



Government of India
Ministry of Environment, Forest and Climate Change
IA Division
(River Valley and Hydroelectric Projects)



**Minutes of 22ND MEETING OF THE EXPERT APPRAISAL COMMITTEE meet
ing River Valley and Hydroelectric Projects held from 10/01/2025 to 10/01/2025 Date: 22/01/2025**

MoM ID: EC/MOM/EAC/580839/1/2025

Agenda ID: EC/AGENDA/EAC/580839/1/2025

Meeting Venue: INDIRA PARYAVARAN BHAWAN, NEW DELHI

Meeting Mode: Physical

Date & Time:

10/01/2025	10:30 AM	05:30 PM
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1. Opening remarks

The 22nd meeting of the EAC for River Valley & Hydro-electric Projects organized by the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi, was held on Physical Mode, under the Chairmanship of Prof. G. J. Chakrapani.

2. Confirmation of the minutes of previous meeting

The Minutes of the Meeting held on 21st EAC meeting on 31st December, 2024 were confirmed.

3. Details of proposals considered by the committee

Day 1 -10/01/2025

3.1. Agenda Item No 1:

3.1.1. Details of the proposal

Proposed Expansion of Tembhu Lift Irrigation Project Taluka Karad, District Satara, Maharashtra by Department of Irrigation located at SATARA, MAHARASHTRA			
Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/MH/RIV/482689/2024	J-12011/48/2023-IA.I (R)	06/01/2025	River Valley/Irrigation projects (1(c))

22.4.3 The EAC deliberated on the information submitted and as presented in the meeting and observed that the proposal is for grant of corrigendum in amendment in Terms of Reference (ToR) to the project for Sukhpura Off-Stream Closed Loop Pumped Storage Project (OCPSP)- 2560 MW in an area of 788.6761Ha in Village Sukhpura, Lakshmikhera, and Nahargarh etc, Sub District Rawatbhata, District Chittaurgarh, Rajasthan by M/s Greenko Energies Private Limited.

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 Ministry granted the Terms of Reference (ToR) for the proposed project vide letter dated 28.02.2020. Subsequently, an amendment to the ToR was granted on 03.08.2022 for changes in water requirement and land area.

The Expert Appraisal Committee (EAC) noted that, due to further revised details regarding land area requirements and minor adjustments in component sizing and levels, another amendment to the ToR was granted by MoEF&CC on 04.12.2024. It was further noted that due to inadvertent submission of incorrect information regarding the ToR date by the Project Proponent (PP), the wrong date, i.e., 28.02.2020, was mentioned in the Minutes of the 19th EAC meeting and the corresponding ToR letter.

22.4.4 The EAC after examining the information submitted and detailed deliberations recommended the proposal grant of corrigendum in amendment in Terms of References as proposed by the PP to Sukhpura Off-Stream Closed Loop Pumped Storage Project (OCPSP)- 2560 MW in an area of 788.6761Ha in Village Sukhpura, Lakshmikhera, and Nahargarh etc, Sub District Rawatbhata, District Chittaurgarh, Rajasthan by M/s Greenko Energies Private Limited, under the provisions of EIA Notification, 2006 and as amended with subject to the following additional conditions:

- i. All ToR points mentioned in the ToR letter dated 28.02.2020 and amendment in TOR dated 03.08.2022 and shall remain unchanged.
- ii. EIA/EMP, collection of baseline data, other statutory clearance and the public hearing shall be carried out as per revised layout.
- iii. Validity of ToR shall be counted from original date of grant to ToR i.e. 28.02.2020.

22.4 Additional Agenda item:

Site visit Report on Proposed Bhavali Pumped Storage Project" (1500MW) at Village Jamunde, Tehsil Igatpuri, District Nashik and villages Kalbhonde and Site visit Report on Proposed Bhavali Pumped Storage Project" (1500MW) at Village Jamunde, Tehsil Igatpuri, District Nashik and villages Kalbhonde and Kothale, Tehsil Shahpur Thane (Maharashtra)

The Member Secretary, EAC informed that the Terms of Reference (TOR) was granted by the MoEF&CC, vide letter no. J-12011/08/2022-IA.I(R), 27.06.2022 and accordingly, Public hearing were conducted on 10.01.2024 for Nashik District and on 13.02.2024 for Thane District (Maharashtra). Final EIA report was submitted to MoEF&CC on 18.06.2024 and an EDS was generated on 03.07.2024, in which clarification w.r.t. change in project area from ToR was asked. Reply of the same has been submitted on 23.07.2024 with proper justification for change in the project area. Thereafter, proposal was considered by Expert Appraisal Committee (EAC) in the 14th meeting conducted on dated 30.08.2024. In meeting, it was recommended that the Sub-committee of EAC shall conduct a site visit prior to reconsideration for EC.

The Sub-committee comprising of Ajay Kumar Lal, Member EAC (Hydro & River Valley project) and Dr. P. R. Sakhare, Scientist E Representative from MoEF&CC undertook site visit to the proposed Bhavali Pumped Storage Project" on 02.01.2025 and 03.01.2025. The sub-committee visited the upper dam, upper reservoir, lower dam, lower reservoir, muck disposal areas of Bhavali PSP.

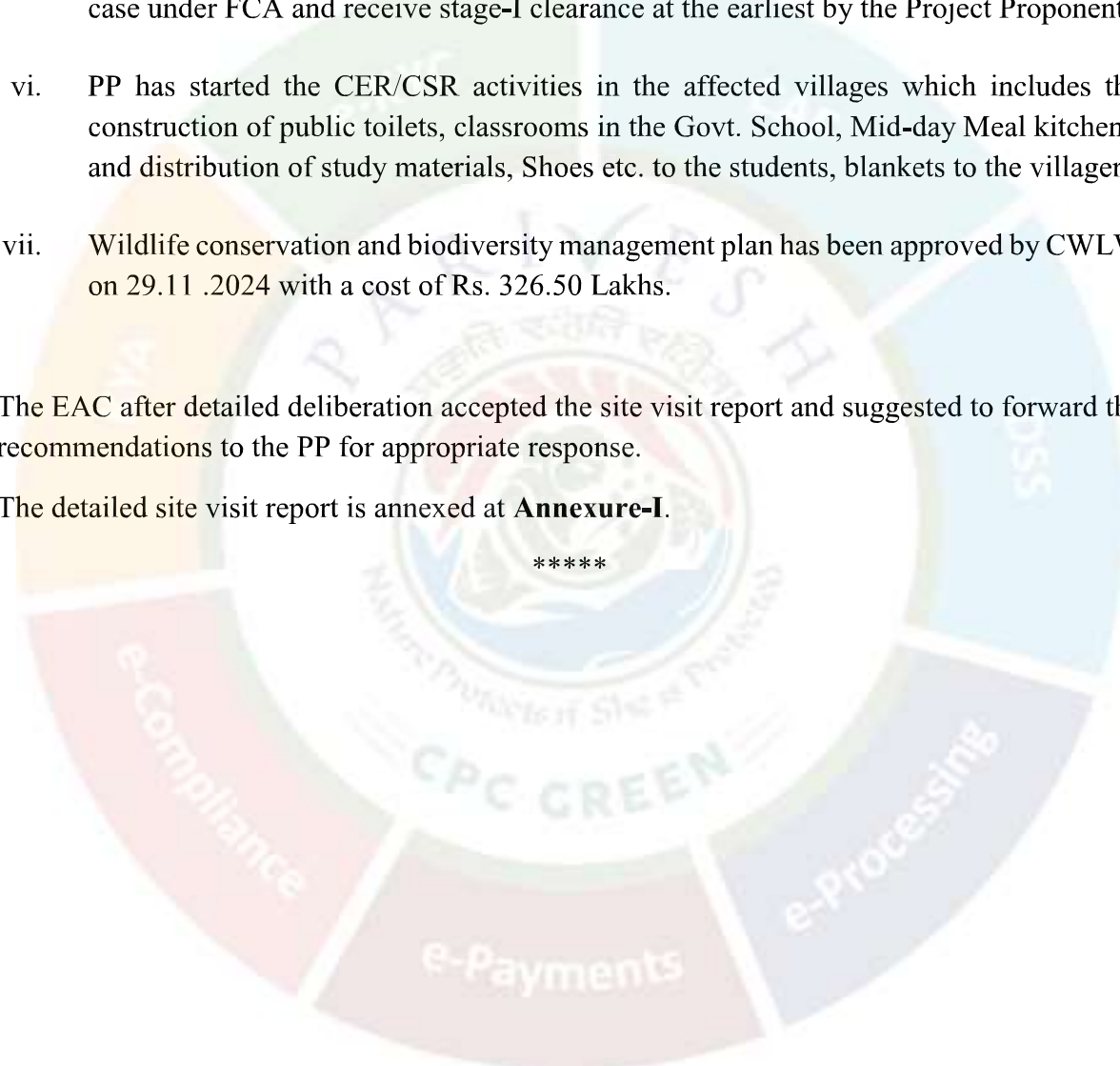
The Sub-committee after detailed deliberation observations and recommendations are as follows:

- i. The selected location is topologically stable and non prone to landslides as such. It is not therefore so fragile or sensitive The proposed project is not likely to cause considerable negative impacts on the geological conditions; rights and interests of people related to water resources of downstream locations if the conditions and safeguards imposed vide the TOR granted are complied with fully and comprehensively. Further, the Project Proponent is also to ensure strict compliance of the assurances given during public hearing.
- ii. The relocation of muck disposal site may not be insisted on while considering the proposal for clearance since the muck disposal site was found to have been selected properly. Further, ecologically better sites were not appeared available in nearby areas. Any relocation at this stage might lead to much changes and may lead to more adverse consequences. However, safety measures as contained in EMP and in other documents should be adhered to in toto.
- iii. Water for operation of project will be sourced from self-yield from catchment area. There will be no dependency on the nearby streams and already established dams/reservoirs as confirmed and assured by the proponent. As stated above, since there are not much agricultural or drinking requirements in or nearby areas, the dam intervention should not be a matter of concern. Nevertheless, project proponent, as assured, will ensure maintenance of e-flow and minimum threshold water availability all year around.

- iv. Nalla passing through the lower reservoir is a non-perennial and was containing very thin layer of water at the time of visit. However, as per the discussion held with the PP, natural flow of nallas/streams will not be restricted/diverted. Provision of ungated slipways has been considered to maintain natural flow of non-perineal nallas/streams.
- v. Out of total forest area of 243.74ha, 160.21ha is reserved forest, 73.85 ha is deemed forest and 9.68 ha is protected forest. The forest density in the proposed forest land involved in the project site is approx. 150 trees/la. A total of around 35000 trees and saplings are likely to be sacrificed. Therefore, it is important to insist on submitting the case under FCA and receive stage-I clearance at the earliest by the Project Proponent.
- vi. PP has started the CER/CSR activities in the affected villages which includes the construction of public toilets, classrooms in the Govt. School, Mid-day Meal kitchens, and distribution of study materials, Shoes etc. to the students, blankets to the villagers.
- vii. Wildlife conservation and biodiversity management plan has been approved by CWLW on 29.11 .2024 with a cost of Rs. 326.50 Lakhs.

The EAC after detailed deliberation accepted the site visit report and suggested to forward the recommendations to the PP for appropriate response.

The detailed site visit report is annexed at **Annexure-I**.



Site visit Report on Proposed Bhavali Pumped Storage Project” (1500MW) at Village Jamunde, Tehsil Igatpuri, District Nashik and villages Kalbhonde and Kothale, Tehsil Shahpur Thane (Maharashtra)

In compliance to the MoEF&CC office order no. J-12011/08/2022-IA.I(R) (E-183170) dated 30.12.2024 the Sub-committee comprising of Ajay Kumar Lal, Member EAC (Hydro & River Valley project) and Dr. P. R. Sakhare, Scientist E Representative from MoEF&CC undertook site visit to the proposed Bhavali Pumped Storage Project” on 02.01.2025 and 03.01.2025. The sub-committee visited the upper dam, upper reservoir, lower dam, lower reservoir, muck disposal areas of Bhavali PSP. The attendees of the site visit included project proponent authorised representatives, their consultants, local staff and a few locals.

Background

The proposed Bhavali Pumped Storage Project (5X250MW+2X125MW) is a self-identified, green field project by the JSW Energy PSP Two Ltd, a subsidiary of JSW Energy Limited. The need for Bhavali PSP in Nashik and Thane district, Maharashtra, has been considered in context of the focus of State Government to stabilize the grid by installation of Pumped Storage project which leads to increase the share of renewable energy which is available in plenty within the state in general and in the country as whole. The project is an off-stream project, where water will be recycled between the proposed upper and lower reservoir in one daily cycle of peaking (7.78 hour) and one daily pumping cycle (8.79 hour). The total land requirement for the project has been assessed as 278.92 ha of which private land is 35.18 ha and forest land is 243.74 ha. Forest land diversion case has been submitted vide FP/MH/HYD/153240/2022, dated 06.03.2022 on Parivesh Portal.

In this background, Terms of Reference (TOR) was granted by the MoEF&CC, vide letter no. J-12011/08/2022-IA.I(R), 27.06.2022 and accordingly, Public hearing were conducted on 10.01.2024 for Nashik District and on 13.02.2024 for Thane District (Maharashtra). Final EIA report was submitted to MoEF&CC on 18.06.2024 and an EDS was generated on 03.07.2024, in which clarification w.r.t. change in project area from ToR was asked. Reply of the same has been submitted on 23.07.2024 with proper justification for change in the project area. Thereafter, proposal was considered by Expert Appraisal Committee (EAC) in the 14th meeting conducted on dated 30.08.2024. In meeting, it was recommended that the Sub-committee of EAC shall conduct a site visit prior to reconsideration for EC. The sub-committee undertook site visit on 2nd and 3rd January, 2025 to assess ground conditions and likely environmental impacts due to project intervention.

General Observations

Topography : Located in the north western edge of the Deccan Plateau along Sahyadri Range of the Western Ghat, the proposed project area is hilly terrain-with undulating rocky (mainly volcanic basalt) subsurface and having thin layer of dominant reddish brown top soil. Slope of the land varies unevenly from comparatively flattened near proposed upper reservoir (5-15 %) to steeper (30-45 %) at the proposed lower reservoir area.

Vegetative cover : Hard strata with sparse bushy covering of ground has resulted in devoid natural thick greening. The area was found to have a few barren patches too. Some patches contain good forest cover while majority covered with mixed species bushes and scrub as undergrowth. Proposed lower reservoir and dam axis site support moderately dense (40%) forest having adequate number of trees mainly *Terminalia bellirica*, *Anogeissus latifolia*, *Madhuca longifolia*, *Adina cordifolia* etc. Upper Reservoir site cover is mixed moist subtropical sub type with less canopy density and open forest (10-20 %). NTFPs such as herbal and commercial leaves, *amla mahua, ber*, etc are found but not in abundance. Soil being shallow with rocky base, the vegetative growth and productivity is sluggish resulting in not much variability in floral diversity. First hand assessment of faunal diversity could not be possible in a day visit. At a glance, no evidence of big mammals or cats could be traced or found. Available documents and certificates relating to their presence, movements or corridors will lead to drawing conclusions on this aspect.

Water availability and impact on flow of water : The area records an average annual rainfall of 3000 mm which is much above normal and therefore it can be termed as wet region. Notwithstanding, due to impervious rocky land surface water infiltration or holding capacity is not befitting. However since water requirement is not being high (no cropping or habitation as such around) water scarcity is not an issue in spite of non poundage or storage. The rivulet on which the dam is proposed is in gorge shape cross sections and appears to be seasonal massive carrier of water during monsoon. During lean season, as at present, it has thin volume of water flowing.

Human Settlement and Habitation : The area mostly being a reserve and protected forest land and in interior of the Tehsil, only scattered few houses in a couple of villages were noticed in the fringe connecting areas. In addition, agricultural or cultivated lands were found to be nominal. Rehabilitation and Resettlement issues therefore are not of much concern

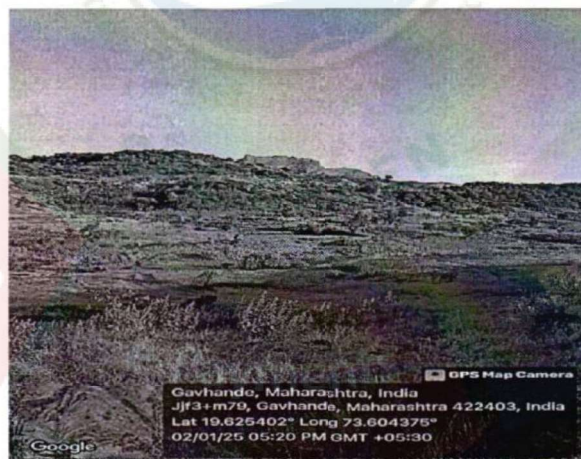
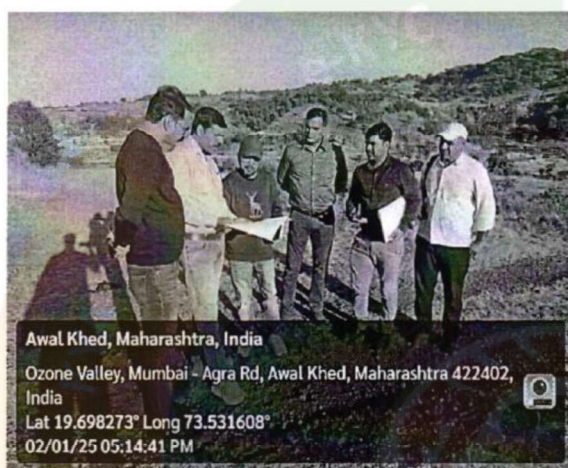
Specific Observations and Recommendations

1. The selected location is topologically stable and non prone to landslides as such. It is not therefore so fragile or sensitive. The proposed project is not likely to cause considerable negative impacts on the geological conditions; rights and interests of people related to water resources of downstream locations if the conditions and safeguards imposed vide the TOR granted are complied with fully and comprehensively. Further, the Project Proponent is also to ensure strict compliance of the assurances given during public hearing.
2. The relocation of muck disposal site may not be insisted on while considering the proposal for clearance since the muck disposal site was found to have been selected properly. Further, ecologically better sites were not appeared available in nearby areas. Any relocation at this stage might lead to much changes and may lead to more adverse consequences. However, safety measures as contained in EMP and in other documents should be adhered to in toto.
3. Water for operation of project will be sourced from self-yield from catchment area. There will be no dependency on the nearby streams and already established dams/reservoirs as confirmed and assured by the proponent. As stated above, since there are not much agricultural or drinking requirements in or nearby areas, the dam intervention should not be a matter of concern. Nevertheless, project proponent, as assured, will ensure maintenance of e-flow and minimum threshold water availability all year around.
4. Nalla passing through the lower reservoir is a non-perennial and was containing very thin layer of water at the time of visit. However, as per the discussion held with the PP, natural flow of nallas/streams will not be restricted/diverted. Provision of ungated slipways has been considered to maintain natural flow of non-perennial nallas/streams.
5. Out of total forest area of 243.74 ha, 160.21 ha is reserved forest, 73.85 ha is deemed forest and 9.68 ha is protected forest. The forest density in the proposed forest land involved in the project site is approx. 150 trees/ha. A total of around 35000 trees and saplings are likely to be sacrificed. Therefore, it is important to insist on submitting the case under FCA and receive stage-I clearance at the earliest by the Project Proponent.
6. PP has started the CER/CSR activities in the affected villages which includes the construction of public toilets, classrooms in the Govt. School, Mid-day Meal kitchens, and distribution of study materials, Shoes etc. to the students, blankets to the villagers.

7. Wildlife conservation and biodiversity management plan has been approved by CWLW on 29.11.2024 with a cost of Rs. 326.50 Lakhs.

Photographs of the site visit:

Upper Reservoir (2nd Jan 2024)



Lower Reservoir (3rd Jan 2024)



Shindal

09.01.25 (A K Lal)

Signature of member

Imy Sakhare
09/01/2025

Signature of MoEFCC
Representative

ATTENDANCEATTENDANCE SHEET22nd MEETING OF EXPERT APPRAISAL COMMITTEE (EAC)(RiverValley & Hydroelectric Sector)

DATE & TIME : 10th January 2025 from 10:30 AM to 2:30 PM
 VENUE : Narmada Conference Hall Ground Floor Jal Wing
 Indira Paryavaran Bhawan New Delhi

Sl. No.	Name of Member	Role	Signature
			[10.01.2025]
1.	Prof. G.J. Chakrapani	Chairman	G. J. Chakrapani
2.	Shri Ajay Kumar Lal	Member	Online
3.	Dr. Udaykumar R.Y.	Member	Online
4.	Dr. Mukesh Sharma	Member	
5.	Dr. J.V. Tyagi	Member	Online
6.	Shri Kartik Sapre	Member	Online
7.	Dr. A.K. Sahoo	Member	Online
8.	Dr. B.K. Das	Member	Online
8.	Dr. J. A. Johnson	Member	
9.	Shri Rajeev Varshney	Member	Rajeev
10.	Representative of CWC	Member	Online
11.	Shri Yogendra Pal Singh	Member Secretary	Y.P.S.

Approval of the Chairman

Re: [WARNING: ATTACHMENT(S) MAY CONTAIN MALWARE]Fwd: Draft MOM of the 22nd EAC meeting held on 10.1.2025-reg.

CG Chakrapani GovindaJoseph <govind.chakrapani@es.iitr.ac.in>

Wed, 22 Jan 2025 10:20:19 AM +0530 *

To "Yogendra Pal Singh" <yogendra78@nic.in>

Cc "chakrapani govind" <chakrapani.govind@gmail.com>

Approved.
Chakrapani

From: "Yogendra Pal Singh" <yogendra78@nic.in>

To: "Chakrapani GovindaJoseph" <govind.chakrapani@es.iitr.ac.in>, "chakrapani govind" <chakrapani.govind@gmail.com>

Sent: Wednesday, January 22, 2025 10:07:13 AM

Subject: [WARNING: ATTACHMENT(S) MAY CONTAIN MALWARE]Fwd: Draft MOM of the 22nd EAC meeting held on 10.1.2025-reg.

Dear Sir,

The draft MOM of the 22nd EAC meeting was circulated to all members of the EAC. No comments received so far. Accordingly, the draft MOM of 22nd EAC meeting held on 10.01.2025 is attached herewith for approval please.

With Regards,

Yogendra Pal Singh
Scientist 'F'
Government of India
M/o Environment, Forest and Climate Change
Room No. 236, 2nd Floor, Vayu Wing
Indira Paryavaran Bhawan
Jor Bagh, New Delhi-110003
Tele-fax: 011-20819364

