge carrying capacity of this pipeline will be 19.54 cumecs. This stage is under construction.
- **Stage 1B:** The stage 1B starts from village Satod. Water is to be lifted from R.L. 270.3m to 323.63m, having rising main of 2500 mm diameters in two rows with 6560m length. For lifting water from this point eight (8) water lift pumps each having capacity of 2200 HP will be installed. The total discharge carrying capacity of this pipeline will be also 19.14 cumecs for feeding the Junone reservoir.

**Stage 2:** The stage two of the proposed project is divided into three sub stages 2A, 2B, & 2C. Construction work is in progress at Stage 2A only.

- **Stage 2A:** In this stage Water is to be lifted from R.L. 323.63m to 336m. It is proposed to lift water from delivery chamber of Malegaon Phata Village by providing five (5) water lift pumps of 1385 HP each having rising main of 1850mm diameter pipe in two rows of 18000m length.
- The discharge carrying capacity of this pipeline will be 4.83 cumecs. A delivery chamber is proposed to be constructed at village Yewati.

ix. Progress of Lift Irrigation Project % wise:

Sr. No.	Project Components	Construction done	Construction to be done
<b>A)</b>	<b>Stage-I</b>		
1.	Earthen Dam	80%	20%
2.	HR	90%	10%
3.	Spillway	10%	90%
4.	Pump House No.1A	75%	25%
5.	Intake structure	0%	100%
6.	Pump House No.1B	80%	20%
7.	Machinery Installation	At PH 1A - 0% At PH 1B - 0%	At PH 1A - 100% At PH 1B - 100%
8.	Rising Main	11.870 km	5.330 km
9.	Electric Supply Works	35%	65%
10.	Distribution Network	0%	100%
<b>B)</b>	<b>Stage-II</b>	Work yet to be Started	

x. Justification for Extension of Validity of Environmental Clearance:

a. The Original Environment Clearance granted on Dated 19.04.2010.

- b. State Government Cabinet accorded the permission to execute the Stage-I of Bodwad LIS work vide G.R. Dated 03.01.2017.
- c. As per the Govt. resolution dated 03.01.2017, the work of Stage-2 should be taken in hand with the approval of the Governing Council after the availability of sufficient surplus funds.
- d. Meanwhile no permission granted to tackle Stage-II work.
- e. Construction work was further delayed in 2020 as a result of the Covid surge, leading to the suspension of operations.
- f. The Project is included in Central Govt. aided PMKSY-AIBP scheme on Dated 06.12.2023.
- g. Presently the permission has been granted to start Stage II work by Governing Council on dated 15.02.2024.
- h. As construction is already underway, and considering availability of funds & permission to start the Stage-II work the project is planned to be completed in 2026.

**9.4.3** The EAC after detailed deliberations observed that the proposal is for grant of extension in validity to Environmental Clearance dated 19.04.2010 of Bodwad Parisar Sinchan Yojana on river Tapi and Purna (CCA:53025 Ha) in an area 1729.64 Ha located at Village Bodwad and Muktainagar, Sub District Muktainagar (Edlabad), District Jalgaon (Maharashtra) by M/s Tapi Irrigation Development Corporation. 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.

It was opined that earlier EC was granted on 19.04.2010 to the said project with validity period for 10 years and subsequently, EC Extension granted on 23.06.2020, valid for 3years. Further, as per MoEF&CC Notification S.O. 221 (E) dated 18th January, 2021 the validity of EC is valid till 18.04.2024 and as per Ministry's Notification S.O. 1807(E) dated 12<sup>th</sup> April, 2022, the said EC is further extendable upto 2 years.

The compliance of EC conditions was also deliberated and desired that compliance to be strengthened with mitigation measures during construction activity by deployment of mist sprayers at the site.

Based on the information submitted and as presented during the meeting, the EAC **recommended** for grant of validity extension Environmental Clearance dated 19.04.2010 to the project Bodwad Parisar Sinchan Yojana on river Tapi and Purna (CCA:53025 Ha) in an area 1729.64 Ha located at Village Bodwad and Muktainagar, Sub District Muktainagar (Edlabad), District Jalgaon (Maharashtra) by M/s Tapi Irrigation Development Corporation, under the provisions of EIA Notification, 2006, as amended along with the following additional/specific conditions for environmental safeguards:

**[A] Environmental Management and Biodiversity Conservation:**

- (i) Biodiversity Management Committee (BMC) shall be constituted for Monitoring and Evaluation of Biodiversity Conservation and Wildlife Management Plan as Implemented by Forest Department.
- (ii) Extensive Plantation of indigenous plant species with 90 % survival rate shall be done within 10 km radius of the project in association with State Forest Department. A time bound action plan shall be prepared in this regard. Plant Survival status report shall be submitted to the IRO along with 6 monthly compliance report.
- (iii) Project specific Environment Management Cell shall be created with Environmental Manger having post graduate degree in environmental sciences/Environmental Engineering to monitor implementation of Environment Management Plan in the project within six months of issue of this letter. The Environment Manager shall report to the Project Head directly to ensure effective implementation of plantation program and other environmental management activities. The functioning of the Environment Management Cell shall be reviewed monthly and record be maintained and submitted with 6 monthly compliance report.
- (iv) The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP report. 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.
- (v) PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground.
- (vi) 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.
- (vii) 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
- (viii) 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.
- (ix) 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 shall be disposed safely and that it does not pollute the natural streams and water bodies in surrounding area. Report of the same to be submitted to Ministry and its Regional office.
- (x) The minimum Environmental flow for the project shall be maintained as per the direction given by the Hon'ble NGT vide its Order dated 09.08.2017 in the matter of Pushp Saini Versus Ministry of Environment, Forest & Climate Change.
- (xi) The Multi-Disciplinary Committee needs to be constituted and the meeting needs to be held at regular interval.
- (xii) Environment matrix provided in EMP be revised if any data change. Number and period of stocking of Fish be incorporated in EMP.
- (xiii) Pasture Development Plan be revised in terms of Rate of plantation and their Cost.

**[B] Disaster Management**

- (xiv) Necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and subsequent amendments thereof.

**[C] Socio economic**

- (xv) Construction of concrete roads in project affected villages as proposed be maintained throughout project life.
- (xvi) The budget for plantation and other EMP activities should be revised as per existing rate.
- (xvii) Local people shall be given top priority to employment and skilled training conducted if required.
- (xviii) 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.
- (xix) 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.
- (xx) 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.

**Agenda No. 9.5**

**Phata Byung Hydro Electric Project (76 MW) in an area of 23.323 Ha, located at Village Barasu, Byung, Jamu, Gair etc., Sub District Okhimath, District Rudraprayag (Uttarakhand) by M/s Mandakini Jal Urja Private Limited– Terms of Reference (TOR) - reg.**

**[Proposal No. IA/UK/RIV/465061/2024; F. No. J-12011/64/2007-IA.I]**

**9.5.1** The proposal is for grant of Terms of Reference to the project for Phata Byung Hydro Electric Project (76 MW) in an area of 23.323 Ha, located at Village Barasu, Byung, Jamu, Gair etc., Sub District Okhimath, District Rudraprayag (Uttarakhand) by M/s Mandakini Jal Urja Private Limited.

**9.5.2** Earlier, the project vide proposal no. IA/UK/RIV/409698/2023 was considered by the Expert Appraisal Committee (Hydro River Valley Sector) in its 42<sup>nd</sup> meeting held on 23.02.2023 and 4<sup>th</sup> meeting held on 24.11.2023 for grant of Terms of Reference (ToR). The EAC deferred the proposal seeking additional information.

The PP has submitted the additional sought by the EAC on 14.02.2024, but it was found that the ownership of the project has been changed from M/s Lanco Mandakini Hydro Energy Private Limited to M/s Mandakini Jal Urja Private Limited, accordingly an ADS was raised to submit the fresh proposal in the name of M/s Mandakini Jal Urja Private Limited. Accordingly, the PP has submitted on Parivesh Portal on 06.03.2024 for obtaining ToR.

**9.5.3** 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 Mandakini Jal Urja Private Limited envisages construction of 76 MW Phata Byung Hydro Electric Project in Rudraprayag District of Uttarakhand. It is run-of-the river scheme to harness hydropower potential of river Mandakini in the state of Uttarakhand. The project is approachable by road (200 kms along NH 109) from Rishikesh via Srinagar and Rudraprayag.
- ii. The proposal is for ToR denovo environment clearance for the project, Phata Byung Hydro Electric Project (76 MW) in an area of 23.323 Ha, located at Village Barasu, Byung, Jamu, Gair etc., Sub District Okhimath, District Rudraprayag (Uttarakhand) by M/s Mandakini Jal Urja Private Limited.
- iii. The project is listed at S.N. 1 (c) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' due to applicability of General Conditions and is appraised at Central Level by Expert Appraisal Committee (EAC).
- iv. The geographical co-ordinates of the project are:
  - Dam site: 79° 00' 28''E, 30° 37' 35''N
  - Power house site: 79° 04' 05''E, 30° 33' 40''N
- v. The Department of Energy, Govt. of Uttarakhand accorded DPR clearance in the year of 2007 for an installed capacity of 76 MW (2 X 38 MW). The MoEF&CC granted Environmental Clearance vide letter dated 18.02.2008 and State forest department granted forest clearance vide letter dated 21-06-2008. The project has been entrusted to M/s Lanco Infratech Ltd. on EPC contract basis during the year 2008.
- vi. The estimated project cost is Rs. 466 Crs (excluding IDC as per NCLT order dated 23<sup>rd</sup> March 2023). The cost is being further reviewed during site investigations. Total capital cost earmarked towards environmental pollution control measures is Rs 20.26 Crs and the Recurring cost (operation and maintenance) will be about Rs 2.2 Crs per annum.
- vii. There is one (1) wildlife sanctuary (KMDS), within 10 km distance from the project site. River/ water body Mandakini is flowing at a distance of average 2 km from North to South-East direction.
- viii. Total Employment will be 100 persons as direct and 600 persons indirectly.
- ix. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 10.10.2007. The main issues raised during the public hearing are related to rehabilitation, employment, impact on forest and local area development.
- x. During 14 - 17 June 2013, Uttarakhand and adjoining areas received very heavy rainfall (~375% more than the normal levels). Resulting cloudburst caused heavy floods in Rudraprayag district of Uttarakhand (where the project is located), resulting in huge losses of life and property. Significant loss and damage that occurred at Phata Project site is listed below:
  - a) The Dam structure (which was already raised to its full height) was severely damaged
  - b) The entire reservoir area was completely filled with debris.

- c) All major project equipment, machinery and other installations at site along the river have been either washed away or damaged beyond repairable condition.
- d) Most of the construction material has been completely washed away.
- e) Approach roads and internal project roads have been washed away with practically no access to some of the project components.
- f) Post the restart of works after the devastation of Uttarakhand Floods, LMHEPL has achieved overall physical work progress of 74%. All the construction activities at Phata Byung Project site from July 2017 is on hold as EPC contractor M/s Lanco Infratech Ltd.(LITL) has been referred to NCLT under IBC (Insolvency and Bankruptcy Code) 2016 and subsequently under Liquidation process since 2018.
- g) Further, the project company LMHEPL was also referred to the Corporate Insolvency Resolution Process ("CIRP") under the Insolvency and Bankruptcy Code, 2016 on 11th June 2020 by the lenders and after almost 2 years of CIRP process the financial creditors approved the Resolution Plan submitted by Statkraft IH Holding AS, Norway by a majority of 100% on February 25, 2022. The Resolution Professional (RP) filed the application for approval of the Resolution Plan before the Hon'ble NCLT, Allahabad Bench.
- h) The Hon'ble NCLT has approved the Resolution plan of Statkraft IH Holding AS, Norway on 23rd March 2023.
- xi. Certified compliance report submitted by IRO, MoEF&CC. IRO had visited the site on 16<sup>th</sup> March 2023 and submitted Certified compliance report (CCR) on 5<sup>th</sup> April 2023.
- xii. Resolution Plan of Statkraft accepted in March 2023 and Department of Energy, Govt of Uttarakhand granted in principal approval of name change of SPV to Mandakini Jal Urja Pvt Ltd early this year.
- xiii. As the SPV name has changed, an application with updated name was filed on PARIVESH 2.0 for seeking the TOR for denovo environment clearance on 06/03/2024.
- xiv. The project was earlier considered in its 4<sup>th</sup> meeting held on 24.11.2023 and the EAC deferred the project for want of the additional information. The Information with response are as follows:

**Query 1:** Obtain certification from the State Forest Department stating that none of the component of the project including the submergence area of the dam falls within the eco-sensitive zone of the Kedarnath Wildlife Sanctuary or any other Wildlife Sanctuary.

**Reply:**

- Letter from DFO, dated 31/01/2024, confirms that area where project is located falls under Rudraprayag Forest division and this area is outside the Kedarnath WLS as per Joint Inspection Reports (2007 and 06/10/2023)
- The Letter also mentions that the ESZ of the KWS is yet to be notified. Final draft notification is with the Chief Wildlife Warden.
- The draft notification has proposed that the southern boundary of the ESZ, where the Project is located, as NIL (zero kilometer).
- In the absence of the ESZ notification, Hon'ble Supreme Court Orders in this regard should be referred to.

**Query 2:** Submit data on catastrophic events observed in the region after grant of earlier

environmental clearance to the instant project.

**Reply:** The District Disaster Management Officer has provided the details of catastrophic events:

- June 2013: Cloud burst and flash flood in Mandakini River, badly affecting project components.
- June 2013: Due to heavy rain and floods at Phata completely washed out adit-3 approach road.
- August 2020: Heavy rain and cloud burst near Gabni Nala caused erosion.

**Query 3:** Point-wise implementation status/action plan on the observations of the IRO, MoEF&CC report regarding conservation measures for Schedule -I wildlife species to be submitted duly certified by the IRO, MoEF&CC.

**Reply:** Updated status on implementation of CAT Plan and Biodiversity Conservation and Wildlife Management Plan was sought from concerned DFOs. DFO, Kedarnath WLS, Gopeshwar and DFO, Rudraprayag Forest Division has provided the status on implementation of CAT and Biodiversity Plan year-wise from 2012-13 till 2023-24 and 2011-12 till 2022-23 respectively on 23/01/2024. Status of implementation along with other information sought by earlier IRO report was provided to IRO, who has verified the information and issued a certified report on 09/02/2024

Summary of the point-wise implementation status/action plan on the observations of the IRO, MoEF&CC report regarding conservation measures for Schedule -I wildlife species. Compliance of Certified Compliance Report (CCR)/IRO Observation

S.N.	Observations During Site Visit	Status
(i)	Hole/breakage in the Head Race Tunnel (HRT) leaking water – repair work should be carried out after required permits and approvals.	To carry out this pressurized chemical grouting a drilling machine, compressors, silent DG Sets, Back-hoe loaders, and dewatering pumps are required. Project needs ToR for moving these machines.
(ii)	The access road to the powerhouse was severely damaged during floods. The repair should be prioritized	Temporary work on the access road has been completed. For permanent repairs heavy machineries and DG Sets are required and possible only after ToR.
(iii)	Noted that the project is nearly completed but work on interior lining and cementing of the tunnel needs to be finished. An exact assessment could not be determined due to water in the tunnel. Project to assess the conditions thoroughly and pump excess water	It has been estimated that 74% of works have been completed. Effective dewatering and detailed tunnel and powerhouse investigation needs heavy pumps and is possible after ToR. Note that only 25 meters of excavation of HRT is pending out of a total of 9.326 Km

(iv)	Implementation of the Catchment Area Treatment Plan and Biodiversity Conservation Plan for which Rs. 939.71 lakh (Rs. 714.21 lakh for CAT and Rs. 225.50 lakh for Biodiversity) has been deposited	Status of implementation of CAT and Biodiversity Plan for Schedule-I species have been provided by respective DFOs – Kedarnath WL and Rudraprayag Divisions.
(vi)	Rs. 225.50 has been deposited in CAMPA for Biodiversity Plan, provide status	
(vii)	Information on Conservation measures of Schedule I species	
(viii)	Expedite the matter of Conservation and development of migratory fishes and fish hatchery	State Fisheries Department vide its letter dated 03/02/2024 has informed that after obtaining denovo environment clearance, provide new EMP and CAT so that Fisheries Management activities can be implemented based on EMP
(ix)	Certification from the State Forest department that none of the components of the project are within the ESZ of Kedarnath WLS	Already discussed above
(x)	To convene MDC meeting	Two meetings of the MDC in 2010 & 2011. Post 2013 floods works stopped and 2017 the project became stressed. MDC dissolved due to EC expiration in Feb'22. As MDC meeting can not be convened due to lapse of EC, an interdisciplinary committee meeting has been conducted during February 2024 as preparation to re-constitute the MDC.

**Query 4:** Project Authorities are required to provide the details of commitments made during public hearing and the actions taken to fulfil the same along with budget allocations/ expenditures towards activities.

**Reply:** Queries made during public hearing and commitments made have been compiled. Major concerns were:

- a) Compliance towards Permit & Approvals:
- b) Impact on the forest, flora & fauna
- c) Impact on houses due to drilling, blasting, tunnelling and underground Work
- d) Impact due to natural disasters such as Earthquake, landslide, soil erosion as well as restoration of construction sites
- e) Employment to Locals and insurance schemes to workers
- f) Community / Social development activities as per Resettlement & Rehabilitation (R&R) Plan

Commitment made and Implementation Status along with budget and actual expenditure



S. N.	Activity under expenditure occurred	Allocated Budget (INR in LAKH)	Expenditure done ( INR In LAKH)
1	Impact on the forest Flora & Fauna CAT, Biodiversity, Schedule-I species	939.69 (Deposited to CAMPA and under CAT PLAN)	846.10
2	Dumping Site & Land restoration Plan	293.98 Allocated in EMP for restoration and muck dumping	62.65
3	As a Social Responsible company payment made to villagers towards renovation of houses as per district authorities guidelines.	As per direction and evaluation of concern local authorities.	15.75
4	Cost Incurred on Employees/ Contractors/ Security Personnel	Not allocated in the EMP as this was as per skillset and individual qualification	402.15
5	Health Support to the Community	211.64 (Under Public Health Delivery System)	233.42
6	Community /Social Development Activities as per R&R Plan	318.50 (under R&R of EMP)	429.77
	<b>TOTAL</b>	<b>1779.56</b>	<b>1989.84</b>

xv. The salient features of the project are as under:

- **EAC Meeting Details:**

EAC meeting/s	9 <sup>th</sup> Meeting of EAC on River Valley Projects
Date of Meeting/s	20 <sup>th</sup> March 2024
Date of earlier EAC meetings	42 <sup>nd</sup> EAC meeting dated 23 <sup>rd</sup> Feb 2023 4 <sup>th</sup> EAC meeting dated 24 <sup>th</sup> Nov 2023

- **Project details:**

Name of the Proposal	Phata Byung Hydro Electric Project (76 MW) (De novo EC application)
Location (Including coordinates)	Rudraprayag, Uttarakhand, Dam site: 79o 00' 28''E 30o 37' 35''N Power house site: 79o 04' 05''E 30o 33' 40''N
Inter- state issue involved	No
Seismic zone	Zone V

- **Category details:**

Category of the project	A
Provisions	Project is 76 MW but becomes Category A due to general conditions applicability (within 10 km of Kedarnath WLS)
Capacity / Cultural command area (CCA)	76 MW

Attracts the General Conditions (Yes/No)	Yes
Additional information (if any)	Nil

- Electricity generation capacity:**

Powerhouse Installed Capacity	76 MW
Generation of Electricity Annually	Annual energy generation in 90% dependable year: 340 GWh
No. of Units	Two generating units of 38 MW each
Additional information (if any)	Nil

- ToR/EC Details:**

Cost of project	466 Crs. (Excluding IDC as per NCLT order dated 23rd March 2023)
Total area of Project	23.323 Ha
Height of Dam from River Bed (EL)	26 m
Length of Tunnel/Channel	9.32 km
Details of Submergence area	4 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	E-flow will be released as per applicable guidelines.
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. b) If not the E-Flows maintain criteria for sustaining river ecosystem.	Several basin level assessments have been undertaken by reputed institutes and expert bodies during 2012-2018 period – WII report (2012), EBI report (2014), HNB Garwal University (2014), AHEC report (2011 and 2015), EB II report (2018) to name a few.  E flow recommendations shall accordingly be applicable.

- Muck Management Details:**

No. of proposed disposal area/ (type of land-Forest/Pvt. land)	9 muck disposal sites were proposed initially, however only 4 have been utilized so far.
Muck Management Plan	Will be prepared in EIA/EMP. Muck will be disposed off at designated sites in a controlled manner to protect environment.

Monitoring mechanism for Muck Disposal	Will be Provided in EIA/EMP report
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- **Land Area Breakup:**

Private Land	2.032 Ha
Government land/Forest Land	21.291 Ha
Submergence area/Reservoir area	4 Ha
Land required for project components	23.323 Ha (including submergence area)
Additional information (if any)	

- **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	----	Average distance of the tunnel is approximately 2 km from the boundary of the Kedarnath Wildlife Sanctuary (KWS) and comes close to the boundary only at the point of construction of dam site and powerhouse. Chief Wildlife Warden has certified that project site is entirely outside Kedarnath Musk Deer Wildlife Sanctuary. As per DFO – Rudraprayag letter dated 31st January 2024 and referring to Joint inspection report dated 6th October 2023, the project is under Rudraprayag Forest division and outside of the KWS.
National Park	----	
Wildlife Sanctuary	Kedarnath Wildlife Sanctuary within 10 km	

- **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)	<ul style="list-style-type: none"> <li>• Present case is a de-novo EC application where 74% work has already been completed.</li> <li>• Six monthly compliance reports were submitted regularly during the progress of the works.</li> <li>• Post IRO Official visit on 16th March'23 and as per the CCR (Certified Compliance Report), we submitted our compliance as ADS through letter dated 22nd May'23 to the MoEF&amp;CC Delhi &amp; IRO Dehradun.</li> <li>• Basis Minutes of 4th EAC meeting, IRO – Dehradun vide letter dated 9th Feb 2024 submitted the CCR report to MoEFCC – Delhi.</li> </ul>
Status of Stage- I FC	Already in place
Additional detail (If any)	
Is FRA (2006) done for FC-I	NA

• **Miscellaneous**

Details of consultant	<p>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 : 1 (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</p>
Project Benefits	<ul style="list-style-type: none"> <li>▪ Project will generate 340 GWh annually in a 90% dependable year.</li> <li>▪ A number of marginal activities and jobs will be available to the locals.</li> <li>▪ Project construction will avoid the Environmental degradation on the incomplete project site.</li> <li>▪ Local area development activities, facilities in Education, medical, transportation, road network and other infrastructure as per demand and need assessment basis</li> <li>▪ This project is critical for balancing the load fluctuations in the Kedarnath and Badrinath areas as per State Transmission Utility.</li> <li>• An opportunity for small scale and cottage industries to develop in the area.</li> </ul>

Status of other statutory clearances	Present case is a de novo EC application where 74% work has already been completed and Forest clearance is already in place
R&R details	No R&R, as present case is a de novo EC application and R&R was completed earlier.
Additional detail (If any)	Nil

**9.5.4** 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 (ToR) for conducting EIA study of the project for setting up of Phata Byung Hydro Electric Project (76 MW) in an area of 23.323 Ha, located at Village Barasu, Byung, Jamu, Gair etc., Sub District Okhimath, District Rudraprayag (Uttarakhand) by M/s Mandakini Jal Urja 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 since general conditions of project being in the vicinity of Kedarnath Wildlife Sanctuary is applicable.
- The EAC noted that the location of the project is within 10 km radius Kedarnath Wildlife Sanctuary.
- Earlier, Environment Clearance (EC) was granted on 18th February, 2008 to Phata byung HEP (76MW) in an area of 22.72 ha at Village Byung, Tehsil & District Rudraprayag, Uttarakhand by M/s Lanco Mandakini Hydro Energy Private Limited. Subsequently, the MoEF&CC on 20th March, 2018 granted the EC validity extension for 3 years up to 17th February, 2021. In view of the MoEF&CC notification dated 18th January, 2021 the validity of the EC was till 17th February, 2022.
- Earlier proponent had referred it to NCLT under IBC (Insolvency and Bankruptcy Code) 2016 and subsequently under Liquidation process since 2018. Now, based on Resolution Plan of Statkraft in March 2023, the Department of Energy, Govt of Uttarakhand has granted in principal approval of name change of SPV to Mandakini Jal Urja Pvt Ltd early this year
- As per Ministry’s notification dated 18<sup>th</sup> March, 2021 regarding exemption of Public Hearing:

—(x) *Notwithstanding anything contained above, the projects where construction and commissioning of proposed activities have not been completed within the validity period of the Environmental Clearance (EC) and a fresh application for EC has been submitted due to expiry of the said period of the EC, the concerned Expert Appraisal Committee or State Level Expert Committee, as the case may be, may exempt the requirement of public hearing subject to the condition that the project has been implemented not less than fifty percentage in its physical form or construction.*

**9.5.5** The EAC after detailed deliberation observed that instant project has been applied denovo after the validity of EC. The project was under construction by M/s Lanco Infratech Ltd.(LITL) and damaged during Uttarakhand flood in 2013. It was further observed that earlier proponent had referred it to NCLT under IBC (Insolvency and Bankruptcy Code) 2016 and subsequently under Liquidation process since 2018. Now, based on Resolution Plan of Statkraft in March 2023, the Department of Energy, Govt of Uttarakhand has granted in principal approval of name change of SPV to Mandakini Jal Urja Pvt Ltd early this year. The construction of the project as informed by PP is about 74%, hence exemption for conducting Public Hearing was requested based on Ministry's notification dated 18<sup>th</sup> March, 2021.

Further, it has been observed that instant project is in vicinity of Kedarnath Wildlife Sanctuary i.e within 10 km of project area and deliberation regarding notification of ESZ is being worked. Earlier, Draft Notification declaring Eco Sensitive Zone around Kedarnath Musk Deer Sanctuary was published by Ministry on 18.12.2017. No final ESZ notification with boundary has been issued by Ministry. Thereby, approval of National Board of Wildlife is mandatory.

Also, it was observed that Hon'ble Supreme Court vide its judgment dated 13/08/2013 in the Civil Appeal No. 6736/2013 (SLP (C) No.362 of 2012) in Alaknanda Hydro Power Co. Ltd. Versus Anuj Joshi & Ors has ordered the following with other directions to form expert body. "*We direct the MoEF as well as State of Uttarkhand not to grant any further environmental clearance or forest clearance for any hydroelectric power project in the State of Uttarakhand, until further orders*". In continuation of this order, there were many orders given by Hon'ble Supreme Court and Ministry had formed reports of Expert Body-I (EB-I), Expert Body-II (EB-II) and other reports based on the orders.

Ministry's RO – Dehradun vide letter dated 9th Feb 2024 submitted the Certified compliance report of earlier EC conditions to MoEFCC – Delhi and point-wise implementation status/action plan on the observations of the IRO, MoEF&CC report regarding conservation measures for Schedule -I wildlife species was deliberated while considering this proposal.

Accordingly, based on the information submitted and as presented during the meeting, EAC **recommended** for grant of Standard ToR for conducting EIA study with Public consultation (written submission) without Public hearing to the project for Phata Byung Hydro Electric Project (76 MW) in an area of 23.323 Ha, located at Village Barasu, Byung, Jamu, Gair etc., Sub District Okhimath, District Rudraprayag (Uttarakhand) by M/s Mandakini Jal Urja Private Limited subject to the compliance of the order of Hon'ble Supreme Court in the Civil Appeal No. 6736/2013 (SLP (C) No.362 of 2012) in Alaknanda Hydro Power Co. Ltd. Versus Anuj Joshi & Ors and under the provisions of EIA Notification, 2006, as amended along with the following additional/specific ToR.

**(A) Environmental Management and Biodiversity Conservation**

- i. The EAC shall conduct site visit before considering the proposal for grant Environmental Clearance.
- ii. NBWL clearance shall be obtained as the project site falls within 10 km Kedarnath Wildlife Sanctuary.

- iii. Revised Catchment Area Treatment plan shall be submitted by the project proponent for the project.
- iv. Environmental Cost Benefit Analysis shall be done in terms of loss of Forest ecosystem due to diversion of Forest land/loss of biodiversity, water availability, water uses for generation of hydro power and Ecological flows.
- v. Calculation and values of GHG (CO<sub>2</sub>, CH<sub>4</sub> etc) emissions during construction and during operation till the life of the project shall be estimated and submitted.
- vi. The EIA study should be undertaken in accordance with recommendations of the EB-II report conducted for Upper reaches of ganga.
- vii. Details of Flora and Fauna reported in submergence area, Nos. of tree along with their density and nomenclature required to be cut for reservoir creation and other project component.
- viii. Fisheries Management Plan shall be prepared along with other Environmental Safety Measures for Manadkini river and other small stream/Nallah and same shall be incorporated in the EIA/EMP report.
- ix. Quantitative values of Impact modelling of environmental parameters shall be submitted for during construction and operation. Also, mitigation measures shall be submitted interms of construction and operation phase.

**(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 consultation (written submission) shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Issues raised during previous public hearing and public consultation (written submission), compliance of the same shall be incorporated in the EIA/ EMP report in the relevant chapter.
- iii. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines. Private land shall be acquired as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- iv. Budget earmarked for R&R, CSR shall not include in the cost of EMP and compliance of issues raised during Public Hearing or public consultation.

**(C) Muck Management**

- i. Details of quantity of muck generation component wise, types of muck (Excavation in tunnels, pressure shaft and powerhouse etc) and disposal site/ transportation to be provided.
- ii. Details of muck management such as dumping sites and its locations, transportation plan along with monitoring mechanism for muck transportation, detailing the road map of project construction site/ indicating the distances from HFL, river, project construction site along with types of road etc.
- iii. Safety measures for avoiding spill over muck into the riverbed/streams and its flow into the river during the high discharge/ flood or monsoon period. Prepare plan for stabilization of muck disposal sites using biological and engineering measures to ensure that muck does

not roll down the slopes and shall be disposed safely and that it does not pollute the natural streams and water bodies in surrounding area.

- iv. Restoration plan for construction area including dumping site of excavated materials by levelling, filling up of burrow pits, landscaping etc.

#### **(D) Disaster Management**

- i. Impact of Project activities (specially blasting and drilling) on the aquatic and terrestrial ecosystem, within study area to be studied and be incorporated in EIA/EMP report.
- ii. Pre-DPR Chapters viz., Hydrology, Layout Map and Power Potential Studies duly approved by CWC /CEA shall be submitted.

#### **(E) Miscellaneous**

- i. Both capital and recurring expenditure under EMP shall be submitted.
- ii. The PP should submit the photograph of monitoring stations & sampling locations. 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 analyze the samples.
- iii. Drone video of project site shall be recorded and to be submit.

#### **Any other item**

#### **Agenda No. 9.6**

**Site visit undertaken by EAC sub-committee on 23rd February, 2024 for Shirawta Off Stream Open Loop Pumped Storage Project of capacity 1800 MW of M/s The Tata Power Company Limited at Village Khandshi, Tehsil Maval, District Pune (Maharashtra)**

**9.6.1** The EAC during deliberations noted the following:

- Ministry vide letter dated 23.09.2023 granted Terms of Reference which inter-alia mentions the following specific condition  
*“The EAC shall conduct site visit before considering the proposal for grant environmental clearance.”*
- In view of the above, Ministry vide its letter dated 6.02.2024 constituted a sub-committee to carry out site inspection to assess the environmental safeguards measures and for additional conditions.
- A site visit was carried out by the EAC (Sub-Committee) during 23rd February, 2024. Following expert members of the EAC have visited the Shirawta Off Stream Open Loop Pumped Storage Project site:
  - (i) Shri Ajay Kumar Lal, Chairman
  - (ii) Dr J V Tyagi, Member
  - (iii) Shri Kartik Sapre, Member
  - (iv) Dr Saurabh Upadhyay, Member, MoEF&CC



### 9.6.2 The Observation of the Sub-Committee area as follows:

#### (i) Lower Reservoir

The Subcommittee visited the existing Lower reservoir site and proposed Power house location and found that a big dam is in the site which was constructed approximately 100 years ago by the project proponent. The dam is an old structure the subcommittee suggested to assess the dam stability and risk assessment.

#### (ii) Power House: -

The location of power house is within the premises of project proponent and at the site small vegetative cover noticed at a few places.

#### (iii) Upper Reservoir

The subcommittee could not visit the upper reservoir site due to non-availability of approach road. The project proponent had arranged the drone facility at the lower reservoir site and the subcommittee has seen the upper reservoir site through the drone. The subcommittee has observed that moderately dense forest is at the proposed upper reservoir site. The project proponent has informed that embankment dam of 20 m height will be made. The subcommittee suggested to submit the geological studies for suitability of dam type for the proposed Upper reservoir. The project proponent has further informed that the forest area reported at ToR stage has been increased as per the forest department data. The subcommittee suggested to apply for amendment in ToR for such changes.

Site visit report is attached at **Appendix A**.

### 9.6.3 The EAC based on the observation in the site visit report of the EAC sub-committee made following recommendations:

- (i) Project Proponent shall undertake a survey to count the number of trees present in the proposed upper reservoir site.
- (ii) The PP should take permission before felling of trees and shall take compensatory plantation activities if applicable.
- (iii) Owing to the hilly terrain and steep slopes, committee is of the opinion that project proponent may undertake land subsidence studies through a qualified geologist and report to submit to the Ministry and IRO.
- (iv) Duly approved plan for conservation of Schedule-I species shall be submitted.
- (v) Explore the possibility to construct approach road and muck disposal area on non-forest land.
- (vi) Study shall be carried out on impact on fishes.
- (vii) Conservation of Indigenous Fishes and aquatic flora fauna in existing Upper Reservoir area. Also, promoting livelihood activities vis-à-vis cage culture, etc.
- (viii) Submit proof that the reservoir belongs to the project proponent and approval of water allocation.

- (ix) The dam is an old structure the subcommittee suggested to assess the dam stability and risk assessment.

### **Agenda No. 9.7**

#### **Site visit undertaken by EAC sub-committee on 22<sup>nd</sup> February, 2024 at Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW) of M/s The Tata Power Co. Ltd at Village Vadeshwar and Bhivpuri, Tehsil Karjat and Mawal, District Raigarh and Pune, Maharashtra**

**9.7.1** The EAC during deliberations noted the following:

- Ministry vide letter dated 23.09.2023 granted Terms of Reference with the following specific condition

*“The EAC shall conduct site visit before considering the proposal for grant environmental clearance.”*

In view of the above, Ministry vide its letter dated 6.02.2024 constituted a sub-committee to carry out site inspection to access the environmental safeguards measures and for additional conditions.

A site visit was carried out by the EAC (Sub-Committee) during 22<sup>nd</sup> February, 2024. Following expert members of the EAC have visited the Shirawta Off Stream Open Loop Pumped Storage Project site:

- (i) Shri Ajay Kumar Lal, Chairman
- (ii) Dr J V Tyagi, Member
- (iii) Shri Kartik Sapre, Member
- (iv) Dr Saurabh Upadhyay, Member, MoEF&CC

**9.7.2** The Observation of the Sub-Committee area as follows:

#### **(i) Lower Reservoir & Power House**

The Subcommittee visited the proposed site of Lower reservoir and Power house and observed that the undulating land surface with considerable stability due to rocky surface mainly consisting basalt and other solid formation of Sahyadri range. The Top soil appeared shallow yet stable and the concentration of sedimentation in the proposed reservoir is not expected much.

As per the information provided by the project proponent the surface will be excavated around 20 m deep and the muck and debris will be utilized in formation of embankment and remaining will be dumped in the private own land.

Area is being rocky and shallow soil depth has sparsh vegetative cover noticed at a few places. The biodiversity was observed low. Also a helipad and an old building structure is at the site.

**(ii) Power House: -**

The location of power house is within the premises of project proponent and the power house will be build after dismantle of old building structure.

**(iii) Upper Reservoir**

The subcommittee visited the upper reservoir site and approach road and check the alternates of approach roads to construct on non-forest land area. The project proponent has informed that due to slope and alignment it is not possible to construct approach road on non-forest area. The committee insist upon to explore such arrangement which requires lesser forest area. Only dry trees were present near the upper reservoir site which are not much value neither environmental not economic. The subcommittee found that the upper reservoir is already there and no any major construction is required. Also, the project proponent informed that the reservoir belongs to the project proponent and as per allocated quota they will be utilizing the water. The committee suggested to submit such documents to the Ministry. The water at the upper reservoir is also found sufficient. On enquired, the PP has informed that no other is using this reservoir.

The subcommittee during visit found that an existing hydropower project is running at the project site. On enquired, the project authorities have informed that this is very old hydropower project.

Site visit report is attached at Appendix B.

**9.7.3** The EAC based on the observation of the EAC sub-committee made following recommendations:

- i. Project Proponent shall undertake a survey to count the number of trees present in the proposed pumped storage project site.
- ii. The PP should take permission before felling of trees and shall take compensatory plantation activities if applicable.
- iii. Owing to the hilly terrain and steep slopes, committee is of the opinion that project proponent may undertake land subsidence studies through a qualified geologist and report to submit to the Ministry and IRO.
- iv. Provide the documentary evidence/ permission obtained for existing hydropower project at the project site.
- v. Duly approved plan for conservation of Schedule-I species shall be submitted.
- vi. Explore the possibility to construct approach road and muck disposal area on non-forest land.
- vii. Submit proof that the reservoir belongs to the project proponent and approval of water allocation.
- viii. Study shall be carried out on impact on fishes.
- ix. Conservation of Indigenous Fishes and aquatic flora fauna in existing Upper Reservoir area. Also, promoting livelihood activities vis-à-vis cage culture, etc.

**Agenda No. 9.8**

**Kandhaura Closed Loop Pumped Storage Project (1680 MW) in an area of 756.89 Ha at Village Sashnai, Markuri & Cherue, Taluka Obra and Robertsganj, District Sonbhadra, Uttar Pradesh by M/s JSW Energy PSP Six Limited – Reconsideration for Terms of References (TOR) – reg.**

**9.8.1** The EAC during deliberations noted the following:

- The proposal for grant of Terms of Reference (ToR) to the project for setting up of Kandhaura Closed Loop Pumped Storage Project (1680 MW) in an area of 756.89 Ha at Village Sashnai, Markuri & Cherue, Taluka Obra and Robertsganj, District Sonbhadra, Uttar Pradesh by M/s JSW Energy PSP Six Limited was considered by the EAC its 8<sup>th</sup> meeting held on 28th February, 2024 wherein the proposal was recommended for grant of Standard ToR and specific by the EAC for conducting EIA study with Public consultation.
- It was further informed to the EAC that the proposal was further examined in the Ministry and found that a portion of the Kandhaura project site falls within the ESZ of Kaimur WL, in which activity of Hydroelectric projects are prohibited. Accordingly, the Ministry decided to take the proposal the sectoral EAC for its re-appraisal.
- The Project Proponent made a detailed presentation on the issues of the project and informed that as per the MoEF&CC, New Delhi Notification vide S.O. 891(E) dated 20.03.2017 (ESZ Notification of Kaimur WLS), the proposed project site is 1.5 km away from the boundary of Kaimur Wildlife Sanctuary and 0.5 km away from ESZ boundary of Kaimur Wildlife Sanctuary. Therefore, it is submitted that the project site does not fall within the ESZ of Kaimur Wildlife Sanctuary.

**9.8.2** The EAC after detail deliberations directed the PP to resubmit the project site coordinates to the Ministry and seek clarification. The EAC also reaffirmed its previous recommendation for the project for grant Terms of Reference to Kandhaura Closed Loop Pumped Storage Project (1680 MW) in an area of 756.89 Ha at Village Sashnai, Markuri & Cherue, Taluka Obra and Robertsganj, District Sonbhadra, Uttar Pradesh by M/s JSW Energy PSP Six Limited once it's confirmed that the project boundary doesn't encroach upon the Kaimur Wildlife Sanctuary.

**Agenda No. 9.9**

**OA NO. 148 OF 2021 in the matter of D. Chandramouleswara Reddy Vs Union of India Before Hon'ble NGT (SZ), Chennai**

1. Hon'ble NGT (SZ) vide its order dated 22.12.2022 (Para 72 (vii) in the matter OA No. 148 of 2021 by D. Chandramouleswara Reddy Vs Union of India and OA No. 212 of 2021 in the matter of State of Andhra Pradesh vs. Union of India and Ors. before Hon'ble NGT (SZ), Chennai, directed for constituting a committee from EAC Members having expertise to go into the matter regarding mitigation, restoration and rehabilitation measure for ecological damage caused by construction of the aforesaid projects without EIA Study & Environmental Clearance.

2. In compliance of the directions passed by Hon'ble National Green Tribunal, the Ministry referred the matter to the EAC (River Valley & Hydro Electric Projects) which considered the matter in its 40<sup>th</sup> meeting held on 25.01.2023. The EAC nominated the members as expert members for the said Committee and recommended the Ministry to constitute the said Committee.
3. The Ministry vide order dated 31.08.2023, constituted an Expert Committee comprising of the following members:

<b>S. No.</b>	<b>Name</b>	<b>Role</b>
1.	Dr. A.K. Malhotra	Chairman
2.	Shri K Gowarappan	Member
3.	Shri Ashok Kharya	Member
4.	Dr. N. Lakshman	Member
5.	Dr. Amiya Sahoo	Member
6.	Dr. J.A. Johnson	Member

4. Thereafter, a meeting took place on 11.10.2023 wherein after detailed deliberation on the information submitted and as presented during the meeting, it was suggested by the Expert committee members that in order to analyse the mitigation, restoration and rehabilitation measures, a site visit of both the projects shall be conducted by the Expert Committee.
5. However, it has come to notice the sudden demise of one of the member of the Committee, Shri K. Gowrappan on 21<sup>st</sup> January, 2024 and some members are not part of the current EAC while for some tenure of six months has been completed in February, 2024.
6. Therefore, the matter was referred to EAC for re-nomination of EAC members wherein after a brief discussion it was decided that following shall be the members the Committee,
  - i. Dr. Uday Kumar R Y - Chairman
  - ii. Dr. J V Tyagi - Member
  - iii. Shri Kartik Sapre - Member
  - iv. Dr. J.A. Johnson - Member
  - v. Dr. A.K. Sahoo - Member
  - vi. Shri Alok Paul Kalsi - Member
7. Further, EAC advised that the Ministry may engage NABET-accredited consultants (if required) for precise environmental damage cost assessments (if any as per the order Hon'ble NGT) and expenses shall be paid by the Project Proponent. This approach enhances accuracy, ensures reliability of evaluations on expert input. By adhering to this recommendation, the Ministry can bolster its environmental damage assessment process. Also, the tenure of the above said committee may be further extended for six months to comply with directions of Hon'ble NGT.

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

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### **Report of the field visit undertaken by EAC sub-committee on 23<sup>rd</sup> February, 2024 at Shirawta Off Stream Open Loop Pumped Storage Project of capacity 1800 MW of M/s The Tata Power Company Limited at Village Khandshi, Tehsil Maval, District Pune (Maharashtra)**

The Ministry vide letter dated 23.09.2023 granted terms of reference with the condition that the EAC shall conduct site visit before considering the proposal for grant environmental clearance.

2. Accordingly, based on request received from M/s Tata Power Ltd, the Ministry vide letter dated 6.02.2024 constituted a sub-committee comprising of the following members to carry out site inspection to access the environmental safeguards measures and for additional conditions.

- (i) Shri Ajay Kumar Lal, Chairman
- (ii) Dr J V Tyagi, Member
- (iii) Shri Kartik Sapre, Member
- (iv) Dr Saurabh Upadhyay, Member

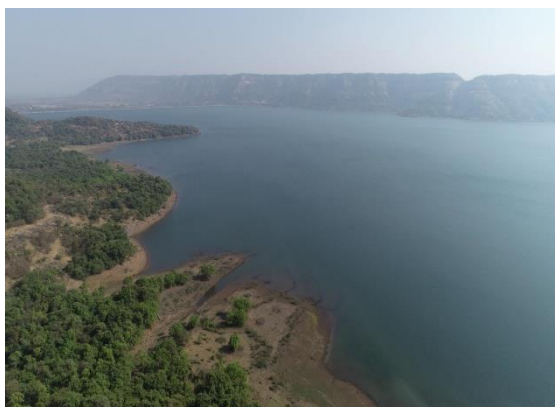
The aforesaid committee undertook the visit on 23.02.2024 and during the site visit the following officers from M/s Tata Power Ltd were present:-

- (i) Dr Ivaturi N Rao, Head - Corp Env & Climate Change
- (ii) Shri Abhijeet Patil, Head Special Projects
- (iii) Shri Vivek Jhaldiyal, representative of Consultant M/s RS Envirolink Pvt Ltd.

The sub-committee during the site visit observed the following:

#### **(i) Lower Reservoir**

The Subcommittee visited the existing Lower reservoir site and proposed Power house location and found that a big dam is in the site which was constructed approximately 100 years ago by the project proponent. The dam is an old structure the subcommittee suggested to assess the dam stability and risk assessment.



## Lower reservoir and existing dam

### (ii) Power House:-

The location of power house is within the premises of project proponent and at the site small vegetative cover noticed at a few places.



## Shirawta PH and Lower Reservoir Site Visit

### (iii) Upper Reservoir

The subcommittee could not visit the upper reservoir site due to non availability of approach road. The project proponent had arranged the drone facility at the lower reservoir site and the subcommittee has seen the upper reservoir site through the drone. The subcommittee has observed that moderately dense forest is at the proposed upper reservoir site. The project proponent has informed that embankment dam of 20 m height will be made. The subcommittee suggested to submit the geological studies for suitability of dam type for the proposed Upper reservoir. The project proponent has further informed that the forest area reported at ToR stage has been increased as per the forest department data. The subcommittee suggested to apply for amendment in ToR for such changes.



Picture of Upper reservoir clicked by drone



**Graphics of PSP and view of Upper reservoir on screen captured through Drone**

3. Based on its observation, the committee recommended the following: -
1. Project Proponent shall undertake a survey to count the number of trees present in the proposed upper reservoir site.
  2. The PP should take permission before felling of trees and shall take compensatory plantation activities if applicable.
  3. Owing to the hilly terrain and steep slopes, committee is of the opinion that project proponent may undertake land subsidence studies through a qualified geologist and report to submit to the Ministry and IRO.
  4. Duly approved plan for conservation of Schedule-I species shall be submitted.
  5. Explore the possibility to construct approach road and muck disposal area on non-forest land.
  6. Study shall be carried out on impact on fishes.
  7. Conservation of Indigenous Fishes and aquatic flora fauna in existing Upper Reservoir area. Also, promoting livelihood activities vis-à-vis cage culture, etc.
  8. Submit proof that the reservoir belongs to the project proponent and approval of water allocation.
  9. The dam is an old structure the subcommittee suggested to assess the dam stability and risk assessment.

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**Report of the field visit undertaken by EAC sub-committee on 22<sup>nd</sup> February, 2024 at Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW) of M/s The Tata Power Co. Ltd at Village Vadeshwar and Bhivpuri, Tehsil Karjat and Mawal, District Raigarh and Pune, Maharashtra**

The Ministry vide letter dated 23.09.2023 granted terms of reference with the condition that the EAC shall conduct site visit before considering the proposal for grant environmental clearance.

2. Accordingly, based on request received from M/s Tata Power Ltd, the Ministry vide letter dated 6.02.2024 constituted a sub-committee comprising of the following members to carry out site inspection to access the environmental safeguards measures and for additional conditions.

1. Shri Ajay Kumar Lal, Chairman
2. Dr J V Tyagi, Member
3. Shri Kartik Sapre, Member
4. Dr Saurabh Upadhyay, Member

The aforesaid committee undertook the visit on 22.02.2024 and during the site visit the following officers from M/s Tata Power Ltd were present: -

1. Shri Prabhakar Kale, Chief Hydros
2. Dr Ivaturi N Rao, Head –Corp Env & Climate Change
3. Shri Abhijeet Patil, Head Special Projects
4. Shri Vivek Jhaldiyal, representative of Consultant M/s RS Envirolink Pvt Ltd.

The sub-committee during the site visit observed the following:

**(i) Lower Reservoir & Power House**

The Subcommittee visited the proposed site of Lower reservoir and Power house and observed that the undulating land surface with considerable stability due to rocky surface mainly consisting basalt and other solid formation of Sahyadri range. The Top soil appeared shallow yet stable and the concentration of sedimentation in the proposed reservoir is not expected much.

As per the information provided by the project proponent the surface will be excavated around 20 m deep and the muck and debris will be utilized in formation of embankment and remaining will be dumped in the private own land.

Area is being rocky and shallow soil depth has sparsh vegetative cover noticed at a few places. The biodiversity was observed low. Also a helipad and an old building structure is at the site.



**Lower reservoir site**



**At proposed lower reservoir site at Helipad**

**(ii) Power House:-**

The location of power house is within the premises of project proponent and the power house will be build after dismantle of old building structure.



### (iii) Upper Reservoir

The subcommittee visited the upper reservoir site and approach road and check the alternates of approach roads to construct on non forest land area. The project proponent has informed that due to slope and alignment it is not possible to construct approach road on non forest area. The committee insist upon to explore such arrangement which requires lesser forest area. Only dry trees were present near the upper reservoir site which are not much value neither environmental not economic. The subcommittee found that the upper reservoir is already there and no any major construction is required. Also, the project proponent informed that the reservoir belongs to the project proponent and as per allocated quota they will be utilising the water. The committee suggested to submit such documents to the Ministry. The water at the upper reservoir is also found sufficient. On enquired, the PP has informed that no other is using this reservoir.



The subcommittee during visit found that an existing hydropower project is running at the project site. On enquired, the project authorities has informed that this is very old hydropower project.



**Photograph of existing hydropower project**

3. Based on its observation, the committee recommended the following: -
- x. Project Proponent shall undertake a survey to count the number of trees present in the proposed pumped storage project site.
  - xi. The PP should take permission before felling of trees and shall take compensatory plantation activities if applicable.
  - xii. Owing to the hilly terrain and steep slopes, committee is of the opinion that project proponent may undertake land subsidence studies through a qualified geologist and report to submit to the Ministry and IRO.
  - xiii. Provide the documentary evidence/ permission obtained for existing hydropower project at the project site.
  - xiv. Duly approved plan for conservation of Schedule-I species shall be submitted.
  - xv. Explore the possibility to construct approach road and muck disposal area on non-forest land.
  - xvi. Submit proof that the reservoir belongs to the project proponent and approval of water allocation.
  - xvii. Study shall be carried out on impact on fishes.
  - xviii. Conservation of Indigenous Fishes and aquatic flora fauna in existing Upper Reservoir area. Also, promoting livelihood activities vis-à-vis cage culture, etc.

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ATTENDANCE

<b>S. No.</b>	<b>Name</b>	<b>Role</b>	<b>Attendance</b>
1.	Prof. G. J. Chakrapani	<b>Chairman</b>	P
2.	Dr. Udaykumar R. Y.	Member	P
3.	Dr. Mukesh Sharma	Member	A
4.	Dr. J V Tyagi	Member	P
5.	Shri Kartik Sapre	Member	A
6.	Shri Ajay Kumar Lal	Member	P
7.	Shri Sharvan Kumar	Representative of CEA	A
8.	Shri Alok Paul Kalsi	Representative of CWC	A
9.	Dr. J.A. Johnson	Representative of WII	P
10.	Dr. A.K. Sahoo	Representative of CIFRI	A
11.	Shri Munna Kumar Shah	Member Secretary	P

## APPROVAL OF THE CHAIRMAN

### ⊕ Revised Draft MoM of 9th EAC meeting held on 20th March, 2024

----- Forwarded Message -----

From: chakrapani govind <chakrapani.govind@gmail.com>  
To: Munna Kumar Shah <munna.shah@gov.in>  
Cc: govind chakrapani <govind.chakrapani@es.iitr.ac.in>  
Sent: Sat, 30 Mar 2024 19:54:21 +0530 (IST)  
Subject: Re: Revised Draft MoM of 9th EAC meeting held on 20th March, 2024

Approved.

On Sat, 30 Mar, 2024, 19:39 Munna Kumar Shah, <munna.shah@gov.in> wrote:

> Dear sir  
>  
> please find the enclosed Revised Draft MoM of 9th EAC meeting held on 20th  
> March, 2024. No further comments has been received from any other EAC  
> members, Accordingly, Revised Draft MoM is submitted for approval and  
> further uploading on PARIVESH Portal.  
>  
> Thank you  
>  
> Regards  
>  
> Munna Kumar Shah  
> Scientist E  
>