

**MINUTES OF THE 23<sup>RD</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 28<sup>TH</sup> JANUARY, 2022 FROM 10.30 AM – 2:00 PM THROUGH VIDEO CONFERENCE.**

The 23<sup>rd</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 28<sup>th</sup> January, 2022 through video conference, under the Chairmanship of Dr. K. Gopakumar. The list of Members present in the meeting is at **Annexure**.

**Agenda Item No. 23.1**

**Confirmation of the minutes of 22<sup>nd</sup> EAC meeting**

The minutes of the 22<sup>nd</sup> EAC (River Valley Hydroelectric Project) meeting held on 15<sup>th</sup> January were confirmed.

**Agenda Item No. 23.2:**

**Chinki Boras Barrage Combined Multipurpose Project (CCA 131925 ha & 50 MW) in an area of 513651 ha located at Tehsil Udaipura Bankhedi and Kareli, District Raisen, Hoshangabad, Narsinghpur (Madhya Pradesh) by M/s Rani Avanti Bai Lodhi Sagar Project – Terms of Reference (TOR) – reg.**

**[Proposal No. IA/MP/RIV/251284/2022; F. No. J-12011/02/2022-IA.I (R)]**

**23.2.1:** The proposal is for grant of Terms of Reference (ToR) to Chinki Boras Barrage Combined Multipurpose Project (CCA 131925 ha & 50 MW) in an area of 513651 ha located at Tehsil Udaipura Bankhedi and Kareli, District Raisen, Hoshangabad, Narsinghpur (Madhya Pradesh) by M/s Rani Avanti Bai Lodhi Sagar Project.

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

- i. Chinki Boras Barrage Combined Multipurpose Project comprises of two barrage located downstream of Bargi project on right flank of Narmada river. It comprises of two nos. of barrages i.e. Chinki Barrage of gross capacity 243 MCM (0.197 MAF) and Boras Barrage of gross capacity of 243 MCM (0.197 MAF), to provide irrigation facility through pressurized pipe system in total 131925 hectares of land.
- ii. In this scheme water will be lifted from river Narmada from five pumping locations and distributed through a network of pipelines comprising of Rising Main, Gravity Mains and distribution networks to serve a command of 1,31,925 hectare (CCA) spread over Narsinghpur, Raisen and Hoshangabad districts.
- iii. The project proposed to irrigate 41100 hectares in Kareli, Narsinghpur and Tendukheda tehsils of Narsinghpur district and 70635 hectares in Udaipur, Silwani and Bareilly tehsils of Raisen district

and 20190 hectares in Bankheri tehsil of Hoshangabad district. It is proposed to generate 25 MW (total 50 MW) power from each barrage of the combined scheme.

- iv. A barrage of 243 MCM capacity is to be constructed near village Chinki of tehsil Kareli of Narsinghpur district on river Narmada. The maximum height of the proposed barrage is 26 m and length is 340 m is proposed. Similarly, a barrage of 243 MCM water storage capacity is proposed to be built near village Bauras in Udaipura tehsil of Raisen district on river Narmada. The maximum height of the said barrage is 17.25 m and length is 645 m is proposed. With the joint project of both the barrage, water will be lifted from Narmada River from 5 different places. To lift about 96 meters of water, 62.41 MW of power would be required.
- v. The district wise details of the beneficiary villages are as follows-

District	Tehsil	No. of Beneficiary Villages	Proposed irrigated area hect.
Narsinghpur	Narsinghpur	26	6400
	Kareli	07	2100
	Tendukheda	69	32600
<b>Total District Narsinghpur</b>		<b>102</b>	<b>41100</b>
Raisen	Udaipur	95	34772
	Silvani	14	32863
	Bareilly	08	3000
<b>Total District Raisen</b>		<b>243</b>	<b>70635</b>
Hoshangabad	Bankhedi	51	20190
<b>Grant total</b>		<b>396</b>	<b>131925</b>

- vi. **Salient features of the project are given below:**

S. No	Particular	Details
1	Name of the Project	Chinki Boras Barrage Combined Multipurpose Project Distt- Narsinghpur- Raisen - Hoshangabad
2	Type of Project (Irrigation/ Multipurpose)	Lift Irrigation Project
3	Location	
i	State	Madhya Pradesh
ii	Supply Source	Between Narsinghpur District Narmada River Hoshangabad and in Raisen District Narmada River
iii	Command Area	District Narsinghpur - 41100 Ha
		Benefitted villages - 102
		District Raisen - 70635 Ha
		Benefitted villages - 243
		District Hoshangabad - 20190 Ha
		Benefitted villages - 51

S. No	Particular	Details
4	Lifting point	(1) Dharamपुरi
		(2) Jhiri
		(3) Richhawar
		(4) Bouras
		(5) Jhikoli (Bouras)
5	Irrigation (ha.)	
i	Gross command area	(GCA) 154425 ha.
ii	Culturable command area	(CCA) 131925 ha.
iii	Area under irrigation (break up)	(i) Rabi 131925 ha
6	<b>Chinki Barrage and 25 MW Hydel Power Station:</b>	
i	District	Narsinghpur
ii	River	Narmada
iii	Location	19 Km from Kareli on NH-26 and 15 Km from Narsinghpur
iv	Coordinates for Barrage, Power house	23°, 02', 00" N
		79°, 05', 24" E
v	Coordinates for PH 1	23°, 2', 54.19" N, 79°, 5', 50.38" E
vi	Coordinates for PH 2	23°, 3', 19.05" N
		78°, 53', 41.90" E
vii	Coordinates for PH 3	22° 10' 50.36"N
		74° 37' 16.47"E
7	<b>Boras Barrage and 25 MW Hydel Power Station:</b>	
i	District	Raisen
ii	River	Narmada
iii	Location	Near Village Boras
iv	Coordinates for Barrage, Power House	23°, 01' 00" N
		79° 05' 24" E
	Coordinates for PH 4	23°, 1', 2.78" N, 78°, 31', 37.23" E
v	Coordinates for PH 5	23°, 0' 25.10" N
		78° 31' 29.21" E
8	Length of Rising Main	86.365 km
9	Power requirement	62.41 MW
10	Cost of the project	Rs.5839.32 Crores
11	B.C. Ratio.	1.80
12	Cost per Ha. on C.C.A.	Rs.4.42Lacs /Hectare
13	Nearest Protected Area	All the components of the project are outside the Eco Sensitive Zone Boundary of Singhori WLS and its Eco-sensitive Zone; which is the nearest protected area.

- vii. **Land requirement:** The total land required for the project components and related works is about **2973.65** ha. Only Private/Govt. land will be acquired for the project, no forest land shall be required. Break-up of land requirement is given below:

Component	Chinki		Boras		Total (ha)
	Private Land	Govt. Land	Private Land	Govt. Land	
Submergence	518.00	1211.00	210.00	1005.00	2944.00
Pump Houses	5.00	-	5.00	-	10.00
Gravity Main	1.33	-	18.32	-	19.65
<b>Total (ha)</b>	<b>524.33</b>	<b>1211.00</b>	<b>233.32</b>	<b>1005.00</b>	<b>2973.65</b>

- viii. **Ecological Sensitive Area, if any within 10km of project site:** All the components of the project are outside the Eco Sensitive Zone Boundary of Singhori WLS and its Eco-sensitive Zone.
- ix. **Project Cost:** The estimated cost for the project at USR 2017 is Rs. 5839.32 crore (including GST).
- x. **Land Acquisition, Rehabilitation and Resettlement:** Under the project, after construction of Chinki barrage 1729 hectares of land on both banks of the river and 1215 hectares from both banks of the river will be affected by the construction of Boras barrage under the project. Total of 2944 hectares of land in Narsinghpur and Hoshangabad districts will be affected. No village will be affected by the submergence area. A provision has been made for the unirrigated land falling under the submergence of the project at 2.50 times of the collector guideline rate of the concerned village or Rs. 10.00 lakh per hectare, whichever is higher. The cost of land acquisition, rehabilitation and resettlement works of the project is Rs. 239.32 crore is estimated.

### 23.2.3: The EAC during deliberations noted the following:

The EAC in the present meeting (23<sup>rd</sup> meeting) deliberated on the information submitted (Form 1, PFR, etc.) and noted that the proposed project is Combined Multipurpose Project comprises of two barrage i.e. Chinki Barrage of gross capacity 243 MCM (0.197 MAF) and Boras Barrage of gross capacity of 243 MCM (0.197 MAF), to serve a command of 1,31,925 hectare (CCA) spread over Narsinghpur, Raisen and Hoshangabad districts.

The EAC also noted that water will be lifted from river Narmada from five pumping locations and distributed through a network of pipelines. It will require 65MW of electricity to lift the water from Narmada river and the scheme also proposes to generate 50 MW (25 MW power from each barrage).

The EAC observed that necessary approval from Narmada Control authority need to be obtained, and further hydrology need to approved form CWC and CEA.

The EAC observed from the kml file that the project cover area is very close to Sighori WLS, so it is important to assess the impact of the project on the water resources availability to the wild animals and recharging of wetlands in the WLS as well as in the surrounding region during non-monsoon season. PP should obtain necessary clarification from the Chief Wild Life Warden of the State

regarding distance of project cover area from the ESZ boundary of the WLS area. Impact on irrigation facilities to the villages coming inside of Sighori WLS may also be studied.

**23.2.4** *The EAC after detailed deliberation on the information submitted and as presented during the meeting recommended for grant of Standard ToR for conducting EIA study for construction of Chinki Boras Barrage Combined Multipurpose Project (CCA 131925 ha & 50 MW) in an area of 513651 ha located at Tehsil Udaipura Bankhedi and Kareli, District Raisen, Hoshangabad, Narsimhapur (Madhya Pradesh) by M/s Rani Avanti Bai Lodhi Sagar Project under the provisions of EIA Notification, 2006, as amended along with the following additional/specific ToR:*

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

- i. Cumulative impact assessment of two barrage on the river ecology, water availability to sustain wildlife in region, Aquifers and livelihood of locals shall be done. Accordingly, Environment Management plan shall be prepared.*
- ii. Impact zone decided prior to base line data generation and accordingly, sampling location shall be finalized. Baseline data as mentioned in Standard ToR shall be collected for preparation of EIA/EMP report along with soil characteristics which shall be studied at minimum 10 locations. The ground water level at 10 locations shall be measured in project area in all three seasons.*
- iii. Sampling locations be located to cover villages situated near the barrages and around boundary of Sighori Wild life sanctuary for collection of baseline data and data to be incorporated in EIA/EMP report.*
- iv. Identify the sand mining/quarrying sites in submergence area and downstream of barrage in Narmada river.*
- v. Certificate and certified map from Chief Wildlife Warden shall be submitted mentioning that project boundary is located outside the Eco- sensitive Zone (ESZ) / Wild Life Sanctuary and no Tiger/elephant corridor/Critically polluted area falls within 10 km of Project site.*
- vi. Impact on irrigation facilities to the villages coming inside of Sighori WLS shall be studied.*
- vii. Explore the possibilities for development of recreational activity between two barrages.*
- viii. River bank protection plan all along the submergence need to be prepared and incorporated in EIA/EMP.*
- ix. Complete details of projects proposed /constructed on River Narmada with distances shall be provided to know the status of the longitudinal connectivity/Free flowing sketch of Narmada River.*
- x. Detailed assessment of River course/habitat of both river banks of Narmada River within 10 km from submergence and downstream of river Narmada shall be done.*

- xi. Scope of watershed development in the 10 km radius of the project shall be studied in consultation with Govt. institutions/ Indian Council of Agriculture Research (ICAR) and accordingly a detailed Water Shed Development Plan shall be prepared and incorporated in EIA/EMP report.*
- xii. Identified Fish zone/occurrence of Fish species in River Narmada upstream and downstream of both barrage and accordingly, for fish movement fish passes shall be proposed in consultation of CIFRI. Accordingly, Fisheries Management Plan shall be prepared (specially conservation of mahseer fish species) during lean season along with other Environmental Safety Measures and shall be incorporated in the EIA/EMP report.*
- xiii. Environmental Cost Benefit Analysis shall be done in terms of water availability, water uses for generation of hydro power and Ecological flows in the Narmada River.*
- xiv. Water uses for the project shall be approved by concerned authority i.e Narmada Control Authority(NCA).*
- xv. Environmental matrix during construction and operational phase needs to be submitted.*
- xvi. Matrix formulated on the basis of detailed study and field survey of flora and Fauna methodology used shall be mentioned in the EIA report.*
- xvii. Endemic plant and animal species found in the area concerned shall be provided instead listing entire endemic species found in the State.*
- xviii. 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.*
- xix. Project impact on avi-fauna shall be studied and incorporated in EIA/EMP report.*

**[B] Socio-economic Study**

- xx. Declaration by the project proponent by way of affidavit that “No” Inter-state issue / policies issue is involved with any state in the project. Consent from other state for drawing of water from Narmada River, if required.*
- xxi. 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.*
- xxii. Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the CER in compliance of the Ministry’s OM F.No.22-65/2017- IA.III dated 30th September, 2020 shall be submitted.*

xxiii. *Tentative no. of project affected families shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.*

**[C] Muck Management / Disaster Management**

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

xxv. *Details of Muck Management plan prepared along with estimated cost incorporated in EIA/EMP report.*

xxvi. *Techno-economic viability of the project must be recommended from CEA/CWC*

**[D] Miscellaneous.**

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

xxviii. *Undertaking need to submitted regarding no activities has been yet on the project site and water allocated to this scheme shall not be diverted to other purpose.*

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

xxx. *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.*

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

**Agenda Item No. 23.3:**

**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, Government of Telangana – Terms of Reference (TOR) - reg.**

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

**23.3.1:** The proposal is for grant of Terms of Reference (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, Government of Telangana.

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

- i. Sitamma Sagar Multi-Purpose Project (SSMPP) is proposed to be constructed a barrage across Godavari River at 200m downstream of the existing Dummugudem Anicut with pond level of El. 63.00 m and development of Hydroelectric project of 320 MW (8 Nos. x 40 MW) at Ammagaripalli Village, Aswapuram Mandal, Bhadradri Kothagudem District, Telangana State. The proposed project also supply irrigation water to the command area about 2.73 Lakh Ha under Sita Rama Lift Irrigation Projects on need basis. The Location of source for the scheme is Latitude 17° 52' 18" N and Longitude: 80° 53' 09" E.
- ii. Sitamma Sagar Multi-Purpose Hydro Electricity Project having an installed capacity of 8 Nos. x 40 MW will contribute 719.12 MU in a 90% dependable year, 765.04 MU in a 75% dependable year and 1016.88 MU in a 50% dependable year and around 999.48 MU per year on an average basis.
- iii. The turbines are designed for a rated discharge of 2400 cumecs. However, a trapezoidal, unlined power channel is designed to convey a discharge of 3048 Cumecs to accommodate for over load capacity, as also to create pondage in the intake during operation of the power house.
- iv. The project site (Head works) is approachable by land at distance of 2.0 km and State Highway (SH-12) from Bhadrachalam to Chandrapatla highway is at distance of 1.5 km, Minor roads are connected to the villages within the command area.
- v. The proposed Sitamma Sagar Multi-Purpose Project envisages following features:
  - The barrage is proposed with 65 numbers (53 numbers of Spillway Bay and 12 numbers of under sluice Bay) with crest level at El. 48.00 m & 47.00m (above Polavaram FRL of El. 45.72m) to maintain dry seal condition. The spillway, sandwiched between concrete non-overflow sections is proposed to span for a length of 1263.00m (between the abutments) in the deepest course of the river.
  - It is proposed to construct the barrage 200 m downstream of the existing anicut. The barrage is proposed to be aligned parallel to the existing anicut axis.
  - The pond level in the reservoir is fixed at El. 63.00m to realize the benefit of maximum head for power generation with least impact to the general population.
  - Consequent to the proposal for construction of barrage, the storage capacity of the reservoir is computed to be 36.57 TMC.
  - The spillway sandwiched between concrete non-overflow sections is proposed to span for a length of 1263.00m between the abutments in the deepest course of the river.
  - The barrage is now proposed with 53 numbers of radial gates of size 15m X15m with crest level at El. 48.00 m (above Polavaram FRL of El. 45.72m) to maintain dry seal condition.
  - Scour sluice is proposed with 12 number of radial gates of size 15m X 16m with crest level at El. 47.00 m (above Polavaram FRL of El. 45.72m) to maintain dry seal condition.
  - A concrete non-overflow section is proposed for a length of 55m on the left bank starting from chainage 655.00m.

- An earthen embankment dam (Maximum section) is proposed for a length of 655m on the left flank starting from chainage 0.00m.
- The 320 MW (8 X 40 MW) power house spanning for a length of 172 m is proposed to be housed on the right flank between chainage 1.977 Km to 2.149 Km.
- The proposed 320 MW (8 X 40 MW) will generate 719 MU annually (90% dependable year) with a Plant Load Factor (PLF) of 25.65%.
- A tailrace channel is proposed to be excavated downstream of the powerhouse to maintain the normal tail water level at El. 46.50m.
- An earthen embankment dam (Maximum section) is proposed for a length of 750m on the right flank between chainage 2.20Km to 2.95Km.
- The Top Bund Level (TBL) of the afflux bund with reference to 1 in 500 year return period flood of 1,09,676 cumecs also works out to El. 68.800 m, considering free board as per relevant IS codes.
- The left bank earthen afflux bund with TBL at El. 68.800 m and top bund width of 12m is proposed in the initial reaches to accommodate a two-lane bituminous road.
- The balance left earthen afflux bund with top bund width of 6m is proposed.
- The right earthen embankment afflux bund with TBL at El. 68.800m and top bund width of 6m is proposed to connect the right concrete non-overflow section.
- For Parnasala flood protection, it is proposed to strengthen the existing plain cement concrete protection wall by raising the top level to match with the TBL of the earthen embankment afflux bund. It is proposed to align the 900 m long retaining wall along the existing ghat.
- A catch drain with suitable cross masonry & cross drainage works for diversion of flood water (between afflux bund & high ground) to downstream side of the barrage is proposed for a length of 20.048 Kms & designed for a discharge of 24 Cumecs on the left bank and for a length of 20.044 Kms & designed for a discharge of 38 Cumecs on the right bank.

vi. Significant salient features as under:

<b>S. No.</b>	<b>Particulars</b>	<b>Details</b>
1	Location	Latitude: 17° 52' 18" N Longitude: 80° 53' 09" N
2	Catchment Area	2,81,000 Sq. Km
3	MFD at Barrage location (Recommended)	88,614 Cumecs
4	MFD at Barrage location (500 Yrs)	1,09,676 Cumecs
5	Design Discharge (Through Main Barrage Bays)	72, 462 Cumecs
6	Design Discharge (Through under Sluice Bays)	17,486 Cumecs
7	Maximum Flood Observed (from 1965 to 2012)	65,905 Cumecs (During 1985-86)
8	No. of vents	65 Nos.
9	Size of vents	53 Nos. 15M x 15M 12 Nos. 15M x 16M
10	Type of Gate	Radial Gates
11	Length of spillway old	1550 M
12	Length of Power House	250 M

13	Length of barrage (As per GAD)	1293.75 M
14	Pond Level/ Max. Water level (Polavaram +45.720)	+ 63.000 M
15	Top Bund Level (for 1 in 100 Years flood return)	+ 68.800 M
16	Crest level old	+ 49.690 M
17	Crest level of spillway	+ 48.000 M
18	Crest level of Under Sluice	+ 47.000 M
19	Tail water level	+ 63.230 M
20	Thickness of Pier	4.500 M
21	Energy dissipation arrangement	Stilling basin
22	Storage capacity @ Pond level	36.576 TMC
23	Hydel Power (719 MU)	320 MW (8 Nos. x 40 MW)
24	LA Required	3122.38 Acres and 322.98 Acres Forest land
25	Benefit Cost ratio	1.2

- vii. **Land requirement:** The total of 3122.38 acres of non-forest land which includes Patta land – 2104.505 acres, Exgratia land – 115.625 acres & Govt. land – 902.25 acres and about 322.98 acres of forest land will be utilized for the purpose of construction. Application for Forest Clearance yet to be submitted.
- viii. **Ecological Sensitive Area, if any within 10km of project:** No environmental sensitivity areas are located within the acquired land.
- ix. **Alternative site:** The project is proposed 200m downstream of existing Dummugudem Anicut which was constructed 150 years back. In this location, the existing substrata is hard rock on which the foundation of barrage will be laid at lesser cost as well as with enough stability. Hence, alternative sites are not studied.
- x. **Estimated cost:** The Government of Telangana vide G.O.Ms. No. 5 Dated: 14.02.2020 has accorded administrative approval for the estimate of Sitamma Sagar Multi-Purpose Project 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), Bhadradri Kothagudem District” for an amount of Rs. 3481.90 Crores with SSR of 2019-20.
- xi. **Employment Generation:** Indirect employment generation can be estimated to be 200, about 3500 temporary employment will be generated during construction of reservoirs, power houses and afflux bunds and around 60 Permanent employment will be generated during operation phase.
- xii. **Interstate issues:** Chhattisgarh State boundary is about 11 km away from the periphery of Sitamma Sagar Barrage.

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

The EAC in the present meeting (23<sup>rd</sup> meeting) deliberated on the information submitted (Form 1, PFR, etc.) and noted that the proposed project to be constructed a barrage across Godavari River at 200m downstream of the existing Dummugudem Anicut and development of Hydro-electric project of 320 MW (8 Nos. x 40 MW) at Ammagaripalli Village, Aswapuram Mandal, Bhadradri Kothagudem District, Telangana State.

The EAC noted that the present proposal is being constructed at the beginning point of Sita Rama Lift Irrigation Project (SRLIP) for which Environmental Clearance was granted on 7<sup>th</sup> January, 2019 by MoEF&CC. The EAC also noted that there is a heavy water plant situated near the existing Sita Rama Lift Irrigation Project (SRLIP) and the present proposal.

It was observed by the EAC that for construction of canal of which earlier EC has been already granted construction is in process and now PP proposes to install a barrage across Godavari River to generate 320 MW of electricity. The PP has submitted that the proposed project will also supply irrigation water to the command area about 2.73 Lakh Ha under Sita Rama Lift Irrigation Project on need basis. However, it was noted that Environmental Clearance for Sita Rama Lift Irrigation Project has already been granted on 7<sup>th</sup> January, 2019 by MoEF&CC. It is not clear that whether the present proposal is the expansion of the Sita Rama Lift Irrigation Project or it is a fresh proposal for development of hydro power generation facility through construction of a new barrage with irrigation command area.

The EAC further noted that temporary muck disposal site proposed by the PP will get submerged in Flood season and muck can flow into Godavari River in flood season therefore, it was recommended to change to location of temporary muck disposal to avoid Environmental Hazard. It was also noted that Heavy water plant is also situated very close to the boundary of the project and the water for the plant is lifted from the Godavari River. The committee felt the need of verification of current status of project site by MoEF&CC regional office before consideration of the proposal.

**23.3.4:** The EAC after detailed deliberation on the information submitted and as presented during the meeting **deferred** the proposal seeking following information:

- 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 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.*
- 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 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 asses /**Ground** water depth in project vicinity area to be collected.*

#### **Agenda Item No. 23.4:**

**Banda Major Irrigation Project (CCA 80,000 ha) in an area of 4699.08 ha located at Tehsil Banda, District Sagar (Madhya Pradesh) by M/s Madhya Pradesh Water Resources Department- Reconsideration of Environmental Clearance (EC) – reg.**

**[Proposal No. IA/MP/RIV/73548/2018, File No. J-12011/08/2018-IA-I (R)]**

**23.4.1:** The proposal is for Reconsideration of Environmental Clearance (EC) to Banda Major Irrigation Project (CCA 80,000 ha) in an area of 4699.08 ha located at Tehsil Banda, District Sagar (Madhya Pradesh) by M/s Madhya Pradesh Water Resources Department.

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

- i. The project site is situated about 45 km away from Sagar district headquarters and about 25 km away from Banda Page 13 of 21 Tehsil headquarter. Location at latitude 24°04'35.11" N and longitude 78°04'43" E.
- ii. It envisages construction of 23 m high composite dam having concrete gravity dam including earthen bund of 710 m across Dashan River (tributary of Betwa River) near village Uldan in Sagar District of Madhya Pradesh to store 301 MCM of water to irrigate 80,000 ha CCA.
- iii. The gross storage is 301 MCM and the live storage is 282.31 MCM of water with approximately 20% of post monsoon flow in river. The catchment area of the project is about 1490.70 km<sup>2</sup>.
- iv. Total submergence area is 4,699.08 ha (Forest land is 505.50 ha, private land is 3,645.13 ha and government land is 548.45 ha). A total of 28 villages consisting of 2,845 families are likely to be affected by this project.
- v. **Command Area:** A command area to be benefited from the project covers 318 villages. Out of the total 318 villages, 81 villages falls in Buxwaha tehsil of Chhatarpur district while the rest 237 villages falls in Banda, Malthon, Sagar and Shahgarh tehsils of Sagar district. The proposed Culturable Command Area (CCA) of 80,000 ha is irrigated by piped irrigation system. The proposed command area is divided into 4 commands namely Malthon, Banda, Shahgarh and Buxwaha. A total 155.00 km network of gravity main and rising main for DC1 (Delivery Channel-1), DC2 and DC3 to irrigate an area of 28,400 ha, 15,600 ha and 36,000 ha, respectively. The total power required for the project is 28.23 MW.
- vi. **Terms of reference:** ToR was accorded by MoEF&CC vide letter No. J-12011/8/2018-IA-I (R) dated May 14, 2018 to Banda Major Irrigation project. Subsequently, Amendment in scoping clearance was issued by MoEF&CC vide letter No. J-12011/8/2018-IA-I (R) dated March 11, 2019 regarding changes in project parameters like CCA, submergence area, capacity of reservoir etc.
- vii. **Land requirement:** The total land requirement for proposed project is 4699.08 ha (Forest land is 505.50 ha (revised to 530.85 ha due to encroachment on forest land), private land is 3645.13 ha (got revised to 3619.78 ha due to removal of forest land) and government land is 548.45 ha),
- viii. **Stage-I Forest Clearance:** Proposal for Stage-I clearance for diversion of forest land submitted to MoEF&CC vide Proposal No. FP/MP/IRRIG/33882/2018 dated 26/09/2018. The entire forest proposed to be diverted falls under Sagar North (T) Forest Division. Stage I forest clearance has been issued vide MoEF&CC letter dated 28/07/2021 for 530.85 ha of forest land.

- ix. **Project Cost:** The total cost of the project is about Rs. 2,610.54 Crores and proposed to be completed in 5 years.
- x. **Cost of EMP:** The total expenditure on Environmental Management Plan and Corporate Environment Responsibility Plan will be about Rs. 38596.445 lakh.
- xi. **Public Hearing (PH):** Public consultation process with two Public Hearing meetings held on 02.03.2019 at Village Uldan in Sagar District and at Village Bakswaha in Chhatarpur District, Madhya Pradesh.
- xii. **Baseline Data:** Three season baseline data was collected during field surveys conducted in three seasons Pre-monsoon (May 2018), monsoon (August 2018) and winter/lean (December 2018).

**23.4.3** The Member Secretary informed the EAC that EAC in its 26<sup>th</sup> meeting held on 20.08.2019 has recommended the Banda Major Irrigation Project (CCA 80,000 ha) in an area of 4699.08 ha located at Tehsil Banda, District Sagar (Madhya Pradesh) by M/s Madhya Pradesh Water Resources Department for grant of Environmental clearance subject to the submission of *Stage- I forest clearance* of proposed project. The MoEF&CC vide its letter dated 14<sup>th</sup> November, 2019 had intimated the PP regarding submission of Stage-I Forest Clearance within 12 months for grant of Environmental Clearance (EC) as per MOEF&CC Office Memorandum dated 19.06.2014. The PP has submitted the Stage-I FC accorded on 28.7.2021 on PARIVESH on 03.01.2022. Accordingly, the proposal is again referred to EAC in terms of the provisions of the O.M. dated 19.06.2014.

**23.4.4: The EAC during deliberation noted the following:**

EAC after examination of the details submitted by the PP observed that there is delay in submission of the Stage –I FC; consequently, baseline data submitted in EIA/EMP report become more than 3 years old. However, it was realized that the explanation of PP in this regard that substantial time was lost due to pandemic situation in country and hence, the PP could not submit the Stage -I forest clearance within the prescribed time limit, is justifiable. The EAC further asked the Project authorities to submit the details of persons engaged in team constituted for monitoring of environmental parameters. The project authorities submitted the names along with designation of environment management team vide letter dated 01.02.2022.

**23.4.5** *The EAC after detailed deliberation on the information submitted and as presented during the meeting retreated the recommendations **recommended** for grant of Environmental Clearance to Banda Major Irrigation Project (CCA 80,000 ha) in an area of 4699.08 ha located at Tehsil Banda, District Sagar (Madhya Pradesh) by M/s Madhya Pradesh Water Resources Department under the provisions of EIA Notification, 2006, as amended along with the following additional conditions:*

- i. *The dedicated team for monitoring the environmental parameters constituted by the project authorities vide order dated 01.02.2022 will ensure the compliance of all environmental safeguard conditions stipulated by the EAC.*
- ii. *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.*
- iii. *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.*

- iv. *Preference to be given to the local villagers as per the requirements and suitability, in the job/ other opportunities in the project, etc.*
- v. *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.*

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

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**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. Mukesh Sharma	Member	P
4	Dr. Chandrahas Deshpande	Member	P
5	Dr. A. K. Malhotra	Member	P
6	Dr. Uday Kumar R.Y.	Member	P
7	Dr. Narayan Shenoy K	Member	P
8	Shri Sharvan Kumar	Member (Representative of CEA)	P
9	Shri A. K. Singh	Representative of CWC	P
10	Dr. J. A. Johnson	Representative of WII	P
11	Dr. A. K. Sahoo	Representative of CIFRI	P
12	Dr. Vijay Kumar	Representative of Ministry of Earth Sciences	P
13	Shri Yogendra Pal Singh	Member Secretary	P

## **APPROVAL OF THE CHAIRMAN**

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**Fwd: Draft corrected Minutes of 23rd EAC meeting held on 28th January, 2022-reg**

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Yogendra Pal Singh <yogendra78@nic.in>  
To: geetdeepbisht <geetdeepbisht@gmail.com>

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From: kgopa@iisc.ac.in  
To: "Yogendra Pal Singh" <yogendra78@nic.in>  
Cc: "Munna Kumar Shah" <munna.shah@gov.in>  
Sent: Monday, February 21, 2022 11:47:24 AM  
Subject: Re: Draft corrected Minutes of 23rd EAC meeting held on 28th January, 2022-reg

Dear Sir  
Yes I approve it  
Gopakumar

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From: Yogendra Pal Singh <yogendra78@nic.in>  
Sent: Monday, February 21, 2022 11:37:17 AM  
To: Gopakumar K <kgopa@iisc.ac.in>  
Cc: Munna Kumar Shah <munna.shah@gov.in>  
Subject: Draft corrected Minutes of 23rd EAC meeting held on 28th January, 2022-reg

External Email

Dear Sir,  
The corrections made by Shri Sharvan Kumar have been incorporated. Please find attached Draft corrected Minutes of 23rd EAC meeting held on 28th January, 2022 for approval.

With Regards,

Yogendra Pal Singh  
Scientist 'E'  
M/o Environment, Forest and Climate Change  
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Indira Paryavaran Bhawan  
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