

Minutes of the 2nd Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects held on 31st August, 2020 through video conference.

In the 2nd meeting of the re-constituted EAC for River Valley & Hydroelectric Projects which was held on 31/08/2020 under the Chairmanship of Dr. K. Gopakumar in the Ministry of Environment, Forest & Climate Change through video conference (VC). The following members participated in the video conference:

- | | | | |
|-----|--------------------------|---|--|
| 1. | Dr. K. Gopakumar | - | Chairman |
| 2. | Dr. N. Lakshman | - | Member |
| 3. | Dr. Mukesh Sharma | - | Member |
| 4. | Dr. B.K. Panigrahi | - | Member |
| 5. | Dr. Chandrahas Deshpande | - | Member |
| 6. | Dr. A.K. Malhotra | - | Member |
| 7. | Dr. Uday Kumar R.Y. | - | Member |
| 8. | Dr. Narayan Shenoy K. | - | Member |
| 9. | Shri. Balraj Joshi | - | Member |
| 10. | Shri Sharvan Kumar | - | Representative of CEA |
| 11. | Shri A. K. Singh | - | Representative of CWC |
| 12. | Dr. J.A. Johnson | - | Representative of WII |
| 13. | Dr. A.K. Sahoo | - | Representative of CIFRI |
| 14. | Dr. Vijay Kumar | - | Representative of Ministry of Earth Sciences |
| 15. | Dr. S. Kerketta | - | Member Secretary |

Item No. 2.0 Confirmation of the minutes of 1st EAC meeting.

In the EAC meeting, the contents of minutes of the 1st meeting held on 29/07/2020 has been agreed by all the members and confirmed accordingly with minor modification as.

Item No 1.2.6: Sela Urthing HEP (202 MW), Near Village Sela Pithoragarh, District in Uttarakhand by M/s UJVNL Ltd. – regarding further consideration of ToR. [Proposal No. IA/UK/RIV/145628/2020, File No. J-12011/08/2016-IA-1(R)].

The underground powerhouse with gross head of 267 m is proposed on the right bank of the river with 2 units of 101 MW each

Shall be read as:

The underground powerhouse with gross head of 270 m is proposed on the right bank of the river with 4 units of 50.5 MW each

Item No. 2.1.1 Jangi Thopan Powari Hydroelectric Project (804 MW), Tehsil Moorang, district Kinnaur, Himachal Pradesh by M/s SJVN Limited– regarding ToR

**Proposal No. IA/HP/RIV/167225/2020, File No. J-12011/14/2020-IA-1
(R)**

Project Proponent (M/s SJVN Limited) along with the Consultant EQMS Indi Pvt Ltd made the detailed presentation and *inter-alia*, provided the following information:

SJVN Limited proposed to construct the Jangi Thopan Powari Hydro-electric Project (JTPHEP) plant of 804 MW capacity in district Kinnaur, Himachal Pradesh. It is a run of the river type project proposed to harness the hydel potential of river Satluj. The project envisages construction of a concrete gravity dam of 48 m high from riverbed level across river Satluj near Jangi village, and underground powerhouse on the right bank upstream of Tehsil boundary (Kashang Nallah).

The project is situated on Satluj River, having its dam site near Jangi Village in Kinnaur, and power house on the right bank of Tehsil boundary (Kashang Nallah). The dam is located at Latitude 31°37'34.55" N and Longitude 78°25'55.17" E. At a distance of approximately 3 km downstream from the TWL of JTPHEP, the tip of reservoir of an under-construction project, namely Shontong Karcham hydroelectric project, exists.

Project envisages construction of concrete gravity dam of approximately 88 m height from deepest foundation level and 48 m from riverbed level at Jangi village, with integral 5 nos. gated spillways having size of 7.5 m (W) x 15.0 m (H) Upper level spillway having width of 8.0m has been proposed in block no. 6 on the left bank side. The spillway has been designed to pass assumed design flood corresponding to Probable Maximum Flood of 6212 cumecs. The Full Reservoir Level has been kept at 2305.0 m and Minimum Draw Down Level at El. 2302.0 m. The dam would provide a gross storage of about 27.45 MCM and live storage of about 4.17 MCM. The length of the dam at top shall be 189 m. It is proposed to excavate a circular-shaped HRT of diameter 9.40 m and length of approximately 12 km using Tunnel Boring machine. Underground powerhouse having size of 165.0 m (L) x 22 m (W) x 50 m (H) shall be provided on the right bank. Water shall be released back into the river through a 9.5m diameter horseshoe shaped tailrace tunnel.

The tentative land requirement for the project is 295.93 ha out of which 270.43 ha is forest land and 25.5 ha is private land. Construction of dam will result in submergence of about 156.2917 ha. of land out of which 143.2093 ha. is forest land and 13.0824 ha. is private land. Application for diversion of 270.43 ha forest land required for the project is yet to be submitted. The project is estimated to cost ₹ 5708.35 Crores and is expected to provide employment to approximately 3500 people during construction period (approx. 5 years).

While recommending Cumulative Environmental Impact Assessment (CEIA) study for 38 HEP in Sutlej River Basin, Himachal Pradesh (H.P) in the 29th EAC (RV & Hydro) meeting held on 5.12.2019, the EAC in the minutes issued has recommended EFR for fish and no-fish stream stretch. The recommended EFR for Jangi Thopan Powari HEP, covered under "No fish zone", to be implemented in Satluj river basin as provided in Table (Annexure-I) of the minutes is 6.63 cumec. However, on the basis of the current 90% dependability, it works out as 9.415 cumec. Thus, higher of the two values, i.e., 9.415 cumec has been adopted as EFR for carrying

out power potential studies.

Project Benefits

1. Capacity addition of 804 MW in the Northern Region and reducing peaking power shortage in the region. Annual generation of 2777.56 MU with 95% machine availability (design energy).
2. Integrated development of Kinnaur region in the areas of employment, communication, education, health, tourism etc.
3. Out of 13% free power to the home state Himachal Pradesh, 1% shall be utilized for contribution towards local area development.

Status of Other Statutory Clearances:

Forest Clearance: Application for diversion of 270.43 ha forest land is required for the project is yet to be submitted.

Wildlife Clearance: Proposal yet to be submitted.

Deliberations of the EAC

EAC in the present meeting (2nd meeting) deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that the instant project as per the DSS is located within 10 km from the Lippa Asrang Wildlife Sanctuary. EAC after detailed deliberation on the information submitted and as presented, **recommended** for grant of Standard ToR to the proposed project with the following Additional ToR conditions:

1. Land acquired for the project shall be suitably compensated in accordance with the relevant law with the prevailing guidelines in this regard. Private land shall be acquired as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
2. An undertaking, as part of the EIA report from Project proponent, owning the contents (information and data) of the EIA report with the declaration that the contents of the EIA report pertaining to a project is a bonafide work and the contents have not been copied from other EIA reports.
3. Consolidated EIA/EMP report is to be submitted as per the generic structure (Appendix III & IIIA) given in the EIA Notification, 2006.
4. The project involves diversion of 270.43 ha of forestland. Forest clearance shall be obtained as per the prevailing norms of Forest (Conservation) Act, 1980.
5. 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.
6. 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.

7. Three season (Pre-monsoon, Monsoon and winter season) baseline data of all the environmental attributes including biological environment as mentioned in the Standard ToR shall be collected for preparation of EIA/EMP report.
8. Application for Wildlife Clearance from Standing Committee of National Board of Wildlife shall be submitted.
9. Conservation plan for the Scheduled I species, if any, in the project study area shall be prepared and submitted to the Competent Authority for approval.
10. Pre-DPR Chapters viz., Hydrology and Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted.
11. Dam break analysis, Disaster Management Plan and Fisheries Management Plan be prepared and submitted in the EIA/EMP report.
12. Environmental matrix during construction and operational phase needs to be submitted.
13. Both capital and recurring expenditure under EMP shall be submitted.
14. Environmental Cost benefit analysis shall be done
15. Impact of developmental activity/project on the wildlife habitat within 10 km of the project boundary shall be studied.
16. Detailed Social Impact analysis along with status of R&R plan shall be submitted in the EIA/EMP report.
17. Recommendations of the Cumulative Environmental Impact Assessment (CEIA) of Sutlej River Basin, Himachal Pradesh shall be implemented.

Item No. 2.1.2 Satdharu Medium Irrigation Project in District Damoh of Madhya Pradesh by Water Resources Department, Govt. of Madhya Pradesh-Regarding reconsideration of Environmental Clearance. Proposal No. IA/MP/RIV/67589/2017, File No. J-12011/27/2017-IA.I (R)

The Project Proponent (PP) along with M/s Voyants Solutions Pvt. Ltd., 403-IV Floor, BPTP Park Central, Sector-30, NH-8, Gurgaon-1, Haryana, accredited with NABET/ QCI made a detailed presentation of the project and *inter-alia*, provided the following information:

Satdharu Medium Irrigation project is proposed on river Satdharu, a tributary of river Bearma, the latter finally joins river Ken. The project is situated in Damoh block and is 20 km from district head quarter. Project shall encompass 24.80 m high and 755 m long earthen dam including 57.50 m long side channel spillway on river Satdharu near village Bariyao of Damoh district. Yield for Satdharu project (CA: 145.68 sq.km) has been computed using the catchment area and average areal rainfall ratio of Garraulli G&D site and the concerned dam catchment.

Yield for 50%,75% and 90% dependability has been assessed as 86.97 MCM, 63.03 MCM and 23.56 MCM respectively. Submergence at FRL (354.15 m amsl) is 1223.78 ha.

It is designed to store 63.03 MCM live storage of water to provide irrigation to command area of 7555 ha (CCA) through a well-planned network of pressurized pipe irrigation network. A rising main of 5.5 km shall take off from the irrigation sluice and shall take pressurized flow up to distribution chamber. From distribution chambers four gravity minors of total length 18.70 km shall take off to irrigate command located on both bank of Satdharu river. Five villages consisting of 526 families are likely to be affected by this project. The total cost of the project is about Rs.315.65 Crores and to be completed in three years.

For Damoh city and villages drinking water provision of 28.01 MCM has been earmarked. There is no intercepted catchment area at Satdharu dam site and full catchment (145.68 sq.km) entirely lies in state of Madhya Pradesh. Entire submergence at FRL and gross command area of 11623 ha lies in MP. Proposed irrigation under Kharif and Rabi shall be 1500 ha and 7555 ha respectively i.e. annual proposed irrigation shall be 9055 ha.

The proposed dam site is located near Bariyao Village in Damoh Tehsil at latitude 23°42'36"N and longitude 79°27'12"E and geographically covered under SOI Topo Sheet No. 55M/6,55M/3 and 55M/10. The site is approachable from Damoh by a fair weather PWD road and a 2 km fair weather road from this PWD road. The distance from Damoh is 20 km. The nearest railway station to the dam site is Damoh section of west Central. Damoh is a railhead on Jabalpur - Kota West Central Railway.

About 1226.34 ha land of Damoh shall be permanently acquired for the project of which the forest, private and government land shall be 789.93 ha, 212.86 ha and 223.55 ha respectively. Total 05 villages are coming under partial submergence. There shall be 526 affected families of which there shall be 84 displaced families. The land acquisition process as per RFCTLARRA 2013 was initiated in all villages and the District Collector has made award for all stakeholders. Stage-I clearance for diversion of 789.93 ha forestland was issued by MoEF&CC vide letter No.F.No.8-63/2017-FC dated 11th May, 2018. No archaeological monument of national importance, defense establishments, lies either in the project area or in its submergence area. The dam site is 9.35 km from the ESZ of Noradehi WLS whereas the reservoir tip is about 3.51 km from the boundary of ESZ.

The maximum concentration of PM₁₀, PM_{2.5} and NO_x and SO₂ has been found to be 59.3 µg/m³, 35.95 µg/m³, 16.44 µg/m³ and 6.25 µg/m³ respectively and within the NAAQS prescribed by CPCB. Noise level monitoring in ambient air has been done at 06 locations for three seasons. The maximum L-equivalent noise levels during day and nighttime recorded were 52.3 dB (A) and 40.5dB (A), respectively, and are within the prescribed limits. All physical and general parameters were observed within the desirable limit at all sampling locations as per IS 2296:1982 for class E water. The ground water had all parameters within the desirable/permissible limits specified in IS 10500: 2012. The texture of the soil varied from loam to clay loam, soil is neutral at all the locations having pH varying from 7.43 to 7.72 and have low to high organic carbon (0.47-0.88%). Available nitrogen content in the surface soils ranges between 85 kg/ha to 102 kg/ha thereby indicating that soils are low in available nitrogen content. Soils are medium to high in potassium content (214.8 kg/ha to 468 kg/ha). In the study area, 185 species of plants were recorded. These include 63 trees, 44 shrubs, 78 species of herbs and climbers. The faunal study reveals that 19 mammalian species of which one (Grey wolf)

belongs to Schedule-1 of Wildlife (Protection) Act, 1972; 120 bird species; 15 species of herpeto fauna were recorded /reported.

Anticipated Environment Impacts and Mitigation measures includes habitat loss due to diversion of 789.93 ha forestland, for mitigation of which compensatory afforestation (Rs 9052 lakh) shall be carried out in equivalent non-forest land transferred to Forest Department. Reduction in reservoir capacity and water available for the designated use, which shall be addressed through implementation of Biological and engineering measures in 1460 ha area under CAT Plan (Rs 882.00 lakh). Fragmentation of habitat and consequent increase in temporary stress levels of wildlife during construction phase for mitigation of which Wildlife and Bio-diversity Management Plan (Rs 30 lakh) has been proposed. The GLC in air for PM₁₀ due to fugitive dust emissions from construction activities at the Dam complex and due to increased transportation shall increase, for mitigation of which various steps shall be undertaken which inter alia include periodical air quality monitoring and copious sprinkling at dam site and on roads for dust suppression shall be done under Air Pollution Control. Ambient air noise levels are expected to increase only during the project construction phase for mitigation of which construction equipment will be equipped with noise suppression devices and properly maintained mufflers and strict compliance with occupational safety and health standards shall be ensured. Movement of fish on upstream of dam shall be stopped but the reservoir on upstream shall continue a habitat for the indigenous species as well as reservoir species for which Fisheries Management Plan (Rs 195 lakh) has been provided. The flows downstream of the dam shall be reduced to the volume (63.03 MCM) stored behind the dam for consumptive use.

The scoping clearance to the project was granted by the Ministry vide letter No. J-12011/27/2017-IA-I(R), dated 12.10.2017. The Public Hearing was presided by the ADM, Damoh, conducted on 28th December, 2018. The main issues touched were related to rehabilitation resettlement and about adequate compensation should be granted for acquiring their assets like land, houses, garden/trees. Adequate provision for drinking water may be earmarked in the project; concession in stamp duty for purchasing land in other area and provision for employment should be generated. Land against patta land may be provided.

EMP with budget breakup (Capital & Recurring cost in Rs. lakh):

S. N.	Plans	Cost	Capital	Recurring
1.	Catchment Area Treatment Plan	882.00	780.00	34.00
2.	Command Area Development Plan	5306.00*	4661.00*	215.00*
3.	Compensatory Afforestation Scheme	9052.00	8233.00	273.00
4.	WL and Bio-diversity Management plan	30.00	18.00	4.00
5.	Fisheries Management Plan	195.00	186.00	3.00
6.	Resettlement & Rehabilitation Plan	3030.00	3030.00	0.00
7.	Green Belt Development Plan	66.00	48.00	6.00
8.	Reservoir Rim Treatment Plan	30.00	30.00	0.00
9.	Muck Management Plan	15.00	15.00	0.00
10.	Landscape and Restoration Plan	4.00	3.40	0.20
11.	Restoration Plan for Quarry Sites	9.00	5.40	1.20
12.	Disaster Management Plan	10.00	9.40	0.20
13.	Water, Air and Noise Management Plan	16.00	7.90	2.70

S. N.	Plans	Cost	Capital	Recurring
14.	Public Health Delivery Plan	90.00	18.00	24.00
15.	Labour Management Plan	21.00	9.00	4.00
16.	Sanitation & Solid Waste Management Plan	54.00	33.00	7.00
17.	Environmental Safeguards	20.00	5.00	5.00
18.	Energy Conservation Measures	21.00	6.60	4.80
19.	Environmental Monitoring Plan	27.00	3.00	8.00
Total EMP (S.N.1 To S.N. 19)		13572.00	12440.70	377.10
20.	CER Plan	475.00	415.00	20.00

*N.B. The cost of works under CAD Scheme has been excluded, as it will be funded under Central Plan with State share in prescribed proportion.

Project benefits *inter-alia*, shall include the benefits like (i) Increased Irrigation Potential (Rabi -7,555 ha and Kharif-1,500 ha),(ii) Better Living Standards, (iii) Improved Market Facilities (3 marketing sheds and 6 km single lane bituminous road) , (iv) Employment Potential (About 500 people)/ Fisheries (306 fishermen will be benefitted), (v) Sustained Water Availability for Agriculture and Cattle rearing (63.03 MCM for agriculture and 15 MCM for drinking/domestic), (vi) Increased Green cover(37 ha), (vii) Improvement in Groundwater Level.

Details of Corporate Environment Responsibility

S. No.	Description	Quantity	Unit	Rate (Rs. Lakh)	Amount (Rs. Lakh)	Year wise break-up		
						I-Y	II-Y	III-Y
1	Health Care							
(i)	Health checkup camps; awareness programme	30	no.	0.50	15.00	5.0	5.0	5.0
(ii)	Supply of hospital equipment to district/CHC/PHC	1	Job	L.S.	35.00	15.0	10.0	10.0
(III)	Organizing veterinary camps 2/year/village for 3 years	30	No.	0.50	15.00	5.0	5.0	5.0
2	Education							
(i)	Books to district/block/village and school libraries	1	Job	LS	5.00	0.0	3.0	2.0
(ii)	Support for infrastructure development in village schools	1	Job	LS	25.00	10.0	10.0	5.0
3	Infrastructure Development							
(i)	Providing 15 Watts Solar Street Light	50	No.	0.30	15.00	0.0	7.5	7.5
(ii)	Setting up of Recreation Facilities	5	No.	3.0	15.00	7.5	7.5	0.0
(iii)	Support for developing play-grounds	5	No.	5.0	25.00	10.0	7.5	7.5
(iv)	Support for local school with game equipment/gadgets	5	No.	0.60	3.00	0.0	1.5	1.5
4	Sanitations and drinking water facilities							
(i)	Providing public hand pumps	30	No.	0.50	15.0	5.0	5.0	5.0
(ii)	Providing flush composite toilet	30	No.	0.30	9.00	0.0	4.5	4.5
(iii)	Setting up of R.O. Plants	5	No.	6.00	30.00	12.0	12.0	6.0
(iv)	Iron Storage Vat	20	no.	0.90	18.00	6.0	6.0	6.0
(v)	Door steps plastic dustbin	2000	no.	0.005	10.00	3.0	3.0	4.0

(vi)	Renovation of storm water drainage system	5	job	LS	25.00	10.0	10.0	5.0
(vii)	Setting up of STO 10 kld capacity	8	No.	10	80.00	30.0	30.0	20.
5	Skill Development and Training							
(i)	Vocational training like goat rearing/poultry rearing	1000	man	0.01	10.00	4.0	4.0	2.0
(ii)	Promotion of self-help groups by proposing livelihood activities in goatry, poultry, bee keeping, tailoring	10	No.	1.5	15.00	5.0	5.0	5.0
(iii)	Women empowerment by way of training in Kitchen garden sewing and providing kits	300	No.	0.10	30.00	10.0	10.	10.
6	Environment Enhancement							
(i)	Creation of water harvesting tank 30x30x30 m	10	no.	5.00	50.00	20.0	20.0	10.0
(ii)	Plantation in Village Panchayat	10	ha	3.00	30.00	5.0	20.0	5.00
Total					475.00	162.50	186.50	126.00

Deliberations of the EAC

Project was earlier considered by the then EAC in the 24th meeting held on 27.05.2019 and EAC in the said meeting observed that Stage-I Forest Clearance for diversion of 789.93ha has been accorded on 11.05. 2018, application for approval conservation plan for Schedule I species had been submitted to concerned department. Further, total 05 villages are coming under partial submergence. There shall be 526 affected families of which 84 shall be displaced. The land acquisition process as per RFCTLARRA 2013 was initiated in all villages and the District Collector has made award for all stakeholders. EAC after detailed deliberations, and considering all the facts of the project as presented, **defer** the proposal for want of following information:

1. Under fisheries Management Plan, no Species specific is mentioned? Why 6.13LK Stocking?
2. Fish diversify in three seasons limited to 10, seems to be very less number and no fish species name has been mentioned for which FMP has to be taken up.
3. Impact prediction says movement of fish u/s shall be stopped, it is not mentioned what are the fish species to be impacted. Thus detail of the type of fish species to be impacted should be submitted.
4. Details of insecticide absent in surface water is to be submitted. Measurements have to be mentioned in proper units.
5. Impact of hydrology before and after irrigation should be given.
6. Certificate from Chief Wildlife Warden that project site is outside ESZ.

Project Proponent (PP) submitted the above information to the Ministry on 17.08.2020 and accordingly proposal was considered in the 2nd EAC meeting (present meeting) held on 31.08.2020. PP along with the consultant made the detailed presentation on the project overview including salient features, e flow and on the additional information sought in the 24th EAC meeting. PP apprised EAC about the Fisheries Management Plan, Fish diversity, Impact of hydrology before and after irrigation, distances of the project site from the ESZ from the Nauradehi WLS. PP also apprised about the Muck management plan, CER plan, Environment Monitoring Plan.

EAC deliberated on the information submitted and presented by the PP. Based on the deliberation EAC further advised PP to submit the clarification on the Fish Management Plan for Mahseer and fish pass, Benefit Cost Ratio, Non -Point Source of Pollution in Study Area and Environmental Flows by Email to all the EAC members within three days. As advised by the EAC, PP submitted the information vide email dated 03.09.2020 to all the EAC members.

The EAC deliberated on the information submitted by the PP (EIA/EMP report, Form 2, Public hearing issues etc.) along with compliances submitted by the PP on 03.09.2020 including clarification submitted on environmental flow. EAC noted that the inflow during lean and non-monsoon period (November to May) in Satdharu Nala has been as nil as there is no flow in this duration. Therefore, PP proposed that 0.28 MCM flow may be released during each of these months to fill the riverbed pools in the downstream. This quantity shall be met from

the storage of the reservoir. During monsoon 30% of inflow shall be released as e-flow. EAC further noted that instant project is outside the ESZ Nauradehi WLS. EAC after detailed deliberations **recommended** the proposal for grant of **Environmental Clearance** subject to compliance of applicable Standard EC conditions with the following additional conditions:

1. The Environmental Management Plan (EMP) shall be strictly adhered to and a sum of Rs. 13572.00 lakhs, 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 updated proportionately
2. Investment of Rs 475.00 lakhs under Corporate Environmental Responsibility (CER) shall be strictly utilized for the activities proposed as per the Ministry's guidelines.
3. After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment and downstream ecology. The study shall be undertaken by an independent agency, decided in consultation with the Ministry.
4. Any other clearances from any other organization/department as applicable to the proposed project shall be obtained.
5. Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.
6. Wildlife Conservation plan for all Schedules I species shall be implemented with the approval of the Competent Authority.
7. 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.
8. PP shall procure construction material only from those Govt./Pvt. Agencies/Corporations etc. that are having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof.

Item No. 2.1.3 Improvement of drainage path of Kalisindh river near Balinda Ghat for prevention of floods in Jhalawar town, tehsil Jhalrapatan, district Jhalawar, Rajasthan by M/s Water Resources Kalisindh Project Division, Jhalawar (Rajasthan)– Regarding applicability of EIA Notification and appraisal on ToR

Proposal No. IA/RJ/RIV/114997/2019, File No. J-12011/13/2020-IA-1 (R)

The Project Proponent (PP) along with Consultant M/s SD Engineering Services Pvt. Ltd, made a detailed presentation of the project and inter-alia, provided the following information:

Present proposed is for “Improvement of Drainage Path of Kalisindh River near Balinda Ghat for Prevention of Floods in Jhalawar Town”. Project is located at Village - Changeri, Hichar & Khanpur; Tehsil-Jhalarpatan; District - Jhalawar (Raj.)

Project Components details:

- The proposed project is “Improvement of drainage path of Kalisindh River near Balinda Ghat for prevention of floods in Jhalawar Town” and will be developed by Water Resources Kalisindh Project, Jhalawar, Rajasthan.
- Jhalawar town is situated on the banks of Kalisindh & Ahu river. Both the rivers are tributary of river Chambal and join near Gagron fort of Jhalawar.
- The river after confluence point traverses through a nearly narrow vertical Gorge. The approximate length of Gorge is nearly 2.0 km.
- In this section, there exists a very narrow section named as Balinda Ghat.
- During the times of high flood, either in river Kalisindh or in river Ahu, the available river section at Balinda Ghat unable to pass the full discharge without causing afflux & thus causes back water effect which in turn causes increase in water level near Jhalawar town which in turn results in flooding of the low-lying colonies & agriculture fields as well.

Project location (Coordinates): The site coordinates are:

Latitude (N): 24°39'41.07"N to 24°37'25.77"N

Longitude (E): 76°10'53.69"N to 76°11'48.11"

Land requirement:

- Project involves forestland of 30.64 ha. For which, forest diversion application has been filed online on Parivesh portal vide Proposal No. FP/RJ/Others/25372/2017.
- Other land use details for the project are given as below:

S. No.	Purpose	Govt. land (m ²)	Pvt. land (m ²)	Forest land (m ²)	Total land (m ²)
1.	Widening of river	41810	-	55100	96910
2.	Partial bypass channel and disposal area	-	2654	238057	240711
3.	Approach road	-	-	13243	13243
Total		41810 m² or 4.18 ha	2654 m² or 0.26 ha	306400 m² or 30.64 ha	350864 m² or 35.086 ha

Details on Submergence Area

- Present proposal is for improving the drainage path to save the Jhalawar town from frequently occurring floods.
- There is no submergence area.

- Flood discharge is determined/ vetted from ID&R Jaipur is 24,000 cumecs.

Details on Ecological Sensitive Area, if any within 10km of project site (WLS, Tiger/elephant corridor, Critically Pollute Area etc.)

- Mukundra Tiger Hills Reserve falls at 0.1km distance towards West direction.
- Proposal No. FP/RJ/Others/25372/2017) dated 18.04.2017.

Project benefit

- The project is for improving the drainage path of Kalisindh river at Balinda Ghat.
- It will prevent the Jhalawar town from frequent flooding.

Project cost and Employment Generation: - Project Cost: Rs. 1544.22 Lakhs (Rs. 15.4422 Crore)

Employment: No permanent employment is required for this project but at the construction stage about 50 employees will be required for various construction works.

R&R details: - There is no R&R envisaged in the present project. It is drainage path improvement project to prevent flooding at Jhalawar town.

Detail of court case, if any: - There are no court case against the project to the best of our knowledge and information provided by Project Proponent.

Project Proponent also apprised EAC during the meeting that proposed project proposal does not envisage construction of any Irrigation and Hydroelectric components.

Deliberations of the EAC

EAC in the present meeting (2nd meeting) deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that the instant project involves Improvement of drainage path of Kalisindh River near Balinda Ghat for prevention of floods in Jhalawar. Instant project does not involve any new irrigation and hydroelectric components, activities which are covered under Schedule 1 (c) of the EIA Notification 2006 and as amended thereof and requires prior Environmental Clearance. Proposed activity involving improvement of drainage path of Kalisindh River is not covered under Schedule 1(c) of the EIA Notification 2006 and therefore does not fall in the purview of this EAC. EAC after detailed deliberation recommended to **return** the proposal in the present form.

Item No. 2.1.4 Shongtong-Karcham Hydroelectric Power Project in District Kinnaur of Himachal Pradesh by M/s Himachal Pradesh Power Corporation Ltd.- Regarding revalidation of the install capacity vis-à-vis Satluj River Basin Study Proposal No. IA/HP/RIV/10098/2007, File No. J-12011/58/2007-IA-1 (R)

The project proponent has sent an email to MoEF&CC mentioning its inability to appear before EAC. The proposal is for revalidation of the install capacity vis-à-vis Satluj River Basin Study.

However, the Member Secretary briefed the in the EAC meeting that the project is under construction based on earlier EC issued during 2011 for an installed capacity of 402 MW, whereas DPR was approved for 450 MW and therefore, project proponent has requested to amend the EC for installed capacity of 450 MW in 2013. The matter was discussed in earlier EAC meetings and proponent was advised to carry out environment flow assessment, complete Public Consultation process for revised installed capacity of 450 MW before appraisal. Satluj basin study has been recommended for approval by EAC during December 2019, which has reassessed the installed capacity of Shongtong Karcham HEP as 387 MW, keeping in view its recommendations on environment flow and inter-project distance.

In the meeting, the EAC opined that project proponent should immediately finalize the installed capacity keeping in view the recommendations of Satluj basin study; apply for amendment of EC accordingly to get scoping for updating EIA study, complete the public consultation process and then come for appraisal. Ministry may take a separate call whether the PP can continue with construction during the period of study and appraisal.

Item No. 2.2 Any other items with the permission of the Chair

Item No. 2.2.1 Discussion on Standard Environment Conditions and Standard Terms of Reference for River Valley Project.

Discussion was held on the Standard EC conditions in the EAC meeting and circulated the draft discussion to all the EAC members. After receiving the comments from the domain Experts, the Member Secretary collated the same. The revised Standard EC Conditions is placed in Annexure.

ANNEXURE

Comments on Standard EC Conditions for River Valley Sector

S. No.	Condition	Comments
I	Statutory compliance	
1	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forestland for non-forest purpose involved in the project.	The EC granted is strictly under the provisions of EIA Notification, 2006 and amendments thereof. It does not amount to be approval under any other acts or rules, applicable for the project, the requisite approvals of which have to be ensured by the Project Proponent.
2	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	
3	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan	

S. No.	Condition	Comments
	shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).	
4	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.	
5	NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC.	
6	Necessary approval of CEA shall be obtained for those projects having the project cost more than Rs. 1,000.00 crores.	
7	Consumptive use of surface water to be planned in the project to check waterlogging as well as to increase crops productivity. The field drains shall be connected with natural drainage system.	
8	Remodeling of existing natural drains (link drains) and connecting them with irrigated through constructed fields drains, collector drains, etc. are to be ensured on priority basis.	
9	On Farm Development (OFD) works like landscaping, land levelling, drainage facilities, field irrigation channels and farm roads, etc. should be taken up in phased manner prior to the start of irrigation in the entire command area. The Command area development plan should be strictly implemented as proposed in the EIA/EMP report.	
10	CAT plans as proposed in the EIA/EMP report shall be implemented in consultation with the State Forest Department and shall be implemented in synchronization with the construction of the project.	
11	Wildlife Conservation Plan prepared for both core and buffer zones shall be implemented in	

S. No.	Condition	Comments
	consultation with the local State Forest Department.	
12	Compensatory afforestation programme shall be implemented as per the plan approved.	
13	Labour force to be engaged for construction works shall be examined thoroughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.	
14	Formation of Water User Association/Co-operative be made and involvement of the whole community be ensured for disciplined use of available water for irrigation purposes.	
15	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	
16	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	
17	The above conditions shall be enforced, <i>inter-alia</i> under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.	
18	Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt.	

S. No.	Condition	Comments
19	Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.	
II	Air quality monitoring and preservation:	
1	Regular monitoring of various environmental parameters viz., Water Quality, Ambient Air Quality and Noise levels as per the CPCB guidelines at designated locations shall be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA / Monitoring purposes.	Modify as: Necessary measures for preservation & monitoring of the air quality, water quality, etc. shall be taken as per the guidelines of the CPCB and a detailed data base thereof shall be maintained for monitoring and further use.
2	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed standards.	
3	Necessary control measures such as water sprinkling arrangements, etc. be taken up to arrest fugitive dust at all the construction sites.	Modify as: Necessary control measures such as water sprinkling arrangements, etc. be taken up to arrest fugitive dust at all the construction sites.
III	Water conservation and its usage during post construction	
1	Before impounding of the water, cofferdams for both at the upstream (u/s) and downstream (d/s) are to be decommissioned as per EIA/EMP report once the project is commissioned, cofferdams should not create any adverse impact on water environment including impacts the rock mass and muck used for the Cofferdam.	Modify as: Before building up of the reservoir, all cofferdams meant for construction of the dam(s) shall be decommissioned as per EIA/EMP report.
2	As the reservoir will be acting as the balancing reservoir and there would be fluctuation of water level during peaking period, efforts be made to reduce impact on aquatic life including impact during spawning period both at the u/s and d/s of the project.	To be deleted.

S. No.	Condition	Comments
3	Water depth sensors shall be installed at suitable locations to monitor e-flow. Hourly data to be collected and converted to discharge data. The gauge and discharge data in the excel sheet be submitted to the RO, MoEFCC and to the CWC on weekly basis.	Modify as: Suitable mechanism like flow meters and/or sensors shall be installed for measuring the e-flow and the real time data shall be transmitted to the respective SPCB/other authorities.
4	Mixed irrigation shall be practiced, and necessary awareness be given to all the farmers and trained in the use of such systems. Proper crops selection shall be carried out for making irrigation facility more effective.	Modify as: The PP shall practice consumptive use of water for mixed irrigation.
IV	Noise monitoring and prevention	
1	All the equipment likely to generate high noise shall be appropriately enclosed or inbuilt noise enclosures be provided so as to meet the Ambient Noise Standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000.	To be retained
2	The ambient noise levels should conform to the Standards prescribed under Environment (Protection) Act Rules, 1986 viz., 75 dBA during daytime and 70 dBA during nighttime.	To be deleted.
V	Waste Management	
1	Muck disposal be carried out only in the approved and earmarked sites. The dumping sites shall be located sufficiently away from the HFL of the river. Efforts be made to reuse the muck for construction and other filling purposes and balanced be disposed of at designated disposal sites. Once the muck disposal sites are inactive, proper treatment measures like both engineering and biological be carried out so that sites are stabilized quickly.	To be retained
2	Solid waste management should be planned in detailed. Land filling of plastic waste shall be avoided and instead be used for various purposes	To be retained.

S. No.	Condition	Comments
	as envisaged in the EIA/EMP reports. Efforts be made to avoid one time use of plastics.	
VI	Green Belt, EMP Cost, Fisheries and Wildlife Management	
1	Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of river basin or as per the ToR conditions or minimum 15% of the average flow of four consecutive leanest months, whichever value is higher, shall be released as environmental flow.	To be retained
2	Detailed information on species composition particular to fish species from previous study/literature be inventorized and proper management plan shall be prepared for in-situ conservation in the streams, tributaries of river and the main river itself for which adequate budget provision be made and followed strictly.	To be deleted This should part of the TOR.
3	To enrich the habitat of the project site, plantation shall be raised as envisaged in the EIA/EMP report. Plantation to be developed along the periphery of the reservoir in multi-layers with local indigenous species in consultation with the local State Forest Department.	To be modified as: Plantation shall be developed along the periphery of the reservoir as per EIA/EMP report.
4	Fish ladder/pass as envisaged in the EIA/EMP report shall be provided for migration of fishes. Regular monitoring of this facility be carried out to ensure its effectiveness.	To be retained
VII	Public Hearing and Human Health Issues	
1	Preventive measures viz. fuming and spraying of mosquito control shall be done in and around the labour colonies, affected villages, stagnated pools, etc. Provisions be made to not to create any stagnated pools to avoid creation of breeding grounds of the vector borne diseases	To be retained.
2	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche, etc. The housing may be in the form of temporary	To be retained.

S. No.	Condition	Comments
	structures to be removed after the completion of the project.	
3	Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.	This can be deleted.
4	Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Dam Break Analysis.	It will be dealt by CWC, may be deleted.
VIII	Corporate Environment Responsibility	
1	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.111 dated 1 st May 2018, as applicable, regarding Corporate Environment Responsibility.	It will be dealt as per the different Act, may be deleted.
2	Skill mapping be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long-time livelihood generation	To be retained.
3	The company shall have a well laid down Environmental Policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEFCC as a part of six-monthly report.	This should be retained.
4	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior	To be retained.

S. No.	Condition	Comments
	Executive, who will directly report to the head of the organization.	
5	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the six-monthly Compliance Report.	To be retained.
6	Post EIA and SIA be prepared for the project through a third party and evaluation report be submitted to the Ministry after five years of commissioning of the project.	To be retained.
7	Multi-Disciplinary Committee (MDC) be constituted with experts from Ecology, Forestry, Wildlife, Sociology, Soil Conservation, Fisheries, NGO, etc. to oversee implementation of various environmental safeguards proposed in EIA/EMP report during construction of the project. The monitoring report of the Committee shall be uploaded in the website of the Company.	To be retained.
IX	Miscellaneous	
1	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	To be retained.
2	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in	To be retained.

S. No.	Condition	Comments
	addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	
3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	To be retained.
4	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environment clearance portal.	To be retained.
5	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	To be retained.
6	Concealing of factual data or submission of false/fabricated data may result in withdrawal of the Environmental Clearance and attracts action under the provisions of Environment (Protection) Act, 1986.	To be retained.
7	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	To be retained.
8	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	To be retained.
9	The Regional Office of this Ministry shall monitor the compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Officers of the Regional	To be retained.

S. No.	Condition	Comments
	Office by furnishing the requisite data/information/monitoring reports.	
10	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	To be retained.

Name of the project

Addressed detailed

e-mail/contact No.

Undertaking

(To be provided by the PP)

This is to certify that the information provided in Form-.... in physical form and/or in .pdf format (as applicable to the project and remaining be removed) in PARIVESH, to the Ministry/EAC members and PPT presentation during the EAC meeting held on 29.07.2020 have no deviation in respect of the proposal of ToR/EC/EC validity extension/EC amendment for establishing “.....MW Thermal Power Project at village, Taluk, District....., State.....by M/s.

2.It is further certified that there are no data entry errors in the information uploaded in PARIVESH system including names/email-id/mobile numbers/address of the project proponent, authorized person, etc. It is also certified that the supporting documents uploaded on PARIVESH portal are correct and duly authenticated by the Authorized Signatory.

3.In case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC.

Authorized Signature

date

From: kgopa@iisc.ac.in
To: balrajjoshi@hotmail.com, "Dr S Kerketta" <s.kerketta66@gov.in>, suna1466@rediffmail.com
Sent: Monday, September 28, 2020 11:25:13 AM
Subject: Re: Draft MoM of 2nd EAC meeting of RVP -reg.- Gopakumar

Dear Dr.Kerketta

I have gone through it and I also got some advice from Mr. Balraj Joshi. **His mail is below**, these are very minor suggestions. Kindly incorporate this and then we are ready for approval.

You need not send it to me again. Kindly incorporate his suggestions and then the draft is approved. look forward to meet you all and thank you for your efforts.

With warm regards
Prof. K.Gopakumar, FIEEE, FNAE
DESE, Indian Institute of Science
Bangalore-560012, INDIA

From: Balraj Joshi <balrajjoshi@hotmail.com>
Sent: Thursday, September 24, 2020 2:57 PM
To: Gopakumar K <kgopa@iisc.ac.in>
Cc: Dr. A.K. Malhotra <ajitkumarmalhotra463@gmail.com>
Subject: Re: Draft MoM of 2nd EAC meeting of RVP -reg.- Gopakumar

External Email

Dear Sir,

The corrections and suggestions made by me have been incorporated in the minutes sent by you with the trailing mail. However, in point no: 14 on page -4, the text in red colour should be removed. [This was basically a question meant for MoEF. In case there was one such methodology available , this could have been mentioned here. However, the question has just been incorporated in the minutes as it is, which is not relevant.] **The 'sum and substance' is - remove the red coloured text on page-4.**

Further all changes should be **accepted in the track change mode**, before further communication of the soft copy to any quarter.

Regards

Balraj Joshi

From: Gopakumar K <kgopa@iisc.ac.in>
Sent: Thursday, September 24, 2020 2:13 PM
To: Balraj Joshi <balrajjoshi@hotmail.com>; Dr. A.K. Malhotra <ajiktkumarmalhotra463@gmail.com>
Subject: Draft MoM of 2nd EAC meeting of RVP -reg.- Gopakumar

Dear Sir

I want your expertise in this to advise me regarding the previous EAC report send to me by Dr. Kerkatta, for the final approval. I will approve it after you give me the go ahead signal. Look forward to your advice and suggestion.

With warm regards
Prof. K.Gopakumar, FIEEEE, FNAE
DESE, Indian Institute of Science
Bangalore-560012, INDIA

From: Dr S Kerketta <s.kerketta66@gov.in>
Sent: Thursday, September 24, 2020 1:44 PM
To: Gopakumar K <kgopa@iisc.ac.in>
Cc: Dr. S Kerketta <suna1466@rediffmail.com>; MOHIT SAXENA <mohit.saxena@gov.in>
Subject: Draft MoM of 2nd EAC meeting of RVP -reg.

External Email

Sir,

Draft MoM of 2nd EAC meeting of RVP is enclosed after incorporating the comments received from the Members. If in order, may please approve it for uploading in the Website.

regards,

(Dr. S. Kerketta)

Director- IA (Thermal, River Valley & HEP)

MoEF&CC, New Delhi

Phone: 011-24695314 (O), 26113096 (R)