

**MINUTES OF THE 28<sup>TH</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 31<sup>ST</sup> MAY, 2022 FROM 10:30 AM – 1:30 PM THROUGH VIDEO CONFERENCE.**

The 28<sup>th</sup> meeting of the re-constituted EAC for River Valley & Hydroelectric Projects organized by the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi, was held on 31<sup>st</sup> May, 2022 through video conference, under the Chairmanship of Dr. K. Gopakumar. The list of Members present in the meeting is at Annexure.

**Agenda No. 28.1**

**Confirmation of the minutes of 27<sup>th</sup> EAC meeting**

The minutes of the 27<sup>th</sup> EAC (River Valley Hydroelectric Project) meeting held on 9<sup>th</sup> May, 2022 were confirmed.

**Agenda No. 28.2:**

**Channaka-Korata (Rudha) barrage on Penganga River-Interstate Irrigation Project (6677.00 Ha CCA), District Adilabad, Telangana by M/s Irrigation & CAD Department, Government of Telangana - Reconsideration of Environmental Clearance – reg.**

**[Proposal No. IA/TG/RIV/55126/2016; F. No. J-12011/17/2016-IA.I(R)]**

**28.2.1:** The proposal is for grant of Environmental Clearance (EC) to Channaka-Korata (Rudha) barrage on Penganga River-Interstate Irrigation Project (6677.00 Ha CCA), District Adilabad, Telangana by M/s Irrigation & CAD Department, Government of Telangana.

The proposal was earlier considered by the EAC (River Valley & Hydro-electric) in its 24<sup>th</sup> and 27<sup>th</sup> meetings held on 27.05.2019 and 23.09.2019, respectively. The EAC in its 27<sup>th</sup> meeting recommended the proposal for grant of Environmental clearance subject to submission of Stage I Forest Clearance.

**28.2.2** PP vide letter dated 29.02.2022 submitted following in response to the additional details sought by the EAC in its 27<sup>th</sup> meeting held on 23.09.2019:

<b>Sr.No.</b>	<b>Additional Detail Sought</b>	<b>Reply to ADS</b>
1.	From .kml file, it has been found that some forestland is involved in the state of Maharashtra. Therefore, Stage I Forest Clearance shall be submitted to the Ministry before the issuance	<ul style="list-style-type: none"><li>• The above referred Stage I Forest Clearance (FC) for the forest land is in respect of proposed pressure mains for Lift Irrigation Scheme is in the State of Maharashtra.</li><li>• The Superintending Engineer, Penganga</li></ul>

	<p>of Environmental Clearance to the project.</p>	<p>Project Circle, Adilabad has addressed the Superintending Engineer, Yavatmal Irrigation Circle, Yavatmal, Maharashtra vide letter No. SE/PGPC/ADB/DEE/AEE/84/M Dated 15-11-2019 with a copy to the Executive Engineer, LPP division, Yavatmal to ascertain whether forest land is involved in the lift scheme proposed in the Maharashtra under Channaka-Korata barrage under whose jurisdiction the Channaka-Korata barrage falls in Maharashtra state.</p> <ul style="list-style-type: none"> <li>• The Executive Engineer, LPP Division, Yavatmal, Maharashtra under control of Superintending Engineer, Yavatmal Irrigation Circle, Yavatmal, Maharashtra has verified and informed that there is no involvement of forest land in the lift scheme proposed by them under Chanakha - Korata Barrage as the alignment of pressure main is passing through the fringe of private lands sandwiched between two forest blocks.</li> <li>• To obtain the certified copy from the concerned DFO, the Executive Engineer, LPP Division, Yavatmal, Maharashtra has addressed the Deputy Conservator of Forests (DFO), Panderkhawda, Yavatmal, Maharashtra for issue of NOC, as there is no forest involved in the lift scheme proposed by them under Chanakha - Korata Barrage vide Lr. No.45/LPP/TS-1/ Chanakha Korata/Forest/2020 Dated:-06-01-2020.</li> <li>• The staff of Deputy Conservator Forest (DFO), Panderkhawda and Deputy Executive Engineer of LPP Division, Yavatmal with Assistant Executive Engineers of Lower Penganga Division, Adilabad has jointly verified alignment of pressure main on dated:07-12-2020 prior to joint inspection of Deputy Conservator Forest (DFO), Panderkhawda.</li> <li>• During the joint verification it was found that</li> </ul>
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		<p>pressure main from Km 5.00 to Km 5.10 crosses the local stream near village Sunkadi. Further it was informed by the staff of Deputy Conservator Forest (DFO), Panderkhawda as per latest notification area around both flanks of the said local stream is a notified forest area and forest area involved is around 0.5 Ha.</p> <ul style="list-style-type: none"> <li>• The proposal of lift scheme proposed by Maharashtra under Channakha-Korata Barrage is at primitive stage and Maharashtra state Government has not yet accorded administrative sanction to the lift scheme in Maharashtra so far.</li> <li>• Hence proposal of lift scheme proposed by Maharashtra is incommensurable to the stage of work of Channakha-Korata Barrage in Telangana state.</li> <li>• It has been requested to the Executive Engineer, LPP Division, Yavatmal, Maharashtra to expedite process of obtaining Stage-I clearance of the forest land involved in respect of proposed pressure main for Lift Irrigation Scheme in the State of Maharashtra and the process is going at snail pace due to covid lockdowns, etc.</li> <li>• Copies of the correspondence with Maharashtra WRD officials are herewith enclosed.</li> </ul>
2.	As the Tippeshwar wildlife Sanctuary is located within 10 km away from the project boundary, NBWL clearance shall be obtained.	The proposals of wild life clearance of Chanaka-Korata Barrage was discussed in the 65 <sup>th</sup> Meeting of the Standing Committee of National Board for Wild Life held on 24 <sup>th</sup> September 2021 through video conference under Chairmanship of Hon'ble Minister for Environment, Forest & Climate Change. After discussions, the Standing Committee of National Board for Wild Life decided to recommend the proposal for wild life clearance of Chanaka-Korata Barrage. (Copy of Letter of MoEF&CC, Wildlife Division, New Delhi is enclosed).

3.	Necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and subsequent amendments thereof.	Will be complied as desired.																						
4.	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.	Will be complied as desired.																						
5.	The project proponent shall comply with the provisions contained in this Ministry's OM No. 22-65/2017-IA.III dated 1 <sup>st</sup> May, 2018 regarding Corporate Environment Responsibility (CER). 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.	<p>An amount of Rs 6.00 Cr is earmarked in EMP towards Corporate Environment Responsibility (CER).</p> <table border="1" data-bbox="778 869 1430 1935"> <thead> <tr> <th data-bbox="778 869 887 958">S.No</th> <th data-bbox="887 869 1214 958">Item proposed in CER</th> <th data-bbox="1214 869 1430 958">Amount in Rs. Cr</th> </tr> </thead> <tbody> <tr> <td data-bbox="778 958 887 1039">1.</td> <td data-bbox="887 958 1214 1039">Training and Skill Development</td> <td data-bbox="1214 958 1430 1039">1.50</td> </tr> <tr> <td data-bbox="778 1039 887 1256">2.</td> <td data-bbox="887 1039 1214 1256">Drinking water supply, Sanitation, Drainage Development &amp; Solar electrification.</td> <td data-bbox="1214 1039 1430 1256">1.50</td> </tr> <tr> <td data-bbox="778 1256 887 1337">3.</td> <td data-bbox="887 1256 1214 1337">Public Health Care Centres.</td> <td data-bbox="1214 1256 1430 1337">0.75</td> </tr> <tr> <td data-bbox="778 1337 887 1464">4.</td> <td data-bbox="887 1337 1214 1464">Primary &amp; Higher School Development.</td> <td data-bbox="1214 1337 1430 1464">0.75</td> </tr> <tr> <td data-bbox="778 1464 887 1890">5.</td> <td data-bbox="887 1464 1214 1890">Ecological Development of the Tippeshwar Wildlife Sanctuary and other important water bodies in both States as per the suggestions of the local forest authorities.</td> <td data-bbox="1214 1464 1430 1890">1.520</td> </tr> <tr> <td data-bbox="778 1890 887 1935"></td> <td data-bbox="887 1890 1214 1935">Total</td> <td data-bbox="1214 1890 1430 1935">6.00</td> </tr> </tbody> </table>		S.No	Item proposed in CER	Amount in Rs. Cr	1.	Training and Skill Development	1.50	2.	Drinking water supply, Sanitation, Drainage Development & Solar electrification.	1.50	3.	Public Health Care Centres.	0.75	4.	Primary & Higher School Development.	0.75	5.	Ecological Development of the Tippeshwar Wildlife Sanctuary and other important water bodies in both States as per the suggestions of the local forest authorities.	1.520		Total	6.00
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	villagers as per the requirements and suitability, in the job/ other opportunities in the project, etc.	
7.	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	Will be complied as desired.
8.	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.	Will be complied as desired.
9.	From the above, it is clear that PP had to submit the copy of Stage-I FC for the forest land involved in the project. The same is till awaited. The requisite document may be furnished at the earliest so as to process the matter in the Ministry.	The forest area involved in Maharashtra state for underground pressure main is around 0.5 Ha. Further in this connection it is submitted that under reference 3 cited, in case of Lower Penganga Interstate Project, the MoEF & CC has issued the Environmental Clearance to the Maharashtra portion of works in the 1 <sup>st</sup> instance and subsequently the Environmental Clearance of Telangana portion of works was accorded separately under reference 4 cited by the MoEF & CC for the same work. In view of the above, I once again request the Member Secretary, IA-I (RV & HEP) Ministry of Environment, Forest & Climate Change, Govt of India, New Delhi arrange to consider to issue proceedings of Environmental Clearance to Channakha Korata (Rudha) Barrage pertaining to common components of Barrage and canal works in Telangana state pending Environmental Clearance to canal work of Maharashtra portion of the project in the same analogy as it was done in respect of Lower Penganga Interstate Project, as the Standing Committee of National Board for

		Wild Life had already recommended the project under reference 7 <sup>th</sup> cited for Wild life clearance w.r.t Tippeshwer Wildlife Sanctuary. Copies of above references are enclosed along with this letter.
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**28.2.3:** The details of the project submitted by project proponent and ascertained from the document submitted are mentioned below:

- i. The Terms of Reference was accorded by MoEF&CC on 5<sup>th</sup> September, 2016 to Channaka-Korata (Rudha) barrage on Penganga River - Interstate Irrigation Project, Adilabad district of Telangana by Irrigation & CAD department, government of Telangana.
- ii. In the Interstate Board (ISB) meeting held at Mumbai on 23.08.2016, both Telangana and Maharashtra states have signed the interstate agreement of Channakha-Korata barrage and in this meeting construction of Channakha-Korata barrage by Telangana state has been signed. As per the agreement, 42.48 MCM (1.5 TMC) of water will be shared between Telangana and Maharashtra states in the ratio of 80:20 i.e., 1.2 TMC and 0.3 TMC respectively.
- iii. The Channaka-Korata Barrage Project (Rudha), is a joint project between the States of Maharashtra and Telangana on River Penganga and it is independent of the joint Lower Penganga Project, which envisages construction of a barrage across River Penganga on down stream of Lower Penganga Project to irrigate an of 6,677.00 ha (5,463.00 ha in Telangana and 1,214.00 ha in Maharashtra). Command area lies in 14 villages of three mandals viz., Tamsi, Adilabad and Jainad in Adilabad district of Telangana state and 9 villages in Kelapur tehsil of Yavatmal district in Maharashtra state. The Gross Command Area of the project is 10,442.913 ha.
- iv. Total land requirement is 228.08 ha which is entirely private land. Total submergence area is about 31.16 Acres in Telangana state. A total of 23 villages consisting of 283 persons are likely to be affected due to this project. The Government of Telangana has already acquired this private land with an estimated R&R budget of Rs. 17.8 Crores. The total cost of the project is about Rs. 399.16 Crores and is proposed to complete the construction work in 2 years.
- v. The staff of Deputy Conservator Forest (DFO), Panderkhawda and Deputy Executive Engineer of LPP Division, Yavatmal with Assistant Executive Engineers of Lower Penganga Division, Adilabad has jointly verified alignment of pressure main on dated: 07-12-2020 prior to joint inspection of Deputy Conservator Forest (DFO), Panderkhawda.
- vi. During the joint verification it was found that pressure main from Km 5.10 to Km 5.40 crosses the local stream near village Sunkadi. Further it was informed by the staff of Deputy Conservator Forest (DFO), Panderkhawda as per latest notification area around both flanks of

the said local stream is a notified forest area. The forest area involved in Maharashtra state for underground pressure main is around 0.5 Ha.

- vii. The proposal of lift scheme proposed by Maharashtra under Channakha-Korata Barrage is at primitive stage and Maharashtra state Government has not yet accorded administrative sanction to the lift scheme in Maharashtra so far.
- viii. Hence proposal of lift scheme proposed by Maharashtra is incommensurable to the stage of work of Channakha -Korata Barrage in Telangana state.
- ix. It has been requested to the Executive Engineer, LPP Division, Yavatmal, Maharashtra to expedite process of obtaining Stage-I clearance of the forest land involved in respect of proposed pressure main for Lift Irrigation Scheme in the State of Maharashtra and the process is going at snail pace due to covid lockdowns, etc.
- x. The Executive Engineer, LPP Division, Yavatmal vide their Lr. No. 1144/LPP/ T-1/Channakha-Korta/2022 Dated: 10-05-2022 has informed that as and when the Government of Maharashtra accords administrative sanction to the proposed Channakha Lift Irrigation scheme, the Stage-I forest proposal will be submitted to the Divisional Forest Officer, Pandharkawada, Dist Yavatmal.
- xi. A PIL No.105 of 2018 was filed by Sri Wasudeo S/O LaxmanraoVidhate of Maharashtra State before the Hon'ble High Court of Judicature at Bombay, Bench at Nagapur on various activities such as (1) Stone quarrying activity in ESZ, (2) Illegal construction of commercial resorts, (3) Inter State barrages, (4) National Highway passing through the ESZ and (5) Human-Animal Conflict. In the affidavit filed by the applicant, the Chief Engineer (Projects), Adilabad is the 16<sup>th</sup> respondent under whose jurisdiction the Chanka-Korata barrage is located. A counter affidavit was already filed by the Chief Engineer (Projects), Adilabad and the case had not come up for hearing before the bench till today.
- xii. In view of the above, PP vide letter dated 29.03.2022 requested to accord Environmental Clearance to Channakha – Korata (Rudha) Barrage pertaining to common components of Barrage and canal works in Telangana state pending Environmental Clearance to canal work of Maharashtra portion of the project in the same analogy as it was done in respect of Lower Penganga Interstate Project, as the Standing Committee of National Board for Wild Life had already recommended the project vide Letter F. No. 6-91/2021 WL Dated:- 22-10-2021 by the Wildlife Division of MoEF & CC, New Delhi for Wild life clearance w.r.t Tippeshwer Wildlife Sanctuary.

#### **28.2.4 The EAC during deliberations noted the following:**

The EAC noted that the EAC in its 27<sup>th</sup> meeting recommended the proposal for grant of Environmental clearance subject to submission of Stage I Forest Clearance. Further, Standing Committee of National board for wildlife recommended the proposal for wildlife clearance in the

65<sup>th</sup> meeting held on 24<sup>th</sup> September, 2021 and the same has been accorded by the Wildlife division, MoEF&CC vide letter no 6-91/2021 WL dated 22.10.2021.

It was also noted that entire submergence is in Telangana region, and forest area involve in Maharashtra state for underground pressure main is 0.5 ha.

However, it was further noted that MoEF&CC has issued the Environmental Clearance to the Maharashtra portion of works for Lower Penganga Interstate Project in the 1<sup>st</sup> instance vide J.12011/68/2006-IA.I Dated 17-05-2007 and subsequently the Environmental Clearance of Telangana portion of works was accorded separately vide LR. No. J-10211/28/2012-IA.I Dated:- 28-05-2015 by the MoEF&CC for the same work.

During Interstate Board (ISB) meeting held at Mumbai on 23.08.2016, both Telangana and Maharashtra states have signed the interstate agreement of Channakha-Korata barrage. As per the agreement, 42.48 MCM (1.5 TMC) of water will be shared between Telangana and Maharashtra states in the ratio of 80:20 i.e., 1.2 TMC and 0.3 TMC respectively. Total cost of this barrage will be 100% born by Telangana State. There is only procedural delay in getting Forest Clearance for the part of canal work in Maharashtra Region. During the meeting the PP made commitment that complete cost of implementation of Environmental Management Plan & Catchment Area Treatment Plan will also be borne by the State of Telangana.

The EAC was of the view that the proposed project is not only for improving the irrigation facilities but it will also provide drinking water to the 18 villages in the Command area. The Environmental issues involved in the project have already been deliberated in detail while recommending the project for grant of EC. No other part of project is falling in forest area except underground pressure main in Maharashtra State. So, the request of PP may be accepted for granting Environmental Clearance to Channakha Korata (Rudha) Barrage for construction of common components of Barrage and Canal works in Telangana State pending Environmental Clearance to canal work of Maharashtra portion of the project. Environmental Clearance to canal work of Maharashtra portion of the project may be considered after submission of necessary forest clearance.

**28.2.5** *The EAC after detailed deliberations on the information submitted and as presented during the meeting agreed for **recommending** Environmental Clearance to Channakha Korata (Rudha) Barrage for construction of common components of Barrage and canal works in Telangana State:*

- i. Necessary clearances/permissions shall be obtained before start of construction of the project in Maharashtra region.*
- ii. Cost of implementation of Environmental Management Plan & Catchment Area Treatment Plan for whole project shall be borne by the State of Telangana.*
- iii. 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.*

- iv. 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.*
- v. 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.*
- vi. 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.*
- vii. 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.*
- viii. The Multi-Disciplinary Committee needs to be reconstituted and the meeting needs to be held at regular interval.*
- ix. 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). A dedicated team to oversee environmental management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis.*
- x. Necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and subsequent amendments thereof.*
- xi. 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.*
- xii. Preference to be given to the local villagers as per the requirements and suitability, in the job/ other opportunities in the project, etc.*
- xiii. 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*
- xiv. 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.*
- xv. Terms and conditions of the MoU signed between state of Telangana and Maharashtra regarding implementation of the Channakha Korata (Rudha) Barrage project shall be adhered with.*
- xvi. Environmental Clearance to canal work of Maharashtra portion of the project shall be considered after submission of necessary forest clearance.*

### **Agenda No. 28.3:**

**Sitamma Sagar Multi-Purpose Project (SSMPP) (320 MW) in an area of 1394.29 ha located at Village Ammagaripalli, Tehsil Aswapuram, District Bhadradi Kothagudem (Telangana) by M/s Irrigation and CAD department, Kothagudem, Government of Telangana- Reconsideration of Terms of Reference (TOR) - reg.**

**[Proposal No. IA/TG/RIV/251367/2022; F. No. J-12011/03/2022-IA.I (R)]**

**28.3.1:** The proposal is for grant of Terms of Reference (TOR) to Sitamma Sagar Multi-Purpose Project (SSMPP) (320 MW) in an area of 1394.29 ha located at Village Ammagaripalli, Tehsil Aswapuram, District Bhadradi Kothagudem (Telangana) by M/s Irrigation and CAD department, Kothagudem, Government of Telangana.

**28.3.2** The proposal was earlier considered by reconstituted EAC in its 23<sup>rd</sup> EAC meeting held on 28<sup>th</sup> January, 2022 and the proposal was deferred seeking additional information from Project Proponent (PP) on following points:

- i. Clarify that proposal is fresh or amendment/modification of granted EC on 07.01.2019 for Sita Rama Lift irrigation water project.
- ii. Certificate from chief wild warden stating that no wild life sanctuary/ National park is situated within 10km radius of the proposed project and no Wild Life corridor is falling in submergence area.
- iii. A Comparative chart shall be prepared of earlier EC for Sita Rama Lift irrigation water project and present proposal for power generation & irrigation need to be submitted.
- iv. Tentative estimation of muck generation with their disposal sites along with protection measures need to be submitted.
- v. PP need to submit that how much the power will be required to lift the water in all schemes (previous proposal and present proposal) water lift for irrigation and Power Generation.
- vi. Factual status report of the project from regional office, MoEF&CC need to be submitted.
- vii. An undertaking shall be submitted by the PP on stamp paper that no components and construction under the present proposal has not been started.
- viii. Breakup of total land area, with its submergence area and its possession status need to be submitted.
- ix. Necessary permission from DAE need to be submitted.
- x. Alternative of sites selection and justification of selecting location of Barrage to be mentioned. Sedimentation status of proposed two barrage needs to be assessed /Ground water depth in project vicinity area to be collected.

**28.3.3** PP submitted Point-wise replies by the vide letter dated 7<sup>th</sup> May, 2022 in response to additional details sought (ADS) by EAC in its 23<sup>rd</sup> meeting are as follows:

### **Query 1**

**Clarify that proposal is fresh or amendment/modification of granted EC on 07.01.2019 for Sita Rama Lift irrigation water project.**

**Reply:**

The earlier granted EC on 07.01.2019 was for Sita Rama Lift Irrigation Project which envisages construction of Head regulator on Upstream of Dummugudem Anicut to draw water from Godavari River through an approach canal with CBL at El +45m. to a quantum of water 65.25 TMC with a discharge at head is 9000 cusecs for an ayacut of 6.74 lakh acres (2.73 Lakh Ha.).

The proposed Sitamma Sagar Multi-Purpose Project is located just 200 m downstream of the existing Dummugudem anicut and the offtake of the ongoing Sita Rama Lift Irrigation Project located just 400 m upstream of the existing Dummugudem Anicut. The storage capacity of the barrage is 36.57 TMC with ponding level of El +63.000 m and thus enabling generation of Hydel Power of 320MW.

Due to construction of Sitamma Sagar Project Barrage the existing old Dummugudem Anicut will get submerged in the water and storage water will be utilized for the ongoing Sita Rama Lift Irrigation Project ayacut through existing approach canal situated upstream of the existing anicut. From this assured storage water the existing Heavy Water Plant will get water without interruption and existing Mission Bhagiradha drinking water supply schemes which serves entire Bhadradi Kothgudem district will get sufficient water in summer season also. The entire project head works are within the radius of 2 km only.

Hence the proposal is an amendment / modification to the EC given to the Sita Rama Lift Irrigation Project vide MoEF&CC Lr.No. No.J- 12011/16/2017-IA-I(R), Dt:07.01.2019.

**Query 2**

**Certificate form chief wild warden stating that no wild life sanctuary/ National park is situated within 10km radius of the proposed project and no Wild Life corridor is falling in submergence area.**

**Reply:** All the components of the project are outside the Eco Sensitive Zone Boundary of Kinnerasani Wild life sanctuary and it's Eco-sensitive Zone, which is the nearest protected area. The Chief Wild Warden has issued No Objection Certificate (NOC) vide its letter dated 08.04.2022.

**Query 3**

**A Comparative chart shall be prepared of earlier EC for Sita Rama Lift irrigation water project and present proposal for power generation & irrigation need to be submitted.**

**Reply:**

The earlier granted EC on 07.01.2019 was for Sita Rama Lift Irrigation Project which envisages construction of Head regulator at Dummugudem Anicut and to draw water from Godavari River through an approach canal with CBL at El +45.000m.	Sitamma Sagar Multi-Purpose Project is a amendment / modification which envisages the construction of Barrage across the Godavari River at 200m Downstream of Existing Dummugudem Anicut.
Quantum of water 65.25 TMC with discharge at head is 9000 cusecs to an ayacut of 6.74 lakh acres (2.73 Lakh Ha)	Quantum of water proposed to store is 36.57 TMC with ponding elevation +63.000m
The main components of the project are  i. Construction of Head regulator on the upstream of existing Dummugudem Anicut. ii. Construction of Lined gravity canals for a length of 243.20 KM. iii. Construction of four pump houses and Delivery systems iv. Laying of Pumping mains and v. Construction of CM & CD works across Main Canal.	The main components of the project are  i. Construction of barrage ii. Construction of Hydel power station generate Hydel power of 320 MW. iii. Supply of water to Sita Rama Lift Irrigation Project on needy base i.e., in draught situation in ayacut area and Nagarjuna Sagar Project ayacut.

#### Query 4

**Tentative estimation of muck generation with their disposal sites along with protection measures need to be submitted.**

**Reply:** It is estimated that about 11.20 Lakh cum of muck will be generated during construction of the Barrage and Power House. Further, based on the suitability and properties of the soil, it will be reused for formation of afflux bunds on either side all along the Godavari River in the project site and the boulders will be reused for slope protection as revetment to the Afflux bunds and also as coarse aggregate in concrete. It is estimated that about 9-10 Lakh Cum of soil, Rock can be reused. The rest is proposed to stack on Right side of the existing SRLIP Canal bank at an elevation of +61.500 m.

#### Query 5

**PP need to submit that how much the power will be required to lift the water in all schemes (previous proposal and present proposal) water lift for irrigation and Power Generation.**

**Reply:** There are 04 no.s of pump houses on the previous proposal of SRLIP for which EC was granted and total power requirement is 693.740 MW to lift the water from Canal for irrigation and the details of the pump houses are as below:

Sl No	Description of Pump House	Each Pump Discharge in Cumecs	Power Requirement in MW	Head in Mts

1	Pump House – 1 @Km.10.500 (B.G Kothuru, Aswapuram (M))	45.00	6 No.s x 25 = 150	+43.300 to +67.150 (23.85M)
2	Pump House – 2 @Km.45.075 (V.K Ramavaram, Mulakalapally (M))	42.48	6 No.s x 40 = 240	+62.200 to +110.000 (47.80M)
3	Pump House – 3 @Km. 57.075 (Kamalapuram, Mulakalapally (M))	42.00	5 No.s x 40 + 2 No.s x 30 = 260	+107.200 to +110.000 (52.580M)
		20.00		+107.200 to 200.00 (74.00M)
4	Pump House – 4 @km. 43.225 on Sathupally trunk Canal at Dibbagudem(V0, Dammapeta (M))	6.08	3 No.s x 10.5 + 2 No.s x 6.1 = 43.70	+192.000 to +266.000 (74.00M)
		5.60		+192.000 to +225.000 (33.00M)
<b>Total Power Requirement</b>			<b>693.70 MW</b>	

Whereas for the present proposal of Sitamma Sagar Multi-Purpose Project, no power is required for Power generation.

#### **Query 6**

**Factual status report of the project from regional office, MoEF&CC need to be submitted.**

#### **Reply:**

It was submitted that IRO, Hyderabad has monitored the project site on 24.02.2022 and monitoring report was submitted on 04.05.2022.

#### **Query 7**

**An undertaking shall be submitted by the PP on stamp paper that no components and construction under the present proposal has not been started.**

#### **Reply:**

An undertaking signed by Chief Engineer on 24.02.2022 was submitted on Non-Judicial Stamp stating that no components and construction of present proposal of Sitamma Sagar Multi Purpose Project which envisages Construction of Barrage with radial gates, hoisting arrangements including formation of guide bunds on either side of barrage with protection arrangements across Godavari river, downstream of existing Dummugudem anicut near Ammagaripalli (V). Aswapuram (M). Bhadradr Kothagudem District' is not yet started except geological

investigations like drilling of boreholes for foundation designs and formation of approach road to conduct the geological investigation is in progress.

#### **Query 8**

**Breakup of total land area, with its submergence area and its possession status need to submitted.**

#### **Reply:**

Protection Bunds are proposed on either side of River Godavari in order to restrict the submergence with in river boundary. An extent of 133.52 Sq.KM will be under submergence in river banks at FRL Condition in river on upstream of the proposed barrage. An extent of 3121.35 acres of Non-Forest land is to be acquired in which 1858.24 acres patta land, 1263.11 acres Government land in addition an extent of 316.30 acres forest land is to be diverted for the purpose of formation of Protection Bunds. Complete extent of Non-Forest land i.e., 3121.35 acres is acquired as on date. The DGPS co-ordinates of the Forest area were submitted PCCF, Hyderabad, Government of Telangana for verification & authentication vide Chief Engineer, Irrigation, Kothagudem Lr.No.CE(I)/ KTGM/DCE/DEE1/AE/DGPS/SSMPP/29M date 11.01.2022. In turn, PCCF, Hyderabad, Government of Telangana vide Lr.No.Rc.No.686/2022/FCA.4, Dt:03.03.2022 has instructed the conservator of Forest, the District Forest Officer, Bhadradi Kothagudem to verify absolute locations of Forest lands proposed for diversification with respect to Gazette notification. In respect of Compensatory Afforestation lands, the lands were identified by the District Collector, Bhadradi Kothagudem district and the DGPS survey is under progress and after completion, the proposals will be submitted to PCCF for authentication.

**Query 9 Necessary permission from DAE need to be submitted.**

#### **Reply:**

A letter was addressed to the General Manager, Heavy Water Plant, Manuguru requesting for No Objection Certificate from Chief Engineer, Irrigation, Kothagudem (Project Proponent) vide Lr. No. CE/ Irrigation/ KTDM/ DCE/ DEE(T)/ SSMPP/ 159/ M Dt: 28.02.2022. A joint meeting was also conducted with Heavy Water Plant, Manuguru authorities and the copy of the same is here with enclosed below. The Irrigation & CAD Department has agreed to take necessary steps to ensure the safety of the plant and the same was accepted by the Heavy Water Plant Authorities. Necessary permission will be obtained and submitted in due course.

#### **Query 10**

**Alternative of sites selection and justification of selecting location of Barrage to be mentioned. Sedimentation status of proposed two barrage needs to be asses /Ground water depth in project vicinity area to be collected.**

#### **Reply:**

No other alternative sites were proposed. This location was selected because of the following reasons.

1. This Proposed site is ideal location for construction of barrage and its storage capacity and further supply the water to ongoing Sita Rama Lift Irrigation Scheme which is just upstream i.e, 600 m of the proposed Sitamma Sagar Project barrage.
2. The foundation is met with rock (out cropped) which is economical for construction of barrage as per the report on Geological and Geotechnical investigations by the investigation team from the National Institute of Technology (NIT), Warangal vide their report no. NITW/CIVIL/GTED/SSMPP-4034/2021, Dt:17.03.2021 and inspection note of the Director, Engineering Geology Division, Geological Survey of India, Hyderabad, Dt:26.03.2021.
3. This location is suitable to supply the water to existing Heavy Water Plant and existing Mission Bhagiratha drinking water supply scheme.

#### **28.3.4 The EAC during deliberations noted the following:**

The EAC in the present meeting (28<sup>th</sup> meeting) deliberated on the information submitted (Form 1, PFR, etc.) and noted that the instant proposal for grant of terms of Terms of Reference (ToR) to Sitamma Sagar Multi-Purpose Project (SSMPP) (320 MW) in an area of 1394.29 ha located at Village Ammagaripalli, Tehsil Aswapuram, District Bhadradi Kothagudem (Telangana) by M/s Irrigation and CAD department, Kothagudem, Government of Telangana.

It was noted that PP has requested for amending the Existing EC, but EAC was of the view that since 320 MW electricity generation component would be added in the existing project, detailed assessment of possible environmental and social concerns is required.

The IRO, Hyderabad has monitored the site on 24.02.2022 and observed the following:

- i. The proposed Sitamma Sagar Multi-Purpose (SSMPP) barrage is located D/S of the approach channel of Sita Rama Lift Irrigation canal Approach road for the proposed project has been made. Excavation works are observed at site.
- ii. Construction of canal works for Sita Rama Lift Irrigation project is in process.
- iii. There is existence of Dummugudem Anicut across the Godavari river which is situated 200mts U/S of the proposed SSMPP barrage.
- iv. There is existence of Heavy water plant at the distance of 2-2.5km from the project site.
- v. The project proponent is submitted that the proposed construction of a barrage is the expansion of the Sita Rama Lift Irrigation Project.

**28.3.5** *The EAC after detailed deliberation on the information submitted and as presented during the meeting **recommended** for grant of Standard ToR to Sitamma Sagar Multi-Purpose Project (SSMPP) (320 MW & CCA 2.73 Lakh Ha) in an area of 3122.38 Acres located at Village Ammagaripalli, Tehsil Aswapuram, District Bhadradi Kothagudem (Telangana) by M/s Irrigation and CAD department, Kothagudem, Government of Telangana, under the provisions of EIA Notification, 2006 and as amended along with the following additional/specific ToR:*

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

- i *The project involves diversion of 130.71 ha of forestland. Forest clearance shall be obtained as per the prevailing norms of Forest (Conservation) Act, 1980. Application to obtain prior approval of Central Government under the Forest (Conservation) Act, 1980, for diversion of forestland required, should be submitted as soon as the actual extent of forestland required for the project is known, and in any case, within six months of issuance of this letter.*
- ii *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 in the **Godavari River**.*
- iii *Impact of developmental activity/project on the wildlife habitat and wildlife corridors, if any along with mitigation measures within study area shall be studied.*
- iv *The longitudinal connectivity/Free flowing sketch be provided in the EIA/EMP report.*
- v *Environmental matrix during construction and operational phase needs to be submitted. Matrix formulated on the basis of detailed study and field survey of flora and Fauna methodology used shall be mentioned in the EIA report.*
- vi *Endemic plant and animal species found in the area concerned shall be provided instead listing entire endemic species found in the State.*
- vii *Details of Flora and Fauna reported in submergence area, Nos. of tree along with their density and nomenclature required to be cut for barrage creation and other project component.*
- viii *Fisheries Management Plan shall be prepared along with other Environmental Safety Measures for small stream/Nallah, Thandava Reservoir and Thandava River shall be incorporated in the EIA/EMP report.*

**(B) Socio-economic Study**

- ix *All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/EMP report in the relevant chapter. Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the CER in compliance of the Ministry's OM F.No.22-65/2017-IA.III dated 30<sup>th</sup> September, 2020 shall be submitted.*



- x *Tentative no. of project affected families displaced due to acquiring of private land shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.*
- xi *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.*

**(C) Muck Management**

- xii *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.*
- xiii *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.*
- xiv *Details of water sprinkling arrangements for arresting the fugitive / dust, emission from transportation and other project activities in project construction area.*
- xv *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.*
- xvi *Restoration plan for construction area including dumping site of excavated materials by levelling, filling up of burrow pits, landscaping etc.*

**(D) Disaster Management**

- xvii *CAT plan, Dam break analysis, Disaster Management Plan and Fisheries Management Plan be prepared along with other EMPs and incorporated in the EIA/EMP report.*
- xviii *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.*
- xix *Pre-DPR Chapters viz., Hydrology, Layout Map and Power Potential Studies duly approved by CWC /CEA shall be submitted.*

**(E) Miscellaneous**

- xx Both capital and recurring expenditure under EMP shall be submitted.
- xxi DPR of the project power generation capacity of 320MW duly approved by the CWC and CEA be submitted.
- xxii 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
- xxiii Necessary clearance from DAE shall be obtained.

**Agenda No. 28.4:**

**Idukki Hydro Electric Project (800 MW) in an area of 127 ha at Village -Arakulam, Tehsil Thodupuzha, District Idukki, Kerala by M/s Kerala State Electricity Board Limited– Terms of Reference (TOR) – reg.**

**[Proposal No. IA/KL/RIV/262627/2022; F. No. J-12011/06/2022-IA.I (R)]**

**28.4.1:** The proposal is for grant of Terms of Reference (TOR) to Idukki Hydro Electric Project (800 MW) in an area of 127 ha at Village -Arakulam, Tehsil Thodupuzha, District Idukki, Kerala by M/s Kerala State Electricity Board Limited.

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

- i. Idukki Hydro Electric Project (780 MW) is located on Periyar River and the source of water for this scheme is water stored in existing Idukki reservoir. The proposed project will generate 800 MW of power by utilizing net design head of 654.57m.
- ii. The proposed Idukki Extension Project is located at Moolamattom of Idukki district of Kerala. The project falls in the Lat. N 9° 49' 42" and Long. E 76° 48' 12". It is located 20 KM towards south from District headquarters. The Power house is located at 550m away from the existing Idukki Hydro Electric Project.
- iii. The Idukki Hydroelectric Project is the biggest Hydroelectric Project on Periyar River Basin in Kerala. It comprises of three dams, namely Idukki, Cheruthony and Kulamavu with interconnecting reservoirs. The 169m high Idukki dam is the first arch dam in India and other two dams of Idukki reservoir system are concrete gravity dams. The water is drawn from Kulamavu Reservoir through the power intake of the existing HE project.

- iv. The scheme envisages construction of a power house to be located about 500 m from existing Moolamattom power house of Idukki Project together with an intake structure from existing Kulamavu reservoir, power tunnel, pressure shaft, tail race tunnel etc. the tail race tunnel would discharge its water through open channel into Thodupuzha River.
- v. The project is envisaged to be Conventional Hydro Electric Scheme utilising water from existing Idukki Reservoir in addition to the existing operational hydroelectric scheme. The water conductor system will connect the Idukki reservoir to tail race exit in Thodupuzha River through an underground power house.
- vi. The scope of work envisages preliminary studies for:
  - a) Collection of hydrological/meteorological data and assessment of water availability for the project.
  - b) Use of existing Idukki reservoir of gross capacity 1996.3 MCM created by three dams across periatr river.
  - c) Selection of an underground power house with numbers of pump-turbines of a particular capacity along with an auxiliary system. Working out the tentative orientation of the powerhouse on preliminary geotechnical, engineering and hydraulic aspects.
  - d) An underground Transformer Cavern with number of Power Transformers for each machine.
  - e) Preliminary geological, geotechnical and engineering appraisal of Head Race Tunnel (Concrete Lined), pressure shaft (steel lined) and Tail Race Tunnel for conveyance of water.
  - f) Power potential studies on the line of present power scenario and future demands.
  - g) Tentative projection of cost and benefits of the project.
- vii. The catchment area of Idukki dam is 675.89 sq.km. The average rainfall in Idukki catchment is 3549 mm. The average water availability inflow into reservoir in Idukki reservoir is 1687.23 MCM. The FRL of this reservoir is El. 732.43 m. Moreover, the proposed scheme do not envisage any change in existing operating levels of the reservoir. No structural modifications/interface are required in existing dam structure. The elevation area capacity curves as available are being recommended for utilization since the quantum of water being used for proposed hydroelectric project study is miniscule. The tail water from Idukki Extension scheme is also discharging to the same river as that of existing scheme.
- viii. The power potential studies have been carried out for power potential with idduki reservoir and can be optimized upto 1580 MW based on the 25 years of hydrological data. The carryover reservoirs simulation studies carried out for FRL at El. 732.43 m, MDDL at El. 694.94 m and maximum TWL ot El. 49.3 m.
- ix. Further, as existing Idukki Hydroelectric project is operating at 780 MW with 6 nos. of unit of 130 MW each. Therefore, Idduki Extension Scheme is proposed to have an Installed

Capacity of 800 MW wherein 4 nos. units is recommended with unit size of 200 MW each with Tecno-economic consideration. Based on the study, the key details of the scheme are summarized below:

Installed Capacity (MW)	800
No of units	4
Unit Size (MW)	200
Head (min) (m)	629.58
Net Rated Head (m)	654.57
Head (max) (m)	677.07
Daily (min) Peaking hours in lean flow (for simultaneour operation of both existing and proposed scheme)	4 Hours 8 minutes (4.13 Hours)
Annual Energy Generation (GWh) from proposed scheme	1301.27
Annual Energy Generation (GWh) from both schemes	2569.70

- x. **Land Requirement:** The total land to be acquired for the project is approximately 127 Ha. Based on the site visit, most of the land required lies in forest area. The various components of the land required is shown in Table below:

S. No.	Appurtenance	Area (Ha.)
1.	Project Component	101
2.	Roads	6
3.	Muck Disposal/ Quarry Site	15
4.	Contractor's facility	5
	<b>Total</b>	<b>127</b>

- xi. **Ecological Sensitive Area, if any within 10km of project:** The Idukki Wildlife Sanctuary is 4.5 km from the project. All the proposed project components are underground and outside ESZ except for intake well, which is approximately 150 m inside the Idukki Reservoir (near Kulamavu Dam). At present the draft notification for demarcation of ESZ boundary of Idukki WL sanctuary has been issued.
- xii. **Alternative site:** Two options i.e. Alternative-1A, Alternative-1B and Alternative-2 have been studied on the basis of site visit and available sources (Geological map, District Resource Map etc) techno-economic feasibility. Accordingly, two possible layouts are selected for further studies. Alternative-1A is as per the Layout proposed in Preliminary Report prepared by KSEB which is located northwards of the existing Idukki H. E. Project and involves approx. 7.9 km TRT Length. Considering 7.9 Km long TRT of Alternated-1A, it was found necessary to explore other possible alternatives. Accordingly, has shorter TRT

(2.0 km length) for Alt-1B & Alt-2 were identified which is proposed southwards of the existing Idukki H.E. Project proposing a small downstream balancing reservoir to stagger the discharge from extension scheme to avoid flooding in Thodupuza River thereby eliminating 7.9 km long TRT of Alt-1A.

Following is the Broad Comparison of all the Alternatives.

Particulars	Alternative: 1A	Alternative: 1B	Alternative: 2
<b>Design Head (m)</b>	648	654	570
<b>Installed Capacity (MW)</b>	780	800	800
<b>HRT (Length and Dia.)</b>	2440 m (L), 7.0 m (Dia.)	1900 m (L), 7.0 m (Dia.)	2440 m (L), 7.0 m (Dia.)
<b>Inclined Pressure shaft (No., Length, Dia.)</b>	2 No., 775 m (L), 3.8 m (Dia.)	2 No., 850 m (L), 3.8 m (Dia.)	2 No., 830 m (L), 3.8 m (Dia.)
<b>TRT (Length, Dia.)</b>	7890 m (L), 7.0 m (Dia.)	1465 m (L), 7.5 m (Dia.)	510 m (L), 7.0 (Dia.) TRT
<b>TRC (Length, Bed Width, Depth)</b>	350 m (L), 10.0 m (B), 4.0 m (H)	730 m (L), 10.0 m (B), 4.0 m (H)	-----
<b>Requirement of New Reservoir</b>	No	No	Yes

In the view of the above finding, a modified layout i.e Alternative-1B is finally proposed in the present study.

- xiii. **Estimated cost:** The estimated cost of the project is ₹ 2669.67 Crores at August, 2021 price levels and annual energy generation of 1301.27 GWh per year and is proposed to be completed in a period 5 years.
- xiv. **Project Benefits:** The scheme would afford energy generation of 1301.27 GWh annually. For assessing the tariff, design energy generation of 1236.21 GWh, calculated with 95% capacity availability in a normal dependable year, has been adopted. The project would provide 800 MW of 4 hours daily peaking capacity benefit.
- xv. **Employment Generation:** The peak labour strength likely to be employed during project construction phase is about 1500 workers and 500 technical staff.

#### 28.4.3 The EAC during deliberation noted the following:

The EAC deliberated on the information submitted and noted that the instant proposal is for grant of terms of Reference (ToR) for conducting EIA Study for construction of Idukki Hydro Electric Project (800 MW) in an area of 127 ha at Village -Arakulam, Tehsil Thodupuzha, District Idukki, Kerala by M/s Kerala State Electricity Board Limited. It was noted that the Idukki Wildlife Sanctuary is 4.5 km from the project. Project components such as intake well, which is approximately 150 m inside the Idukki Reservoir (near Kulamavu Dam). EAC decided for site visit of EAC sub-committee members before appraisal of EC for deciding specific safeguard measures in terms of habitat fragmentation & degradation, conservation of endemic wild species in Idukki Wildlife Sanctuary.

**28.4.4** *The EAC after detailed deliberation on the information submitted and as presented during the meeting recommended for grant of Standard ToR to for conducting EIA Study for construction of Idukki Hydro Electric Project (800 MW) in an area of 127 ha at Village - Arakulam, Tehsil Thodupuzha, District Idukki, Kerala by M/s Kerala State Electricity Board Limited, under the provisions of EIA Notification, 2006 and as amended along with the following additional/specific ToR:*

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

- i Application for necessary clearance from NBWL shall be submitted along with wildlife conservation plan approved by PCCF.*
- ii The project involves diversion of 111 ha of forestland. Forest clearance shall be obtained as per the prevailing norms of Forest (Conservation) Act, 1980. Application to obtain prior approval of Central Government under the Forest (Conservation) Act, 1980, for diversion of forestland required, should be submitted as soon as the actual extent of forestland required for the project is known, and in any case, within six months of issuance of this letter.*
- iii 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 from the existing reservoir.*
- iv Impact of developmental activity/project on the wildlife habitat and wildlife corridors, if any along with mitigation measures within study area shall be studied.*
- v The longitudinal connectivity/Free flowing sketch be provided in the EIA/EMP report.*
- vi Environmental matrix during construction and operational phase needs to be submitted. Matrix formulated on the basis of detailed study and field survey of flora and Fauna methodology used shall be mentioned in the EIA report.*
- vii Endemic plant and animal species found in the area concerned shall be provided instead listing entire endemic species found in the State.*

- viii *Details of Flora and Fauna reported in submergence area, Nos. of tree along with their density and nomenclature required to be cut for barrage creation and other project component.*
- ix *Fisheries Management Plan shall be prepared along with other Environmental Safety Measures for small stream/Nallah, Thandava Reservoir and Thandava River shall be incorporated in the EIA/EMP report.*

**(B) Socio-economic Study**

- x *All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/EMP report in the relevant chapter. Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the CER in compliance of the Ministry's OM F.No.22-65/2017-IA.III dated 30<sup>th</sup> September, 2020 shall be submitted.*
- xi *Tentative no. of project affected families displaced due to acquiring of private land shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.*
- xii *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.*

**(C) Muck Management**

- xiii *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.*
- xiv *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.*
- xv *Details of water sprinkling arrangements for arresting the fugitive / dust, emission from transportation and other project activities in project construction area.*
- xvi *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.*

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

***(D) Disaster Management***

*xviii CAT plan, Dam break analysis, Disaster Management Plan and Fisheries Management Plan be prepared along with other EMPs and incorporated in the EIA/EMP report.*

*xix 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.*

*xx Pre-DPR Chapters viz., Hydrology, Layout Map and Power Potential Studies duly approved by CWC /CEA shall be submitted.*

***(E) Miscellaneous***

*xxi Both capital and recurring expenditure under EMP shall be submitted.*

*xxii DPR of the project for 800MW power generation capacity duly approved by the CWC and CEA be submitted.*

*xxiii 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.*

*xxiv Arial view video of project site shall be recorded and to be submit.*

**Agenda No. 28.5:**

**Lower Orr Dam project under Ken-Betwa Link Project Phase II (90000 CCA) in an area of 3007.2 ha at Village Didoni, Tehsil Chanderi, District Ashoknagar, Madhya Pradesh by M/s National Water Development Agency – Reconsideration of Environmental Clearance – reg.**

**[Proposal No. IA/MP/RIV/255619/2013; F. No. J-12011/31/2011-IA.I]**

**28.5.1:** The proposal is for grant of Environmental Clearance to Lower Orr Dam project under Ken-Betwa Link Project Phase II (90000 CCA) in an area of 3007.2 ha at Village Didoni, Tehsil Chanderi, District Ashoknagar, Madhya Pradesh by M/s National Water Development Agency.



**28.5.2:** The proposal was earlier considered by reconstituted EAC in its 25<sup>th</sup> EAC meeting held on 14<sup>th</sup> March, 2022 and the proposal was deferred seeking additional information from Project Proponent (PP) on following points:

- i. Point wise reply to desired information sought by the EAC in its 3<sup>rd</sup> meeting held on 29<sup>th</sup> October, 2020.
- ii. Comparison chart showing significant changes observed during recently collected one season baseline data with 3 seasons baseline data that was previously collected. Trends may be correlated with possible environmental concerns after implementation of the project.
- iii. Comparison table showing changes done in earlier EIA and revised EIA in terms of project components and its description.

**28.5.3** PP submitted point-wise reply by the vide letter dated 18<sup>th</sup> May, 2022 in response to additional details sought (ADS) by EAC in its 25<sup>th</sup> meeting. The EAC noted that PP has started the construction work without getting Environmental clearance and some of the activities have been completed to the extent of 30% on ground. The status of construction work till June 2021 is given as below:

- Above foundation of dam - 20%
- Canal excavation and construction - 15%

**28.5.4** *The EAC after deliberations decided to conduct site visit by following EAC sub-committee members before making any recommendations on proposal:*

- i. *Dr. A. K. Malhotra*
- ii. *Dr. Uday Kumar R.Y.*
- iii. *Dr. M. K. Sinha*
- iv. *Dr. N. Lakshman*
- v. *Dr. Mukesh Sharma*
- vi. *Dr. J. A. Johnson*
- vii. *Dr. A. K. Sahoo*
- viii. *Representative from MoEF&CC*

*The Chairman, EAC coopted Shri K. Gowarappan, ex-member of the Violation Committee, MoEF&CC as a member of the committee who will conduct the site visit.*

*The EAC also recommended that the Ministry may initiate necessary action under E (P) Act, 1986 in view of the start of construction work without obtaining the Environmental Clearance.*

The proposal was **deferred** on the above lines.

\*\*\*\*\*

**ATTENDANCE LIST**

<b>Sr. No.</b>	<b>Name &amp; Address</b>	<b>Role</b>	<b>Attendance</b>
1.	Dr. K. Gopakumar	Chairman	P
2.	Dr. N. Lakshman	Member	P
3.	Dr. Uday Kumar R.Y.	Member	P
4.	Dr. N. Lakshman	Member	P
5.	Dr. A. K. Malhotra	Member	P
6.	Shri Sharvan Kumar	Representative of CEA	P
7.	Dr. A. K. Sahoo	Representative of CIFRI	P
8.	Dr. M. K. Sinha	Representative of CWC	P
9.	Shri Yogendra Pal Singh	Member Secretary	P
10.	Dr. Saurabh Upadhyay	Scientist C, MoEF&CC	P

## APPROVAL OF THE CHAIRMAN

Fwd: Draft MOM of the EAC (RVHEP) meeting held on 31.05.2022 for perusal and comments-reg Inbox x



**Yogendra Pal Singh** via nic.in  
to me ▾

9:40 AM (38 minutes ago) ☆ ↶

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**From:** [kgopa@iisc.ac.in](mailto:kgopa@iisc.ac.in)

**To:** "Yogendra Pal Singh" <[yogendra78@nic.in](mailto:yogendra78@nic.in)>, [jaj@wii.gov.in](mailto:jaj@wii.gov.in), [ajitkumarmalhotra463@gmail.com](mailto:ajitkumarmalhotra463@gmail.com), "amiya saho" <[amiya.sahoo@icar.gov.in](mailto:amiya.sahoo@icar.gov.in)>, [amiya7@gmail.com](mailto:amiya7@gmail.com), "CE EMO" <[ceenvtmgmt@nic.in](mailto:ceenvtmgmt@nic.in)>, "bijayaketan panigrahi" <[bijayaketan\\_panigrahi@gmail.com](mailto:bijayaketan_panigrahi@gmail.com)>, "chandrahas deshpane" <[chandrahas\\_deshpande@welingkar.org](mailto:chandrahas_deshpande@welingkar.org)>, [dchandrahas@gmail.com](mailto:dchandrahas@gmail.com), [mukesh@iitk.ac.in](mailto:mukesh@iitk.ac.in), [lnand@rocketmail.com](mailto:lnand@rocketmail.com), "kn shenoy" <[kn.shenoy@manipal.edu](mailto:kn.shenoy@manipal.edu)>, [udaykumarry@yahoo.com](mailto:udaykumarry@yahoo.com), "Dr. Vijay Kumar" <[vijay\\_kumar66@nic.in](mailto:vijay_kumar66@nic.in)>, [Dirhpa3@gmail.com](mailto:Dirhpa3@gmail.com), "Mukesh Sinha" <[sinha\\_mukesh@nic.in](mailto:sinha_mukesh@nic.in)>

**Cc:** "Saurabh Upadhyay" <[saurabh.upadhyay85@gov.in](mailto:saurabh.upadhyay85@gov.in)>, [mkkd@rediffmail.com](mailto:mkkd@rediffmail.com), "Saurabh Kumar" <[sourabh.9@govcontractor.in](mailto:sourabh.9@govcontractor.in)>

**Sent:** Thursday, June 16, 2022 11:26:37 AM

**Subject:** Re: Draft MOM of the EAC (RVHEP) meeting held on 31.05.2022 for perusal and comments-reg

Dear Sir

Yes I approve it

Kindly take the opinion from the other members also

With regards

Gopakumar

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