

Minutes of the 23rd Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects held on 23.04.2019 at Narmada Meeting Hall, Ground Floor, Jal Block, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi-3.

The 23rd meeting of the re-constituted EAC for River Valley & Hydroelectric Projects was held on 23.04.2019 with the Chairmanship of Dr. Sharad Kumar Jain in the Ministry of Environment, Forest & Climate Change at Narmada Meeting Hall, Ground Floor, Jal Wing, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi-3. The following members were present.

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| 1. | Dr. Sharad Kumar Jain | - | Chairman |
| 2. | Shri Sharvan Kumar | - | Representative of CEA |
| 3. | Shri N.N. Rai | - | Representative of CWC |
| 4. | Dr. J.A. Johnson | - | Representative of WII |
| 5. | Dr. D.M. More | - | Member |
| 6. | Dr. J.P. Shukla | - | Member |
| 7. | Dr. (Mrs.) Poonam Kumria | - | Member |
| 8. | Dr. S. Kerketta | - | Member Secretary |

Shri Chetan Pandit, Dr. A.K. Sahoo, Dr. Vijay Kumar, Dr. S.R. Yadav, Prof. R.K. Kohli, Dr. T.P. Singh and Dr. Govind Chakrapani could not present due to pre-occupation. The deliberations held and the decisions taken are as under:

Item No. 23.0 Confirmation of the minutes of 22nd EAC meeting.

The Minutes of the 22nd EAC (River Valley & Hydroelectric Projects) meeting held on 27.02.2019 were confirmed.

Item No. 23.1 Appraisal before the EAC of the report of Expert Committee constituted in pursuance to the Order Dated 16.10.2017 of Hon'ble NGT, Eastern Zone Bench, Kolkata in OA No. 346/2013/PB/9/EZ of Lower Subansiri HEP (8x250 MW) project – regarding

File No. L-11011/9/2017-IA.I

At the beginning, the Chairman and the EAC Members wanted to know the details of the project and the status of the Court Cases pending at NGT. M/s NHPC made a detailed presentation on the proposal and *inter-alia*, provided the following:

1. Report of Expert Committee constituted in pursuance to the order dated 16.10.2017 of Hon'ble NGT, Eastern Zone Bench, Kolkata in OA No. 346/2013/PB/9/EZ of Lower Subansiri HEP (8x250 MW) was placed before the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric Projects in its meeting held on 23.04.2019 for appraisal.
2. Lower Subansiri HEP in Arunachal Pradesh/ Assam on Subansiri River, a tributary of Brahmaputra is being executed by M/s NHPC Ltd. The project consists of i) a Concrete Gravity Dam of 116 m high above the river bed level and 123 m high above the deepest foundation level and ii) a surface Power House with an installed capacity of 2000 MW with 8 units of 250 MW capacity each. Environment Clearance for 2000 MW Lower Subansiri HEP has been accorded vide Letter No. J-12011/40/2001-IA-I dated 16.07.2003.

3. Construction of the Lower Subansiri HEP was started in January, 2005 after obtaining all the statutory clearances. However, works of the Project had to be stalled due to agitation by various groups of Assam on downstream issues since December, 2011 and further stay on resumption of the works by NGT, Kolkata vide order dated 11.12.2015 in an O.A. No.346/2013 filed by Shri Aabhijeet Sharma, Guwahati. Approx. 55% of the works has been completed and expenditure amounting to about Rs. 10723 Crores has been incurred till March, 2019.
4. An appeal was filed by Shri Aabhijeet Sharma, Social Activist and President of Assam Public Works, Guwahati in NGT, Delhi on 10.12.2013 seeking direction from the court mainly on issues of more sustenance flow, construction of embankments in the downstream and stay of the construction work till disposal of the petition. The case was subsequently transferred to NGT, Kolkata on 06.08.2014. In the said matter, the Hon'ble NGT passed an order on 11.12.2015 that construction work of the project shall not be done till further orders. However, NHPC was allowed to undertake emergency maintenance works for safety and protection of the public and property.
5. Hon'ble NGT, Kolkata after hearing all the parties in the matter pronounced its judgment on 16.10.2017 and directed that MoEF&CC shall constitute a Committee of three expert members who shall be selected from amongst accomplished experts and scientists who may be private individuals or from institutions of repute having undertaken studies on the seismology, geology, hydrology of rivers and river eco-system of the Himalayas and the North-Eastern region of the country. The Committee may be a combination of experts from both the categories, provided that one of such members shall be selected from the North-Eastern Region.
6. Another application was filed before the NGT regarding Lower Subansiri HEP in May, 2017 by Shri Tularam Gogoi, a farmer, Social Activist and an advocate practicing in Guwahati High Court, with prayer for fresh public consultation and fresh appraisal of the project in view of the alleged change in scope of the project. After hearing the matter on 11.08.2017, the Hon'ble NGT directed that the decision in O.A. No. 346/2013 will also be applicable in this matter as the ToR of Expert Committee would also cover the subject matter of the Application including modified width of the dam incorporated on the recommendation of Dam Design Review Panel.

After the above briefing, the NHPC Officials were asked to leave the Meeting Hall. Then the Member Secretary of the EAC also briefed the following to the EAC Members:

1. In pursuance to the judgement dated 16.10.2017 of the Hon'ble NGT, Eastern Bench, Kolkata, in the applications filed by both Shri Aabhijeet Sharma and Shri Tularam Gogoi, a 3-member Expert Committee (EC) was constituted by MoEF&CC vide its order dated 27.11.2017. The committee consists of Dr. Prabhas Pande, Dr. I.D. Gupta and Shri P.M. Scott from the fields of Engineering Geology, Seismology and Hydrology, respectively. Shri P.M. Scott is from North-eastern region.
2. Further, the Order said that as per the EIA Notification, 2006, the EAC shall complete the appraisal within 60 days and place it before the Competent Authority for final decision.
3. Accordingly, Expert Committee Report has been placed before Expert Appraisal Committee (EAC) for River Valley & Hydroelectric Projects for Stage-IV Appraisal as per EIA Notification, 2006.
4. Expert Committee (EC) had five meetings with different stakeholders. Further it had two review meetings for finalization of report, after which EC has submitted the report to MoEF&CC on 26.03.2019. The work of the present Committee remained deferred for nearly 10 months on account of the Order of the Hon'ble NGT in a matter filed by Shri Aabhijeet Sharma and Shri Tularam Gogoi before the Hon'ble NGT raising

objections on the constitution of the Committee. During all the meetings, both applicants did attend even after prior intimation.

5. Both the applications of Shri Aabhijeet Sharma and Shri Tularam Gogoi and other connected MAs in the said matter were heard and dismissed on 19.11.2018 and on 14.12.2018, respectively by the Hon'ble NGT, Principal Bench, New Delhi, as the court did not find any merit in both the applications.
6. Meanwhile, Shri Tularam Gogoi challenged the NGT order dated 14.12.2018 before the Hon'ble Supreme Court. The Hon'ble Supreme Court passed an order on 11.03.2019 which is reproduced below:

"We accordingly set aside the impugned order of the Tribunal dated 14 December, 2018 in Execution application No. 23/2018 (earlier Execution Application No. 1 of 2018) and the Order dated 19 November, 2018 in M.A. No. 140/2018, M.A. No. 178/201, M.A. No. 295/2018, M.A. No. 285/2018 and M.A. No. 286/2018 and restore the applications to the file of the Tribunal for determination afresh."

7. Shri Aabhijeet Sharma had also challenged the Hon'ble NGT order dated 19.11.2018 before the Hon'ble Supreme Court which was disposed of on the same day in line with Civil Appeal No. 2011 of 2019.
8. Now, the restored application of Shri Aabhijeet Sharma has been listed for hearing in NGT on 25.07.2019.
9. In line with NGT order dated 16.10.2017, the Ministry has referred the report for Stage IV Appraisal by the EAC as per the provisions of EIA Notification, 2006 and recommendations of the Committee thereof, if any.

Thereafter, the Expert Committee made a detailed presentation of their report before the EAC (River Valley and Hydroelectric Projects) and *inter-alia*, provided the following:

1. The Expert Committee was given the assignment of reviewing the safety aspect of the dam and the downstream impact of the SLP, in light of the recommendations made by the Expert Group and the Technical Expert Committee, and technically examine the feasibility of Alternative Dam Proposal submitted by the Applicant, Shri Aabhijeet Sharma. The ToRs of the Expert Committee were as below:
 - a. Review of the safety aspect of the dam in line with the recommendations made by the Expert Group and the Technical Expert Committee,
 - b. Review the d/s impact as recommended by the Expert Group & TEC,
 - c. Convene meetings with stakeholders and consider early resumption of work,
 - d. Visit project site and its vicinity,
 - e. Examine the reports submitted by various Committees,
 - f. Examine alternative proposal,
 - g. Seek assistance of independent experts and
 - h. Finalize the report within a period of three months.
2. During the meeting, EAC was also appraised that in view of the above, following tasks were also done by the Expert Committee:
 - a. Expert Committee held meetings with the stakeholders, including CWC, CEA, IIT-Roorkee, CWPRS, GSI, Members of the POC, Independent Experts, NHPC Officials, Govt. of Assam and Govt. of Arunachal Pradesh. Interacted with people from the Riparian Zone.

- b. Reviewed all the previous reports.
 - c. Visited the Project Site as well as two other hydroelectric projects located in the Outer Himalaya, namely Ramganga HEP, Uttarakhand and Pare HEP, Arunachal Pradesh.
3. The findings on various issues, viz. Foundation competency, Slope stability and landslides, Seismotectonics of the region, Seismic design parameters of the SLP, Seismic safety of dam and abutments, Energy dissipation arrangement and Sediment Management and Downstream Impacts were presented in detail.

EAC observed that the Expert Committee has performed their task in line with the Hon'ble NGT order dated 16.10.2017 and recommendation made are based on the facts and studies carried out for Lower Subansiri HEP by the various committees in the past, site visit, as well as meetings with the stakeholders.

After detailed deliberation, the EAC agreed with the recommendation of the Expert Committee. As the matter is sub-judice, the recommendations of Expert Body have not been made part of the minutes.

Item No. 23.2 Attunli HEP (680 MW) in Dibang Valley District of Arunachal Pradesh by M/s Attunli Hydro Electric Power Company Limited -regarding Fresh Terms of Reference.

File No. J-12011/61/2006-IA.I(R) & Proposal No. IA/AR/RIV/101783/2019

The Project Proponent (PP) applied for grant of ToR/Scoping Clearance for the proposed project online on 09.04.2019. The PP along with the Consultant, M/s RS Envirolink Technologies Pvt. Ltd., Gurgaon made a presentation of the proposal and *inter-alia*, provided the following:

ToR was granted to the project vide letter No. J-12011/61/2006-IA.I(R) dated 05.06.2014. Later on, ToR was extended for one more year i.e. till 04.06.2019 vide letter dated 11.05.2018. As the project could not complete all the formalities as per the provisions of EIA Notification, 2006 including conduct of public hearing, the PP once again approached MoEF & CC for grant of fresh ToR to the project.

Attunli Hydroelectric Project (HEP) is proposed for development on Tangon river in Dibang Valley district of Arunachal Pradesh and is being developed by M/s Attunli Hydro Electric Power Company Ltd. (AHEPCL), which is a joint venture between Jindal Power Limited and Hydro Power Development Corporation of Arunachal Pradesh (HPDCAP)- a State Govt. PSU. The project is located upstream of Tangon limb of the 3097 MW of Etalin Hydroelectric Project. The allotted FRL and TWL of Attunli project are El. 1360 m and El. 1060 m, respectively.

The project is proposed to be developed as a run-of-river scheme with diurnal pondage for peak hour power generation. A concrete gravity dam of maximum height 85 m from the deepest foundation is proposed on Tangon river to divert the water into an underground water conductor system which connects to the power generating equipment located underground containing 4 units of 170 MW each. The entire power (680 MW) of the project is proposed to be evacuated through one double circuit, ACSR-conductor transmission system with proposed interconnection at a 400 kV pooling station.

Detailed Project Report (DPR) of the Project has been approved by Central Electricity Authority (CEA) vide letter dated 02.07.2018. Application for diversion of forestland has been filed online on 26th October, 2015 and is under process.

The PP submitted that three seasons baseline data of the study area, as a part of EIA study for Physico-Chemical, Aquatic and Ecological Parameters and socio-economic studies have already been collected and updated to ensure that the data is not more than 3 years old at the time of appraisal. However, list of project affected families for private land acquisition for the project could not be completed and therefore, EIA study could not be concluded. Under the new land acquisition act, SIA study has been initiated by the District Authorities and is under progress.

EAC discussed the reasons for delay in detailed and provisions under EIA Notification, where ToR cannot be extended beyond five years period and therefore, a fresh ToR is required. EAC also noted that Dibang basin study has been completed and all the recommendation of the basin study including that of environment flow release should be adopted while finalizing EIA report. EAC further discussed that environment flow release is a critical component of hydropower projects and therefore, the PP should also undertake a site specific study for environment flow release based on the latest hydrological data available and make a comparison with that of recommendation made in Dibang River Basin Study.

After detailed deliberation, the EAC recommended for grant of ToR to the proposed project with the following additional ToR conditions:

1. As the environment flow release is a critical component of hydropower projects, a site specific study for environment flow assessment based on the latest hydrological data available be made and the results shall be compared with that of recommendation made in the basin study.
2. Baseline data shall not be more than 3 years old at the time of submitting the project for appraisal.
3. 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.
4. The project involves about 261.53 ha of forestland. Forest clearance shall be obtained as per the prevailing norms of Forest (Conservation) Act, 1980.
5. All the tasks including conducting public hearing (as per the provisions of EIA Notification, 2006 and as amended from time to time).
6. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/EMP report in the relevant chapter.
7. Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 1st May, 2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.
8. Consolidated EIA/EMP report is to be submitted as per the generic structure (Appendix III) given in the EIA Notification, 2006.

Item No. 23.3 Munjri Irrigation Project in Sheopur district of Madhya Pradesh by M/s Madhya Pradesh Water Resources Department-regarding Fresh ToR.

File No. J-12011/07/2019-IA.I(R), Proposal No. IA/MP/RIV/101717/2019

The Project Proponent (PP) applied for grant of ToR/Scoping Clearance for the proposed project online on 08.04.2019. However, the project could not be appraised as the PP was not having NABET Consultant for presentation of the project including finalisation of sampling locations based on the downwind direction for preparation of EIA/EMP report. As per OM dated 04.08.2009 and S.O. 648 (E) dated 03.03.2016, the Member Secretary informed the EAC about the requirement of NABET Consultant at the time of presentation of the proposal for grant of ToR. As the Consultant was not present, the proposal has not been considered and deferred. The PP shall provide the actual distance of the project site from the state boundary at the time of appraisal.

Item No. 23.4 Badaun Lift Canal Project district Badun, Uttar Pradesh by M/s Eastern Ganga Canal, Irrigation Department, Uttar Pradesh - regarding consideration of Fresh EC

File No. J-12011/02/2015-IA.I (R), Proposal No. IA/UP/RIV/26603/2015

The Project Proponent (PP) applied for grant of Environmental Clearance for the proposed project online on 18.03.2014. The project proponent along with the Consultant, Enviro Infra Solutions Pvt. Ltd., Ghaziabad made the detailed presentation on the proposal and *inter-alia*, provided the following information:

Badaun Lift Canal Irrigation is proposed to utilize water from river Ganga to irrigate the command area in Western part of Badaun district of Uttar Pradesh. The water is proposed to be diverted from existing Narora barrage across river Ganga and no new dam / barrage is proposed in the project. The Badaun Lift Canal Irrigation Project proposes to utilize monsoon flows from river Ganga and no storage and diversion of the lean season or non-monsoon flows is envisaged.

The present project envisages utilizing 102 cumecs of surplus monsoon discharge at Narora for irrigating upland of Badaun and Sambhal district. The scheme envisages construction of a canal head regulator on upstream left bank of Narora Barrage to divert 102 cumecs of water from the pond to 20.05 km long gravity main canal up to village Dhanwara followed by lifting by 15 m across Mahawa Nadi into balance 32.25 km long gravity canal to provide Kharif irrigation through 4 branches in command area (1,39,665 ha) covered under five tehsils namely, Sahaswan, Bisauli, Bilsa and Sadar in Badaun district and Gunnaur tehsil in Sambhal district, U.P.

Total land requirement is 504.26 ha and all the identified land is private land. Neither forestland nor government land will be acquired. There is no submergence area. No family is affected in terms of residential/commercial structure acquisition. For construction of the canal head regulator, main canal, branches and distribution system, this total land will be utilized.

In-principle clearance for preparation of DPR of Badaun Lift Canal Irrigation Project was accorded by CWC vide letter No. 13/81/2013-PA(N)/47-51, dated 15.01.2014. Water availability of Badaun Lift Canal Irrigation Project was carried out based on inflow data of the river Ganga at Narora Barrage Site (CA=32,512 km²) for the period from 1985-86 to 2012-13. The flow data of river Ganga available at Bijnor Barrage (CA=30,000 km²) for the period from 1997-98 to 2012-13 were also used to check the inflow data of Narora Barrage. The annual gross yield of 25,050 MCM at 75% dependability was recommended by CWC at Narora Barrage. The total committed/planned utilization of 4,913 MCM at Narora Barrage was deducted in the gross annual yield of 25,050 MCM at 75% dependability, the annual net yield of 20,137 MCM was

recommended by CWC, which is much more than the water requirement of 634 MCM for the proposed Badaun Lift canal Irrigation project.

Ambient air quality monitoring has been done at 06 locations. Ambient Air Quality (AAQ) data for PM₁₀, PM_{2.5}, SO₂ and NO_x have been recorded during Post Monsoon of 2017, Pre Monsoon of 2018 and Monsoon of 2018. The maximum concentration of PM₁₀, PM_{2.5} and NO_x has been found to be 54.7 µg/m³, 41.5 µg/m³ and 15.5 µg/m³, respectively, while concentration of SO₂ has been recorded to be 10.2 µg/m³. Thus, concentration of pollutants has been found to be within the limits of standards prescribed by CPCB.

Ambient noise level monitoring has been done at 06 locations. The noise monitoring shows that the equivalent noise levels during the day and night time at Faizganj (Commercial) recorded are 61.9 dBA and 48.7 dBA, respectively, and are within the prescribed limits. The noise levels for the rest of 4 stations are also within the prescribed limits. The major source of the noise in the study area is due to vehicular movement as well as rural activity.

Surface water sampling has been taken at 05 locations. The pH values of all analyzed samples ranged between 7.5-8.15 and are within the permissible limit (6.5-8.5). The TDS levels ranged between 180.92 and 258.2 mg/l and are well below the desirable limit. The Chlorides level in surface water samples ranged from 15.00 to 21.00 mg/l and has been observed to be less than the desirable limit. The fluorides level ranged between 0.35 to 0.46 mg/l has also been found to be lower than the desirable limit. The nitrate level ranged between 0.75 to 0.94 mg/l and has also been lower than the desirable limit.

Groundwater sampling has been taken for 25 locations. The analysis results indicate that the pH ranged between 6.6 to 8.3, which is well within the specified standard of 6.5 to 8.5 limit. Total hardness has been recorded and found to be in the range of 138.23 to 274.7 mg/l, which is within the permissible limits at all the locations. The Total Dissolved Solids (TDS) concentration recorded to be between 211.8-378.20 mg/l and is found to be within the permissible limits. Bacteriological studies reveal that no coliform bacterial are present in the samples. The heavy metal contents are observed to be below detectable limits.

During the study period, regarding floral diversity, a total of 193 terrestrial species has been recorded in the study area. Similarly, a total of 138 faunal species has also been recorded in the study area.

The project has been conceived with the sole objective of minimal displacement of people and their property in the project affected area, the acquisition of land for public purpose has been necessitated. The acquisition of the land shall be by mutual consent with the stake holders in consonance with Section 46 of "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013", (RFCTLARRA 2013) which has come into force from 01.01.2014, notified by Government of India.

The total cost of the project is about Rs.3128.39 Crores and it is proposed to be completed in 5 years. The summary of cost estimate of various environment management plans is shown below:

Sl. No.	Plans	Cost (Rs. in Lakh)
1.	Catchment Area Treatment Plan	0.00
2	Command Area Development Plan	50463.00*
3.	Compensatory Afforestation Scheme	0.00

4.	Wildlife and Bio-diversity Management plan	40.00
5.	Fisheries Management Plan	100.00
6.	Resettlement and Rehabilitation Plan	37944.00
7.	Green Belt Development Plan	295.00
8.	Reservoir Rim Treatment Plan	0.00
9.	Muck Management Plan	921.00
10.	Landscape and Restoration Plan	50.00
11.	Restoration Plan for Quarry Sites	10.00
12.	Disaster Management Plan	15.00
13.	Water, Air and Noise Management Plan	35.00
14.	Public Health Delivery Plan	240.00
15.	Labour Management Plan	345.00
16.	Sanitation and Solid Waste Management Plan	324.00
17.	Local Area Management Plan	782.00
18.	Environmental Safeguards During Construction Activities Including Road Construction	54.00
19.	Energy Conservation Measures	128.00
20.	Environmental Monitoring Plan	206.00
Grand Total		41489.00

*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 benefit includes number of positive changes on the socio-economic conditions of the people in the surrounding area. There will be obvious change in the scenario leading into the Socio-economic development of the area viz., (i) Increased Irrigation Potential, (ii) Better Living Standards, (iii) Improved Market Facilities, (iv) Employment Potential / Fisheries, (v) Tourism / Recreation Facilities, (vi) Sustained Water Availability for Agriculture and Cattle rearing, (vii) Increased Green cover, (viii) Improvement in Groundwater Level, (ix) Improvement in Life Style, Status and Confidence-building, (x) Command Area Development, (xi) Solution of the problem of migration and (xii) Social Forestry.

The public hearing has been conducted on 06.02.2019 in Badaun District, and on 18.02.2019 in Sambhal district as per EIA Notification, 2006 and its subsequent amendment. The major issues raised during the public hearing are mainly on proper land compensation for loss of private land.

The EAC after detailed deliberations and considering all the facts of the project as presented by the PP, recommended the proposal. The PP shall urgently submit the following additional information:

1. Corporate Environment Responsibility (CER) to be prepared as per the Ministry O.M dated 01.05.2018.
2. Permission for felling of 750 trees.
3. Clearance/NOC from the department concerned of Uttar Pradesh State Govt. for utilization of existing barrage and surplus flood water for irrigation purpose.
4. Permission from NMCG for drawal of water from Ganga River.
5. QCI & NABET Accredited certificate of the consultant for the period during which baseline data and other EIA/ EMP studies carried out.
6. Consolidated EIA/EMP report as per the generic structure of EIA Notification, 2006.
7. Calculation for the cost of water.
8. Approved Conservation plan for Scheduled I species (leopard).

9. Details of recurring cost under various Environment Management Plan (EMP).

Item No. 23.5 Lakhwar HEP (300 MW) at village Lohari district Dehradun, Uttarakhand by M/s UJVNL – Consideration in the EAC based on the NGT Order.

File No. J-12011/09/2014-IA.I(R)

The Member Secretary of the EAC for River Valley Projects gave a presentation on the site visit report of the Sub-committee of the project. He informed that in the EAC meeting held on 28.01.2019 at Ministry of Environment, Forest & Climate Change, New Delhi, it was decided that a Sub-committee consisting of six members be constituted in pursuance to NGT order vide dated 10.01.2019 in Application No. 431 of 2015 (Manoj Kumar Mishra & Bhim Singh Rawat Vs Union of India & Others) and the Sub-committee shall visit the project site of Lakhwar HEP (300 MW) in village Lohari, district Dehradun, Uttarakhand by M/s UJVNL for examining the proposed project for stipulating any additional conditions while preparing the EIA/EMP report as per the EIA Notification, 2006. The following members of the Sub-committee attended the site visit:

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| 1. | Dr. Sharad Kumar Jain | - | Chairman |
| 2. | Prof. R.K. Kohli | - | Member |
| 3. | Shri N.N. Rai | - | Member |
| 4. | Dr. J.A. Johnson | - | Member |
| 5. | Dr. D.M. More | - | Member |
| 7. | Dr. S. Kerketta | - | Member Secretary |

Dr. (Mrs.) Poonam Kumria, Member, EAC was not available during the site visit due to preoccupation. The Sub-committee visited the site and held discussion with the PP on 22.04.2019 at the project site at Lakhwar, Dehradun. During visit, the Sub-committee observed that till 1992, a substantial construction work had been done on the project viz. 40 km Road infrastructure, Dam stripping on both banks, Diversion tunnel, Intake, Underground power house, Adit for Control Room, Adit to erection bay, Tail race tunnel, etc.

Further, Para-10 of NGT order vide dated 10.01.2019 in the Application No. 431 of 2015 (Manoj Kumar Mishra & Bhim Singh Rawat Vs Union of India & Others) stated that

"We, therefore, direct the EAC to appraise the project afresh in terms of EIA notification 2006 and impose additional general and specific conditions as may be considered necessary. EAC will be free to call for any reports which it may consider necessary. EAC is further directed to complete the appraisal by 15.04.2019. Till the project is reappraised status quo be maintained."

Based on the order, the Sub-committee made the following observation:

1. In the EAC meeting, it has been recommended that as the base line data of the EIA/EMP report submitted in 2007 is found to be more than three years old, once again 3 seasons baseline data to be collected and the same be incorporated in the previous EIA/EMP report. However, the Sub-committee during visit found at the site that till 1992, a substantial construction work had been done on the project viz. 40 km Road infrastructure, Dam stripping on both banks, Diversion tunnel, Intake, Underground power house, Adit for Control Room, Adit to erection bay, Tail race tunnel, etc. Therefore, it was suggested that baseline data for pre-monsoon and

monsoon be collected and the same be incorporated in the previous EIA/EMP report. An amount of more than Rs. 400.00 crores has been invested and the said Public money is blocked for more than 27 years. The sub-committee considers a colossal loss to state's exchequer.

2. Vyasi HEP which is a ROR scheme is in advanced stage of construction is located at 5 km downstream of Lakhwar HEP. Both the projects were approved as early in 1986-87. During that period, the concept of minimum Free flow stretches was not in place. Therefore, minimum distance from HRT of Vyasi HEP to FRL of Lakhwar HEP has been kept only 100 m. After detailed deliberation, it has been opined that as the FRL for the downstream project shall be maintained at FRL and MDDL and further there would be a continuous flow of water through a pondage area. Further, both the proposals are integrated one and have been planned long back, minimum distance of 100 m from HRT of Vyasi HEP to FRL of Lakhwar HEP be allowed.
3. Social Impact Assessment report to be prepared. Similarly, the EMP and other aspects of the study are to be revised/updated accordingly.
4. Due to this project, 22 km upstream length of Yamuna river and 4 km of Agalar river will be submerged. Every year, the locals celebrate a mass fish catch in Agalar river which is a traditional festival for them. Further, Mahasheer do migrate from Yamuna river to Agalar river for spawning as this river is relatively calm and undisturbed. Therefore, a separate in-situ conservation plan be prepared as a part of fish management plan.
5. As the proposed project falls in Yamuna River Basin and its CIA & CCS is already complete, the recommendation of CIA & CCS to be also part of the Project.

The above issues were discussed in detailed in the present EAC meeting and EAC agreed with the observations of the Sub-committee. It is also mentioned that this project has been declared as the National Project. Therefore, special consideration be given for early resumption of the project work. The *status quo order* given by the Hon'ble NGT has stalled all the activities on the field which is a great setback to the newly created state. The Sub-committee is inclined to get the mitigation measures complied as shall be suggested in the revised EIA/EMP report. At the same time the EAC recommends vacation of the *status quo* so that activities viz. of tendering activities, etc. (which do not impact environment) could be under taken by the Project Proponent.

Construction work on the project was initiated long ago and 30% work has already been completed. During these last 27 years, impact of the project components on environment is already taking place. Villagers from Kuna, Ranogi, Lakhwar, Katapathar, Timlliyan and Nainbag villages met the Sub-committee during the site visit and conveyed their strong support for the implementation of the project and also early resumption of the construction work. The villagers did not object to the implementation of this project and urge that if the project is resumed early, their livelihood will improve manifold (**A copy of representations of villagers is Annexed**). After a discussion on this aspect, the EAC in its meeting agreed with the suggestion of the Sub-committee and baseline data for pre-monsoon and monsoon be collected and the same be incorporated in the previous EIA/EMP report. Any unexpected behaviour and important findings to be highlighted (**A copy of the site visit report of the Sub-committee is Annexed**).

After deliberation on the site visit report, the EAC recommended for the grant of **fresh TOR** for preparation of EIA/EMP report as recommended the Sub-committee.

Item No. 23.6 Pumped Storage Project (9x150 MW) at Upper Sileru village Kudem Kothaveedhi (M), district Visakhapatnam, Andhra Pradesh by M/s Andhra Pradesh Power Generation Co. Ltd.
- Regarding Fresh ToR.

File No. J-12011/08/2019-IA.I(R), Proposal No. IA/AP/RIV/94369/2019

The Project Proponent (PP) applied for grant of ToR/Scoping Clearance for the proposed project online on 01.04.2019. The project proponent along with the Consultant, M/s WAPCOS Ltd., Gurugram, Haryana made a detailed presentation on the proposal and, *inter-alia*, provided the following information:

The present Upper Sileru Pumped Storage Project is proposed to be constructed on river Sileru. It is a tributary of Sabari River. It originates in Andhra Pradesh and also flows through Odisha before merging with Sabari. Sileru (known as Machkund in its upper reaches) river joins Sabari river near tri-junction boundary point of Andhra Pradesh, Chhattisgarh and Odisha. A pumped storage hydropower project is typically comprised of an upper reservoir and lower reservoir interconnected with a waterway, a powerhouse which contains hydropower electrical mechanical equipment, and a transmission connection to the power grid.

The Upper Sileru Pumped Storage Hydroelectric Project (USPSHEP) is located on Sileru River near Sileru village about 200 km from Visakhapatnam/Rajahmundry. The project envisages re-utilisation of water of the Guntawada reservoir which is presently being used for power generation at the existing Hydroelectric Power Station and surplus water is spilled away from the reservoir. It is proposed to store this surplus water in Donkarayi reservoir located in the downstream side for reutilisation during pumping mode. The geographical coordinates of Guntawada reservoir are longitude 82°02'18" East and latitude 18°03'34" North.

The existing Guntawada reservoir near Sileru village is the upper reservoir for the proposed project. The dam is under operation with a live storage capacity of 3.108 TMC. The existing Donkarayi reservoir near Donkarayi village will be the lower reservoir to enable Upper Sileru PSP to operate as a peak station. The dam is under operation with a live storage capacity of 13.30 TMC. The project comprises about 2.764 km long head race tunnels (3 Nos.) to a surface power house and have an installed capacity of 1350 MW. Other components of the project include approach channel, intake, Surge Shaft (2 Nos.), underground Penstock and a Tail Race Tunnel (3 Nos.) to discharge the flow back into Sileru River downstream of existing Upper Sileru Hydroelectric Power House.

During non-monsoon seasons, the water levels of the Donkarayi reservoir gets depleted and pumped storage project would not be operated. In order to avoid this condition, a separate weir of gross storage capacity 1.7 TMC is proposed on the Sileru river at 7.2 km upstream of the Donkarayi reservoir to store and reutilize the water in pumping mode. Some portion of the weir structure comes in the river course of territory of Odisha state and FRL is within the fixed FRL as for Donkarayi reservoir. There is no submergence due to the construction of the weir as the water level will be in the river course.

The installed capacity of the project is 1350 MW. Nine units of 150 MW/169 MW each of Pump-Turbine mode Vertical shaft Francis type units would be installed. Design discharge of each unit is 183.5 m³/s. Surface power house will be installed. 3 Nos. of Head Race Tunnels of 12 m diameter and 2,746 m long will be constructed to feed the 9 units. 3 Nos. Tail Race Tunnels of 12 m diameter and 2,478 m long will be constructed to discharge into downstream. Sizing of the project components are made based on the preliminary studies. However, Civil, Hydro-Mechanical and Electrical works as appropriate will be installed after detailed engineering of the

project components. The Project would be operated as peaking station for 8 hours per day for 350 days to deliver 3,780 MU energy to the grid.

About 410 ha land is required for the construction of Approach channel, Intake structure, HRT, Surge shafts, Pressure shafts, Surface power house, TRT, Tailrace channel, Adits, Switch yard, Roads, other related structures, Muck disposal areas, etc. Out of 410 ha, the PP has already acquired 30 ha land and forestland is 380 ha. No private land is involved. Forest Clearance is required for the 380 ha of forestland. Proposal for Forest Clearance is yet to be submitted.

The project envisages grid stability, to store energy to meet the peak power demand of the grid and also to encourage development of renewable energy sources. The total estimated cost of the project including direct and indirect charges including ICD with escalation is Rs. 11,054.10 Crores.

The EAC after deliberation on the information submitted and as presented by the PP, recommended for grant of standard Term of Reference along with the following additional conditions for undertaking EIA and preparation of Environment Management Plan (EMP):

- i. The project involves about 380 ha of forestland. Forest clearance shall be obtained as per the prevailing norms of Forest (Conservation) Act, 1980.
- ii. Application to obtain prior approval of Central Government under the Forest (Conservation) Act, 1980 for diversion of forestland should be submitted as soon as the actual extent of forestland finalized for the project, and in any case, within six months of issuance of this letter.
- iii. All the tasks including conduct of public hearing be completed as per the provisions of EIA Notification, 2006 and as amended time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/EMP report in the relevant Chapter.
- iv. Public hearing in close proximity to the portion of weir falling within the river bed of Odisha shall also be carried out.
- v. Consent from Odisha Govt., shall be obtained for construction of portion of weir falling within the river bed in the Odisha State.
- vi. Fund allocation for CER shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 1st May, 2018 for various activities therein. The details of funds allocation and activities for CER shall be incorporated in EIA/EMP report.
- vii. Consolidated EIA/EMP report is to be submitted as per the generic structure (Appendix III) given in the EIA Notification, 2006.

Item No. 23.7 100 MW Malana II HEP, Kullu, Himachal Pradesh by M/s Everest Power Private Limited at Himachal Pradesh - Regarding Amendment in Environmental Clearance.

File No. J-12011/21/2005-IA-I, Proposal No. IA/HP/RIV/94369/2005

The Project Proponent (PP) applied for grant of amendment in EC for the proposed project online on 05.02.2019. The PP along with the Consultant, M/s RS Envirolink Technologies Pvt. Ltd., Gurgaon made a presentation of the proposal and *inter-alia*, provided the following:

Malana-II Hydroelectric Power Project is now in operation as a Run-of-the-river scheme located in the Malana Nallah, a tributary of Parbati River in the Beas Basin, near the Malana village of Kullu District, Himachal Pradesh. Environment Clearance (EC) was granted by MoEF & CC on 21st June, 2005. Project got commissioned in July, 2012 and is under successful operation.

The project is located at latitude between 32°02'15" N to 32°05'06" N and longitude between 77°15'26" E to 77°16'51" E. The project consists of 45 m concrete gravity dam, with underground power house of two vertical axis Pelton wheel turbine of 50 MW installed capacity each. Gross storage at FRL of 2,543 m is 0.385 Mm³ and submergence area is only 3.5 ha. Catchment area at diversion location is 158.7 km².

To provide additional safety measures in the existing dam structure due to flash floods on account of changing climatic conditions, Directorate of Energy (DoE), Government of Himachal Pradesh (GoHP) has directed for implementation of additional ungated surface spillway by conversion of non-overflow blocks into overflow blocks. DPR, along with the Physical Model Study carried out by IIT, Roorkee for additional spillway was submitted to DoE, GoHP in November, 2017. Directorate of Energy, GoHP has approved the revised DPR for additional spillway on 2nd February, 2018. Therefore, amendment of EC is requested so that additional spillway is constructed as directed and approved by DoE, Govt. of Himachal Pradesh.

Except provision of additional un-gated surface spillway by conversion of non-overflow blocks into overflow blocks in existing dam to ensure the additional safety of dam, the present proposal does not envisage any change in the salient features of the project, i.e. FRL, MWL, submergence area, installed capacity, land requirement, etc.

EAC discussed the requirement of additional spillway and changes envisaged in project scope, if any, due to conversion of four non-overflow blocks to overflow blocks of size 6.25 m (7 bays)x2 m with overall waterway width of 43.75 m to have discharge capacity of proposed surface spillway as 239.5 m³/s with an adequate energy dissipation arrangements adjacent to existing spillway aprons. EAC noted that the proposed spillway has been optimized and designed through Physical Hydraulic Model Studies carried out by IIT, Roorkee and approved by Department of Energy, GoHP.

EAC further discussed that construction of surface spillway will not change any of the project parameters/study area as covered as a part of EIA study except for additional muck generation of 18,500 m³, out of which around 2,300 m³ is proposed to be reused and balance 16,200 m³ shall be disposed off at pre-designated approved unutilized additional muck dumping sites located near bridge-II on right bank (having capacity of about 36,549 m³) and approved as part of environment/forest clearance of the project. Proponent explained that this site was identified for muck disposal and forestland has been diverted and obtained forest clearance of the project during project construction; however, the same remained unutilized due to construction of ropeways in place of proposed road from bridge-III to surge shaft and therefore is available for muck dumping. As the site is forestland, necessary permission from State Forest Department has been taken vide letter dated 31.10.2018.

EAC noted that changes are proposed for additional safety, with no significant additional impacts. Further there is no significant change in scope from original EIA/EMP study as there are no changes in project parameters, land requirement, etc. EAC recommended the proposal for amendment of environment clearance with the following additional conditions:

1. Muck so generated to be disposed of only at the designated and unused muck disposal sites.
2. Construction work to be carried out during daytime only and less noisy equipment be used for construction work so as to not to disturb any wildlife in the area.

3. If need be, statutory permissions as required for the construction work be obtained from other Statutory Authorities.
4. Minimum e-flow be maintained as per the recommendation of Beas River Basin Studies.

Item No. 23.8 Cumulative Impact Assessment and Carrying Capacity Study (CIA & CCS) of Teesta River Basin. Presentation before the EAC for recommendation of the Study- Further Consideration

File No. J-12013/19/20013IA.I

The Project Proponent along with the Consultant, M/s WAPCOS Ltd., Gurgaon made a presentation of the proposal and *inter-alia*, provided the following:

Teesta Basin for West Bengal portion was initiated at the instance of Ministry of Environment, Forest & Climate Change, Government of India while according prior Environmental Clearance to Teesta Low Dam-V HEP in May, 2013. The proposal was appraised during 92nd meeting of EAC held during 28th-29th March, 2016, 98th meeting of EAC held during 11-12th August, 2016 and 22nd meeting of EAC held on 27th February, 2019.

The detailed presentation on pointwise response to comments raised during 22nd EAC meeting are as below:

- Detailed list of phytodiversity (algae, Lichens, bryophytes Pteridophytes, gymnosperms & angiosperms), RET species along with species from CITES was presented.
- A total Six HEP was considered in the Teesta Basin Report of Sikkim Portion on Teesta River, which submitted in year 2006. The Last HEP on Teesta River in Sikkim State is Teesta Stage-VI HEP and its Power House is on Sikkim and West Bengal Border. The Teesta Stage-VI HEP starting from Power is also considered in the Teesta Basin Report of West Bengal Portion and the Free Stretch between TWL of Teesta VI HEP & FRL Teesta Intermediate HEP (which is first project on Teesta River in West Bengal) is about 1.4 km.
- It was informed by WBSEDCL representative that State Government of West Bengal has given its concurrence on the recommendation of Basin Study Report

The List of HEPs proposed on Teesta river and Rammam river in the study area is given in Table-1 and 2, respectively.

Table-1: List of HEP proposed on Teesta River

S. No	Project Name	Proposed IC (MW)	Status
1.	Teesta HEP Stage-VI	500	Under Construction
2.	Teesta Intermediate HEP	84	ToR accorded by MoEF in October, 2013
3.	Teesta Low Dam-I and II HEP	81	ToR accorded by MoEF in December 2013
4.	Teesta Low Dam-III HEP	132	Commissioned
5.	Teesta Low Dam-IV HEP	160	Commissioned
6.	Teesta Low Dam-V HEP	80	ToR accorded by MoEF in May 2013
7.	Jorthang Loop HEP	96	Commissioned

S. No.	Project Name	Proposed IC (MW)	Status
Total		1133	

Table-2: List of HEPs on Rammam River

S. No.	Name of Project	Proposed IC (MW)	Status
1.	Rammam Stage-I HEP	48	Project handed over to NHPC Ltd. by WBSEDCL
2.	Rammam Intermediate Small HEP	12	Project handed over to NHPC Ltd. By WBSEDCL
3.	Rammam Stage-II HEP	51	Project under operation by WBSEDCL
4.	Rammam Stage-III HEP	120	Under construction by NTPC Ltd.
Total		231	

The Teesta sub-basin in West Bengal covers an area of 3,225 km² which comprises of hilly terrain of Darjeeling district (approximately 1,121 km²) and plains of Jalpaiguri district (2,104 km²). The study was carried out in Teesta river and its tributaries flowing in the hilly terrain of West Bengal. Monitoring samplings were located at 15 sites of Teesta, Rangit and Riyang Khola rivers. All the samplings were carried out on monthly interval from April, 2014 to March, 2015.

The discharges in 90% dependable year for hydroelectric projects being covered under the present study on river Teesta and Great Rangit and on river Rammam are given in Table-3 and Table-4, respectively.

Table-3: Discharges in 90% Dependable Year for HEPs on river Teesta and Great Rangit

Month		Teesta Intermediate HEP	Teesta Low Dam -I and II HEP	Teesta Low Dam-III HEP	Teesta Low Dam-IV HEP	Teesta Low Dam-V HEP	Jorethang Loop HEP
June	I	656.09	79.26	416.09	341.20	440.5	111.4
	II	925.97	130.44	699.31	410.08	740.3	189.3
	III	823.73	274.99	657.65	735.26	696.2	163.9
July	I	1187.40	594.87	745.70	833.39	789.5	221.7
	II	785.20	480.05	808.17	808.08	855.6	197.1
	III	663.99	382.00	981.79	967.24	1039.4	150.1
August	I	669.65	258.83	772.33	798.59	817.6	170.8
	II	651.29	520.54	867.84	684.34	918.8	246.6
	III	804.86	332.21	854.72	723.44	904.9	214.5
September	I	547.50	240.51	648.70	649.03	686.8	170.8
	II	493.27	197.06	471.16	879.92	498.8	122.4
	III	644.40	207.63	583.07	673.76	617.3	214.5
October	I	371.00	196.58	515.41	608.68	545.7	103.4
	II	396.64	154.89	518.05	510.59	548.4	84.9
	III	350.08	120.96	488.15	430.61	516.8	65.6
	I	294.64	88.84	284.85	242.42	301.6	50.8

Month		Teesta Intermediate HEP	Teesta Low Dam -I and II HEP	Teesta Low Dam-III HEP	Teesta Low Dam-IV HEP	Teesta Low Dam-V HEP	Jorethang Loop HEP
November	II	278.71	64.98	159.07	221.51	168.4	47.8
	III	239.18	49.25	135.53	196.92	143.5	39.9
December	I	204.83	43.79	192.12	178.92	203.4	31.1
	II	187.43	39.04	176.95	171.99	187.3	27.3
	III	206.73	36.92	126.22	154.91	133.6	24.3
January	I	177.22	35.57	177.76	141.25	188.2	24.3
	II	105.50	28.33	164.43	134.40	174.1	24.9
	III	107.97	26.98	157.45	127.96	166.7	24.6
February	I	94.53	30.95	132.62	156.72	140.4	24.3
	II	93.18	34.21	131.44	151.28	139.2	24.0
	III	89.09	9.35	128.49	151.11	136.0	23.7
March	I	106.94	4.79	160.94	126.81	170.4	22.7
	II	175.82	7.97	168.79	137.64	178.7	27.5
	III	231.53	15.85	179.37	160.48	189.9	24.7
April	I	215.38	24.00	151.19	223.07	160.1	43.6
	II	275.14	15.15	190.90	215.28	202.1	44.7
	III	314.46	33.65	316.33	244.11	334.9	41.1
May	I	491.19	30.87	226.82	423.01	240.1	70.2
	II	724.76	78.18	231.66	281.28	245.3	45.6
	III	745.81	156.18	400.69	312.90	424.2	51.8

Table-4: 90% Dependable Year flows for HEPs rivers Rammam

Month		Rammam-I HEP (combined discharge of 90% DY flow)	Rammam Intermediate HEP (75% DY flow)	Rammam-II HEP (combined discharge of 90% DY flow)	Rammam-III HEP (90% DY flow)
June	I	24.58	10.82	7.95	8.62
	II	10.1	14.22	16.66	11.24
	III	18.78	21.48	14.43	21.02
July	I	19.76	19.24	17.48	30.99
	II	46.52	33.93	22.87	30.92
	III	15.76	64.04	24.02	44.26
August	I	19.16	34.21	16.36	43.96
	II	18.77	25.74	19.83	38.1
	III	17.83	24.66	18.45	38.38
September	I	20.26	37.93	17.12	43.12
	II	17.21	44.36	16.16	33.38
	III	35.56	37.52	17.19	28.49
October	I	15.88	24.88	13.62	22.87
	II	14.99	18.6	12.98	17.21
	III	9.15	10.48	10.91	13.38
November	I	7.12	7.48	10.14	12.61
	II	5.97	7.26	9.39	10.93
	III	4.19	6.44	8.49	9.04

Month		Rammam-I HEP (combined discharge of 90% DY flow)	Rammam Intermediate HEP (75% DY flow)	Rammam-II HEP (combined discharge of 90% DY flow)	Rammam- III HEP (90% DY flow)
December	I	2.72	5.8	10.51	8.33
	II	2.43	5.7	7.38	7.62
	III	2.18	5.51	6.89	6.29
January	I	2.5	5.26	6.71	5.42
	II	2.43	4.96	6.19	5.77
	III	2.09	4.82	5.68	5.31
February	I	2.56	5.34	5.33	5.24
	II	2.27	4.13	4.76	4.81
	III	2.53	3.58	4.25	4.67
March	I	2.43	2.79	3.89	4.49
	II	2.92	2.58	4.46	4.72
	III	2.9	2.53	3.57	4.99
April	I	1.83	2.49	3.36	5.01
	II	1.86	2.49	4.03	5.15
	III	1.81	2.6	4.1	6.63
May	I	2.17	3.02	6.24	7.17
	II	2.2	3.04	4.83	7.4
	III	2.51	3.02	7.22	11.12

The detailed findings of terrestrial ecology, aquatic ecology, fauna and avifauna were presented. The design flow series for the various hydroelectric projects on Teesta River along with its tributaries were also presented.

The results of simulation for various scenarios by using HEC-RAS model have been provided in Table-5.

Table-5: Various scenarios covered as a part of HEC-RAS modeling

S. No.	Season	Flow Release (average of months)	Months
1.	Monsoon Season	100%	June-September
2.	Monsoon Season	30-15% at 1% interval	June-September
3.	NMNL* season-1	100%	October-November
4.	NMNL season-1	30-15% at 1% interval	October-November
5.	Lean Season	100%	December-March
6.	Lean Season	30-15% at 1% interval	December-March
7.	NMNLseason-2	100%	April-May
8.	NMNL season-2	30-15% at 1% interval	April-May

* Non-monsoon Non-lean

The details pertaining to length of free flow of river in the study area are given in Table-6.

Table-6: Details of length of free flow of river in the study area

S. No.	Projects	Length of free flow of river (km)
A. River Teesta		
1.	TWL of Teesta VI HEP & FRL Teesta Intermediate HEP	1.40
2.	TWL of Teesta intermediate HEP and FRL of Teesta Low Dam III HEP	6.00
3.	TWL of Low Dam III HEP and FRL of Teesta IV Low Dam HEP	4.47
4.	TWL of Teesta IV Low Dam HEP and FRL of Teesta V Low Dam HEP	1.10
5.	TWL of Teesta Low Dam V HEP and FRL of Teesta Barrage	15.0
B. River Great Rangit		
6.	TWL of Jorthang Loop HEP & FRL of Teesta Low dam (I&II) HEP	1.124
7.	TWL of TLDP (I & II) HEP & Confluence of Bari Rangit & Teesta River	3.0
C. River Rammam		
8.	TWL of Rammam-I HEP & FRL of Rammam Intermediate HEP	1.0
9.	TWL of Rammam Intermediate HEP and Trench Weir of Rammam-II HEP	1.0
10.	TWL of Rammam-II HEP & FRL of Rammam-III HEP	1.60
11.	TWL of Rammam-III to confluence with Great Rangit River	6.70

The free flowing river in Teesta & Rammam shall be available on an intermittent basis only for a length of 27.97 km in a stretch of 51.55 km in River Teesta and 10.3 km in a stretch of 31.6 km in River Rammam.

The Member Secretary informed in the EAC meeting that vide letter No. PO/O/C-III/4M-13/2017 dated 18.04.2019, the Department of Power & NES, Govt. of West Bengal, conveyed its concurrence on the recommendations of the Draft Teesta Basin Study Report regarding development of HEPs (Operation, under Construction and Proposed) to be considered in the said RBS report in West Bengal for final acceptance. Therefore, the EAC did not take separate cognizance for acceptance of the recommended HEPs from the Govt. of West Bengal separately.

After detailed deliberations on the recommendations of the study report, the following recommendation were made by the EAC:

1. Free flow stretch will be available for a stretch of 27.97 km out of a total stretch of 51.55 km on main Teesta river.
2. The Teesta Low Dam V HEP has been accorded TOR Clearance by EAC of River Valley Project of Ministry of Environment, Forest & Climate Change in 2013 vide letter No-J-12011/39/2012-IA.I, dated 23.08.2013. The validity of TOR is for 4 years, and the project proponent will have to get fresh TOR since the earlier ToR is no more valid now.
3. It is recommended while appraising Teesta Low Dam V HEP for TOR Clearance, that the NBWL Clearance, which was a condition in the TOR Clearance in the year 2013, should still continue. In addition, additional studies to assess the impacts on Mahananda Wildlife Sanctuary should also be considered, while appraising the project for TOR Clearance. Impacts on Elephant migratory route is one such study. Likewise, special study on impacts on flora and fauna of the sanctuary during construction phase can also be recommended.

4. Four hydroelectric projects are operational/ under construction for which provision of Environmental Flows has not been made. Only spills in monsoon months are expected on those days, when discharge is higher than rated discharge. The four hydroelectric projects operational/ under construction are as follows:
 - Teesta Stage-VI HEP (500 MW)
 - Teesta Low Dam-III HEP (132 MW)
 - Teesta Low Dam-IV HEP (160 MW)
 - Jorethang Loop HEP (96 MW)
5. Free flow stretch for about 4.124 km is available in HEP's located on river Great Rangit.
6. It is recommended that in addition to spills in monsoon season for Teesta Low Dam-IV HEP an Environmental Flow of 1.25 cumec be released by project proponent, which should be maintained in all the non-monsoon months.
7. In absence of sufficient data on river cross-section for Teesta Stage-VI and Teesta Low Dam-III HEP which are located upstream of Teesta-IV Low Dam HEP, a discharge of 1.25 cumec be released in non-monsoon months as Environmental Flows, in addition to the spills in monsoon season.
8. As mentioned earlier, Rammam-II & Rammam-III are under operation and construction stage respectively. However, for Rammam-I and Rammam Intermediate HEP Environmental Flows have been recommended as per the following Norms:

Monsoon Season	:	30% of average Discharge of monsoon season for 90% DY
NonMNL season	:	25% of average Discharge of Non-Monsoon Lean season for 90% DY
Lean Season	:	20% of average Discharge of lean season for 90% DY

9. It is recommended to change the layout of Rammam Intermediate HEP to ensure that free stretch is available between TWL of Rammam-I HEP and FRL of Rammam Intermediate HEP.
10. The recommended Environmental Flows for HEPs for which cross sections are available are given in Table-8.

Table-8: Recommended Environmental Flows for 90% DY for various HEPs

Month	Teesta Low Dam (I&II) HEP	Teesta Intermediate HEP
Monsoon Season	20% (61.64 m ³ /s)	20% (147.56 m ³ /s)
Lean season	15% (3.78 m ³ /s)	15% (69.12 m ³ /s)
Non-Monsoon Non-lean season (April-May)	20% (22.52 m ³ /s)	20% (64.34 m ³ /s)
Non-Monsoon Non-lean season (October-November)	23% (12.96 m ³ /s)	23% (34.13 m ³ /s)

As per the NGT order on Environmental Flows, the minimum Environmental Flows for lean season shall be as 15% of average discharge of lean season for the last project in Teesta River falling in Sikkim i.e. Teesta Stage VI HEP. The recommended Environmental Flows for Teesta Stage VI HEP is 15% of average discharge of lean season i.e. 16.06 m³/s.

EAC recommended for approval of the CIA and CCS of Teesta river basin in West Bengal.

Item No. 23.9 Gond Major Irrigation Project (CCA: 28,000 ha) in the district of Singrauli, Madhya Pradesh by M/s Madhya Pradesh Water Resources Department – Regarding fresh EC

File No. J-12011/33/2017-IA.I (R), Proposal No. IA/MP/RIV/69923/2017

The PP applied online on 04.04.2019 for implementation of Gond Major Irrigation Project (CCA: 28,000 ha) in the district of Singrauli, Madhya Pradesh. The PP informed by writing on 23.04.2019 that the PP is not in readiness for presentation and requested to defer the appraisal and may be given another opportunity for presentation of the proposal. Accordingly, the proposal was **deferred**. The following information also to be submitted by the PP:

1. Copy of Public Hearing advertisement held in district Singrauli.
2. Funds allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 1st May, 2018 for various activities therein. The details of funds allocation and activities for CER shall be incorporated in EIA/EMP report.
3. Consolidated EIA/EMP report is to be submitted as per the generic structure (Appendix III) given in the EIA Notification, 2006.
4. Conservation plan for Scheduled I species shall be prepared and submitted.
5. QCI & NABET Accredited certificate of the consultant for the period during which baseline data and other EIA/ EMP studies were carried out.

Item No. 23.10 Teesta-IV HEP (520 MW) project in North Sikkim District of Sikkim by M/s. NHPC Ltd- Regarding Amendment in Environmental Clearance.

File No. J-12011/67/2008-IA-I & Proposal No. IA/SK/RIV/10139/2012

The Project Proponent (PP) applied for Amendment in Environmental Clearance for the proposed project online on 12.04.2014. The PP along with the Consultant, M/s CIFRI, Barackpore made a presentation of the proposal and *inter-alia*, provided the following:

Teesta Stage-IV (520 MW) HE Project is a Run of the River (RoR) scheme on the Teesta river located in Mangan subdivision of North District of Sikkim. Project was accorded Environmental Clearance by MoEF&CC on 09.01.2014. The status of various clearances as submitted by the Project Proponent i.e. NHPC is as under:

Techno-economic Concurrence	: 13.05.2010
Forest Clearance (Stage-I)	: 26.02.2013
Environmental Clearance	: 09.01.2014
Wildlife Clearance	: 03.12.2014
Forest Clearance (Stage-II)	: Pending

Amendment in Environment Clearance has been sought in light of the NGT order dated 15.11.2017 in the matter of Application No.11/2014 (Shri Tenzing Lepcha & Ors. Vs UoI and Ors) vide which Environment Clearance has been granted to Teesta IV HEP (520MW) was upheld by NGT subject to compliance of following two conditions by NHPC before commencement of the project:

1. *The Project Proponent shall propose a 3 regime e-flow in consultation with the experts of CIFRI to the MoEF&CC to the satisfaction of the EAC.*

2. The project proponent shall prepare a mitigation plan to prevent reservoir induced seismicity due to Teesta-IV Project for consideration and approval of MoEF&CC.

In this regard, the background of both the above issues have been explained followed by detailed presentation on mitigation measures adopted for Reservoir Induced Seismicity (RIS) and e-flow by CIFRI, Barrackpore. The Details are presented below:

(A) Reservoir Induced Seismicity (RIS) Mitigation Plan

In the above mentioned NGT matter, the tribunal has observed that EAC in its meeting held on 08.09.2012 had made an observation that “Keeping in view of the recommendations of the Carrying Capacity Study of Teesta Basin, the details of the planning of the Teesta IV HEP and actions taken/provision made in the EIA/EMP should be presented including mitigations measures....” NGT has further observed that measures proposed to be undertaken by the Project Proponent with regard to Reservoir Induced Seismicity leading to landslides has not been placed on record which is particularly relevant when the state just experienced an earthquake of magnitude 6.9 in Richter Scale.

Considering the above, the Hon’ble NGT directed that before commencement of the project, the project proponent shall “prepare a mitigation plan to prevent reservoir induced seismicity due to Teesta IV HEP for consideration and approval by MoEF&CC.” Earlier, this aspect was discussed in detailed during the 60th EAC meeting held on dated 08.09.2012 and a response to the EAC observation was provided to MoEF&CC/EAC on 18.10.2012. However, in line with NGT order, a mitigation plan has been formulated in consultation with Department of Earthquake Engineering, IIT, Roorkee, since the Seismic Design Parameter (SDP) studies of the project were undertaken by the same Institute earlier.

In this regard, a detailed presentation was made and highlighted the seismic scenario in Himalayas with respect to seismo-tectonic set up resulting in some great earthquakes in Himalayas vis-à-vis the seismo-tectonic scenario in and around Teesta IV HEP. The background, causative factors along with a worldwide distribution of RIS was also presented. It has also been submitted that the thrust environment in Himalayas is not favorable for RIS. Moreover, the volume of reservoir impoundment in Teesta IV HEP which is only 18.6 MCM is much less than 500 MCM, the minimum volume requirement for RIS (ICOLD Bulletin 148, Martin Wieland, 2018).

Various measures already taken for seismicity monitoring through its centralized online data center connecting all its power station along with specialized seismicity studies like MEQ and LET studies (as per NCSDP guidelines) for its project were also explained. Besides designing and constructing the project as per the approved seismic design parameters by NCSDP, three-fold mitigation plan for RIS in Teesta IVHEP are proposed as under:

- i. In order to establish a correlation between Reservoir Impoundment & RIS, it is proposed to collect the seismicity data of at least a year before impoundment of the reservoir. Accordingly, a network of at least six seismographs and one accelerograph within the radius of 40-50 km from the dam will be set up to record the activity beneath the reservoir area. This network will have online seismic monitoring facility and data will be obtained on a continuous mode at the Real Time Seismic Data Center.
- ii. Seismic monitoring will be continued after impoundment. Variation in the levels of seismic activity including the occurrence frequency and magnitude with levels of reservoir filling will be closely monitored. This post impoundment data will then be compared with the pre impoundment data to assess any signature of Reservoir Induced Seismicity (RIS).

- iii. Variation in reservoir levels will be correlated with the recorded seismic data regularly. If any indication of RIS is obtained from these observations then proper measures will be taken up to regulate the reservoir filling at optimum levels.

The EAC found that the in-house study made by the PP seems to be in-order and also in-line with the Hon'ble NGT Order.

(B) E-flow issue of Teesta-IV Project

The Environment Clearance condition on e-flow stipulates that *"A minimum environmental flow of 15 cumecs shall be released during lean and non-lean/non-monsoon months of the year. For the monsoon months (June-September), environmental flow of 20 cumecs shall be released for sustenance of the aquatic life in the downstream."*

In this regard, the Applicant had submitted that the EAC, while appraising the Project, has considered the e-flow in isolation and fixed 15 cumecs during lean and non-lean/non-monsoon months and 20 cumec during monsoon months of the year, instead of three regime e-flow as prescribed in other projects during August and September, 2013, EC accorded to 300 MW Panan HEP, Sikkim and 612 MW Luhri Project in Himachal Pradesh.

After detailed hearing and arguments, the Hon'ble NGT in its judgment dated 15.11.2017, directed the Project proponent to propose 3-regime e-flow in consultation with the experts of CIFRI. Further, the Hon'ble Tribunal in its order has also mentioned that the Project Proponent in consultation with CIFRI will determine the minimum e-flow for non-lean and non-monsoon months keeping 15 cumecs as the minimum e-flow for lean months.

In compliance to the NGT order dated 15.11.2017, a study to CIFRI, Barrackpore was awarded, in December, 2017 to determine the e-flow for non-lean and non-monsoon months. CIFRI submitted its report in February, 2019 and the same was placed before the EAC for appraisal and finalization of 3-season e-flow regime.

A detailed presentation on the study was made by CIFRI, Barrackpore. CIFRI submitted that a detailed study has been carried out on eflow for the project during 2009-2010. However, additional sampling were also carried out between February and April, 2018, representing non-lean non-monsoon season for generating the current status on river hydrology, river habitat and biological data including fish and fish food organisms. CIFRI presented that there are several E-flow estimation methods existing world-wide. However, due to the complexity of the target fish species, its aquatic habitat, and temporal variability of flow depth and velocity characterized by the irregular river cross-section, there is a need to integrate the hydrological method (e.g., Flow-Duration Curve (FDC) method), Hydraulic rating method (e.g., MIKE11-HD that solves the full dynamic wave equations using the de Saint Venant equations of continuity and momentum equations), and the fish biology (e.g., adaptable water depth and velocity for its migration, spawning, etc.). It was also submitted by CIFRI that the river system is already largely modified due to commissioning of Teesta III PS in the upstream and Teesta-V PS in the downstream.

Further, CIFRI presented that based on the field surveys and secondary sources, Snow Trout species is found to be the most dominant fish species at the selected sampling sites in Teesta river. Although none of the previously available fish species such as *Tor* spp., *Neolissochilus hexagonolepis*, *Nemacheilus botia* and *Garra* sp. have been reported during the short period of study time, their occurrence in the selected study stretch could not be ruled out. It has been observed that *Schizothorax richardsonii* of Cyprinidae family fall under the vulnerable category in the streams. Realising the importance, a Habitat study was carried out during

February and April, 2018 representing the overlapping period of lean season and non-lean non-monsoon season, respectively and observed that the Rang Rang confluence point which is approximately 300 m downstream and Deadkhola site which is 7,500 m downstream are more suitable for the breeding and spawning of *Schizothorax* sp. Hence, protecting the entire life cycle of *Schizothorax* sp. through adequate environmental flows would be required in order to conserve the fish species.

Based on this additional study for non-lean non-monsoon season e-flow, CIFRI recommended to release a dedicated flow of 20 m³/sec from the proposed Teesta IV Dam during non-lean non-monsoon. CIFRI has mentioned that this release will suffice a minimum depth of 0.6 m with a flow velocity of 0.4 m/s, which is essential for maintaining the juveniles' habitat for *Schizothorax* sp. and other indigenous fish species. In addition, the discharges from the natural streams/nalas between the proposed dam and power house will further enhance the aquatic lives during non-lean non-monsoon months.

After the detailed deliberations on the issue, the EAC desired some additional information regarding the calculation done by CIFRI for arriving at the figure of 20 m³/ sec for the desired depth of 0.6 m and flow velocity of 0.4 m/s. EAC also deliberated and mentioned that the Manning Roughness Coefficient taken for the study is on quite higher side. So, calculation done by the CIFRI may be presented before EAC in its next meeting. The PP shall confirmed data on the occurrence of Golden Mahaseer in the study area of the basin which has reportedly sighted in the Teesta river. **Accordingly, the recommendation on the e-flow releases to be once again presented before the EAC with details for its review.**

Item No. 23.11 Any Other items with the permission of the Chair

As there being no agenda item left, the meeting ended with a vote of thanks to the Chair.

Annexure: Site visit report of the Sub-committee

Site visit report of Lakhwar HEP (300 MW) at village Lohari, district Dehradun, Uttarakhand by M/s UJVNL in pursuance to NGT order vide dated 10.01.2019 in Application No. 431 of 2015 (Manoj Kumar Mishra & Bhim Singh Rawat Vs Union of India & Others)

In the EAC meeting held on 28.01.2019 at Ministry of Environment, Forest & Climate Change, New Delhi, it was decided in the EAC meeting that a Sub-committee consisting of six member committee could be constituted in pursuance to NGT order vide dated 10.01.2019 in Application No. 431 of 2015 (Manoj Kumar Mishra & Bhim Singh Rawat Vs Union of India & Others) which shall visit the project site of Lakhwar HEP (300 MW) in village Lohari, district Dehradun, Uttarakhand by M/s UJVNL for examining the proposed project for stipulating any additional conditions while preparing the EIA/EMP report as per the EIA Notification, 2006 and amendments thereafter. The Sub-committee consisting of the following Members:

- | | | | |
|----|--------------------------|---|------------------|
| 1. | Dr. Sharad Kumar Jain | - | Chairman |
| 2. | Prof. R.K. Kohli | - | Member |
| 3. | Shri N.N. Rai | - | Member |
| 4. | Dr. J.A. Johnson | - | Member |
| 5. | Dr. D.M. More | - | Member |
| 6. | Dr. (Mrs.) Poonam Kumria | - | Member |
| 7. | Dr. S. Kerketta | - | Member Secretary |

The Sub-committee was duly approved by the Competent Authority vide Ministry's vide Office Order No. L-11011/19/2018-IA.I(R) dated 02.04.2019. The Sub-committee held discussion on 22.04.2019 with the project officials at the project site at Lakhwar, Dehradun and also visited the project site. Dr. (Mrs.) Poonam Kumria, Member, EAC was not available during the site visit due to preoccupation. The following officers and other senior officers from the project site were present:

- | | | | |
|----|---------------------------|---|----------------------------|
| 1. | Shri Rajeev Kumar Agarwal | - | Executive Director (Civil) |
| 2. | Shri Sujeet Kumar Singh | - | General Manager (Civil) |
| 3. | Shri Amresh Kumar Singh | - | Executive Engineer |

Background of the Project:

During visit, the Project Proponent gave a detailed presentation and reiterated the facts as provided earlier in the EAC meeting and *inter-alia*, provided the following:

Combined Lakhwar Vyasi project was accepted by Planning Commission on 09.01.1976 in its Fifth plan. Storage and use of water at Lakhwar Vyasi be determined after taking into account the requirements of eastern and western Yamuna canal system and any releases required to be made from Tajewala to meet the requirement of Delhi water supply, Agra and Gurgaon canals. Lakhwar Vyasi project had three major components- Lakhwar dam, Vyasi dam and Katapathar barrage. The major works of the project commenced in 1987 and progressed up to 1992. Till 1992, substantial construction work has been done on the project viz. 40 km Road infrastructure, Dam stripping, Diversion tunnel, Intake, Underground power house, Adit to control room, Adit to erection bay, Tail race tunnel, etc.

MoU between Uttar Pradesh, Haryana, Rajasthan, Himachal Pradesh and National Capital Territory of Delhi on allocation of surface flow of Yamuna was signed on 12th May, 1994. As per MoU, 11.983 BCM has been assessed as an annual utilizable flow of river Yamuna and has been allocated to the five beneficiary states. The catchment area treatment of river Yamuna at Lakhwar-Vyasi was part of the centrally sponsored watershed management programme at the time of start of the construction. Much work in land, surveys, project formulation, identification of degraded areas, soil conservation measures, etc. has been done till August, 1986. Government of Uttarakhand has entrusted the implementation of this project to UJVNL Limited on 23.06.2008. Fresh environmental clearance of Vyasi HEP was accorded to NHPC. on 07.09.2007 and the same was transferred in favour of UJVNL vide letter No. J-12011/48/2007-IA.I dated 22.04.2010. After review of the request of UJVNL, validity of Environmental Clearance of Lakhwar MPP has been given vide letter No. J-12011/32/2010-IA.I, dated 10.01.2011. The revised DPR of Lakhwar Multipurpose Project has been prepared with an estimated cost of Rs. 3966.51 Crore. The total cost of irrigation/ drinking water component was worked out as Rs 2578.23 crores (65% of total cost) and the cost of power component was worked out as Rs. 1388.28 crores (35% of the total cost).

In pursuance to NGT order vide dated 10.01.2019 in the Application No. 431 of 2015 (Manoj Kumar Mishra & Bhim Singh Rawat Vs Union of India & Others), para-10 of the order of NGT states that ***“We, therefore, direct the EAC to appraise the project afresh in terms of EIA notification 2006 and impose additional general and specific conditions as may be considered necessary. EAC will be free to call for any reports which it may consider necessary. EAC is further directed to complete the appraisal by 15.04.2019. Till the project is reappraised status quo be maintained.”*** Based on the order, the Sub-committee made the following observation:

1. In the EAC meeting, it has been recommended that as the base line data of the EIA/EMP report submitted in 2007 is found to be more than three years old, once again 3 seasons baseline data to be collected and the same be incorporated in the previous EIA/EMP report. However, the Sub-committee during visit found at the site that till 1992, a substantial construction work had been done on the project viz. 40 km Road infrastructure, Dam stripping on both banks, Diversion tunnel, Intake, Underground power house, Adit for Control Room, Adit to erection bay, Tail race tunnel, etc. Therefore, it was suggested that baseline data for pre-monsoon and monsoon be collected and the same be incorporated in the previous EIA/EMP report. An amount of more than Rs. 400.00 crores (1992 PL) has been invested and the said Public money is blocked for more than 27 years. The sub-committee considers a colossal loss to state's exchequer.
2. Vyasi HEP which is in advanced stage of construction is a ROR scheme, located at 5 km downstream of Lakhwar HEP. Both the projects were approved as early as in 1986-87. During that period concept of minimum Free flow stretches was not in place. After detailed deliberation, it has been opined that as the pondage level of the Vyasi HE Project (downstream project) shall be maintained at FRL and MDDL and further there would be a continuous flow of water through the pondage area. Further, both the proposals were planned

as integrated scheme long back. Hence, considering the above site specific situation, the free flow reach criterea may not be applicable for this case.

3. Social Impact Assessment report to be prepared. Similarly, the EMP and other aspects of the study are to be revised/updated accordingly.
4. Due to this project, 22 km upstream of Yamuna river and 4 km of Aglar river will be submerged. Every year, the locals celebrate a mass fish catch in Aglar river which is a traditional festival of this area known as "Maund" festival for them. Further, Mahseers and snow trouts do migrate from Yamuna river to Aglar river for spawning. Therefore, a separate *in-situ* conservation plan be prepared as a part of fish management plan.
5. As the proposed project falls in Yamuna River Basin and its CIA & CCS is already complete, the recommendation of CIA & CCS to be also part of the Project.
6. Few Photographs of the site visit of the Sub-committee are annexed as **Annexure.**


(S. KERKETTA)


(J.A. JOHNSON)


(N.N. RAI)


(D.M. MORE)

(R.K. KOHLI)


(S.K. JAIN)

Site Visit Photographs – Lakhwar Multipurpose Project



View of the Dam site (abutments)



Downstream view of the site



Upstream view of the dam site (Proposed submergence)



Presentation on the status of the project at power house cavern



Interaction with the locals - Power House Cavern

Annexure: Representations of villagers



दिग्विजय सिंह (एडवोकेट)

प्रदेश कार्यवाहिनी समस्त

पूर्व मण्डल अध्यक्ष (कालसी)

पूर्व व्यवस्थापक भा.ज.पा. उत्तरांचल पात्रिका

निवास:-

50, अजमल खाँ रोड, देहरादून

ग्राम-बसान, लखवाड़ कालसी गेट, देहरादून

मो- 9411580403

सद्वीर्य कार्यकर्ता भा.ज.पा.

पत्रांक.....

दिनांक 22-4-19

बलवीर सिंह चौहान

ग्राम-बसान

मो- 9411580403

कुंवर सिंह शर्मा

ग्राम-बसान

मो- 9411580403

चतर सिंह चौहान

ग्राम-बसान

मो- 9411580403

अनिल पवार

ग्राम-बसान

मो- 9411580403

सेवा में,

श्री शरद कुमार जैन (अध्यक्ष)

सब कमेटी पर्यावरण

भारत सरकार।

विषय- लखवाड़ बाँध परियोजना को पर्यावरणिय स्वीकृति के सम्बन्ध में।

महोदय,

लखवाड़ बाँध परियोजना से प्रभावित समस्त जनता आपके स्थलीय भ्रमण कार्यक्रम पर आपका हार्दिक अभिनन्दन एवं स्वागत करते हैं तथा समस्त प्रभावितों की स्थिति से आपको निम्नवत् अवगत कराते हैं।

1. लखवाड़ बाँध परियोजना से 12 ग्राम जनपद देहरादून तथा 22 ग्राम जनपद टिहरी गढ़वाल कुल 34 ग्राम प्रभावित हो रहे हैं।
2. उक्त 34 ग्रामों में से 29 ग्राम में वर्ष 1972 से 1992 के मध्य भूमि का अधिग्रहण किया जा चुका है तथा 05 ग्रामों में भूमि का अधिग्रहण शेष है।
3. हम ग्रामवासियों की पैतृक भूमि आज से लगभग 40 से 45 वर्ष पूर्व लखवाड़ बाँध परियोजना हेतु ले ली गई थी किन्तु परियोजना प्रभावितों को दिये जाने वाले अन्य लाभ जैसे रोजगार आय आज दिनांक तक नहीं दिये गये जिस कारण सभी प्रभावित बेरोजगार व भूमिहीन हो गये हैं।
4. हमें विश्वस्त सूत्रों से ज्ञात है कि लखवाड़ बाँध परियोजना की पर्यावरणिय स्वीकृति पूर्व में दी जा चुकी है किन्तु भारत सरकार द्वारा महोदय की अध्यक्षता में गठित कमेटी से पुनः जाँच कराई जा रही है।

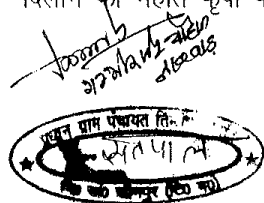
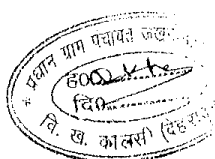
अतः हम समस्त प्रभावित जनता आपसे विनम्र अनुरोध करते हैं कि प्रभावितों के हितों को मध्यनजर रखते हुये पर्यावरण से सम्बन्धित पुनः स्वीकृति दिलाने की महति कृपा करें। हम सभी ग्रामवासी आपके आभारी रहेंगे।

अध्यक्ष
उद्योग व्यापार मण्डल

अमरजीत सिंह

(शान्ति जुवाँठा)

अध्यक्ष
नगरपालिका परिषद विकास



अमरजीत सिंह चौहान
अध्यक्ष, विकास

भद्रदीप
समस्त प्रभावित जनता

दिनांक 22-4-19


सत्य प्रतिलिपि प्रस्ताव सं० १, दिनांक २२/०७/२०१८

आज दिनांक 22.07.2018 को लखवाड़ बांध विद्युत परियोजना से प्रभावित क्षेत्रिय जन प्रतिनिधिगण एवं जनता की अगुवाई में एक आवश्यक आम बैठक, स्थान यमुनापुल में दोपहर 12 बजे आहुत की गयी है। बैठक में चर्चा करने पर समस्त क्षेत्रवासियों द्वारा निर्णय लिया गया कि उपरोक्त योजना से क्षेत्र व जनता के हित को देखते हुये 300 मेगावाट ^{लखवाड़} विचाराधीन उक्त परियोजना का निर्माण होना अति आवश्यक है तथा योजना के निर्माण कार्य से क्षेत्र के किसी जनप्रतिनिधि एवं जनता को कोई अपत्ति या एतराज नहीं है। प्रस्ताव सर्व सहमति से पारित कर केन्द्र सरकार की सेवा में प्रेषित किया जाता है।

हस्ताक्षर एवं मोहर क्षेत्रिय जनप्रतिनिधिगण

दिवा पाठसिद्धि

चलारिङ-चाहान
ग्राम लारवण
०५॥७१३२५३



प्रधान प्राप पचायत सो.को.
को. Ramesh
को. सो.को.
को. सो.को.
को. सो.को.

Singh
~~Signature~~
श्री प्रकाश दासजी
विद्यार्थी-केंद्र (D.O.C.)

प्रधान ग्राम पंचायत बंगो की
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दि.
जौनपुर, दिग्ग

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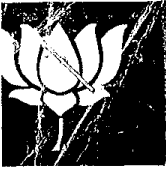
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प्रधान ग्राम पंचायत सिया कौमटो
 तह. V. N. A. S.
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 जिला दिहरी गढ़वाल

[Handwritten signatures]

Behm

प्रधान गण पंचायत धरमपुरी
दि. २७/०६/२५
विद्युत-जोड़पर टिप्पणी



भारतीय जनता पार्टी

उत्तराखण्ड (देहरादून)

नेतृत्व सिंह (एडवोकेट)

कार्यकारी सदस्य

पिछडा अध्यक्ष (कालसी)

स्थापक भा.ज.पा. उत्तरांचल पत्रिका

निवास :-

50, अजमल खाँ रोड, देहरादून

ग्राम-बसान, पो0ओ0-कालसी गेट, देहरादून

मो0 : 9411580403

25

दिनांक

प्रतिष्ठा में,

माननीय श्री नरेन्द्र मोदी जी,

प्रधानमंत्री, भारत सरकार

नई दिल्ली

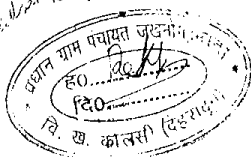
विषय — 300 मेगावाट लखवाड़ बाँध बहुउद्देशीय परियोजना “जनजाति क्षेत्र” जिला देहरादून/“अन्य पिछडा क्षेत्र” टिहरी गढ़वाल, उत्तराखण्ड को प्रारम्भ करने के संबंध में।

श्रद्धेय महोदय,

वर्तमान समय आप भारत के प्रधानमंत्री पद पर सुशोभित हैं, जिससे हम समस्तजन अपना सौभाग्य समझते हैं, तथा आशा भी करते हैं कि वर्ष 2014 के आम चुनाव से पूर्व आपके द्वारा दिए गए नारे की “सबका साथ सबका विकास” व “अच्छे दिन आने वाले हैं” के तहत लखवाड़ बाँध परियोजना से प्रभावित 34 ग्रामों के लगभग 925 परिवारों से बने 3000 वर्तमान परिवारों के भी अच्छे दिन आएंगे, किन्तु वर्ष 1974 से 1991 तक हमारी आजीविका का एकमात्र साधन कृषि भूमि लखवाड़ बाँध परियोजना हेतु अधिकृत कर ली गयी है, लेकिन परियोजना प्रभावितों को दिए जाने वाले रोजगार विस्थापन भत्ते आदि का लाभ वर्तमान तक नहीं मिल सका, इस संबंध में आपका व्यक्तिगत ध्यान आकर्षित करते हुए अवगत कराना है कि —

1. 300 मेगावाट लखवाड़ बाँध बहुउद्देशीय परियोजना हेतु वर्ष 1974 से 1991 के मध्य

जनपद टिहरी गढ़वाल “अन्य पिछडा क्षेत्र” के 17 ग्रामों में 60-105 हैक्टेयर भूमि तथा जनपद



11/7/3253

जो बंधनस्थित हो

मोहन लाल निराल
सदस्य
क्षेत्र पंचायत टटोर नैनव
वि0 ख0 जीनपुर, टिहरी ग

देहरादून के "जनजाति क्षेत्र" के 12 ग्रामों में 45.317 हैक्टेयर भूमि कुल 105.422 हैक्टेयर भूमि का अधिगृहण किया गया तथा समस्त भूमि का कब्जा लेकर भूमि उत्तराखण्ड जल विद्युत निगम के नाम दर्ज हो गयी है तथा जनपद टिहरी के 05 ग्रामों में भूमि का अधिगृहण शेष है।

2. इस भूमि/भवन अधिगृहण के फलस्वरूप लगभग 3000 वर्तमान परिवारों की अपनी पैत्रिक सम्पत्ति से पृथक होकर बेरोजगार हो गए। गत् 44-45 वर्षों से परियोजना को भारत सरकार से स्वीकृति नहीं मिल सकी है। दिनांक 06.09.2014 को दैनिक समाचार पत्र हिन्दुस्तान में छपे समाचार की 300 मेगावाट लखवाड़ बाँध बहुउद्देशीय परियोजना को मिली स्वीकृति से बाँध के कार्य प्रारम्भ होने की उम्मीद हुई, दिनांक 23.12.2018 को उत्तराखण्ड के माननीय मुख्यमंत्री माननीय त्रिवेन्द्र सिंह रावत ने स्थान कालसी जिला देहरादून में मंच से घोषणा की कि वर्ष 2019 के फरवरी माह में लखवाड़ बाँध परियोजना का कार्य प्रारम्भ कर दिया जाएगा। दिनांक 12.01.2019 को दैनिक जागरण समाचार पत्र में प्रकाशित समाचार की "300 मेगावाट लखवाड़ बाँध बहुउद्देशीय परियोजना" के अधर में तथा "70 फीसदी काम फिर अंधेरा" से समस्त प्रभावित स्वयं को ठगा सा महसूस कर रहे हैं।

3. व्यासी बाँध परियोजना हेतु पूर्व अधिगृहित भूमि पर संबन्धित भूमि प्रभावितों को अनुगृह सहायता अनुदान, कृषि मजदूरी को वितरण किया जा चुका है तथा परियोजना में रोजगार दिया जा चुका है, किन्तु लखवाड़ बाँध परियोजना से प्रभावित गत् 40-45 वर्षों से बेरोजगारी का दंश झेल रहे हैं।

उक्त समाचार पत्रों में प्रकाशित समाचारों से जानकारी मिली कि नेशनल ग्रीन ट्रिब्यूनल (N.G.T) ने विशेषज्ञ मूल्यांकन समिति को आदेश दिए हैं, कि पर्यावरण की दृष्टि से परियोजना का नए सिरे से आंकलन करें जबकि पूर्व में वन और पर्यावरण मंत्रालय से स्वीकृति दी जा चुकी है इस प्रकार से प्राप्त स्वीकृति पर पूर्व प्राप्त स्वीकृति पर पुनः आंकलन कराना जनता को बरगलाने एवं भ्रमित करने का कृत्य है। माननीय लखवाड़ बाँध परियोजना से अनुसूचित जाति, अनुसूचित जनजाति एवं अन्य पिछड़ा वर्ग प्रभावित हैं तथा वर्तमान में

अरवि सुबसि
सदस्य
क्षेत्र पंचायत धनपूर
विकासखण्ड- कालसी, देहरादून

ग्राम पंचायत बाबी
वि. ख. कालसी देहरादून

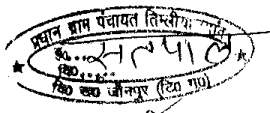
प्रधान ग्राम पंचायत धनपूर
वि. ख. कालसी देहरादून

प्रधान ग्राम पंचायत टिहरी
वि. ख. कालसी देहरादून

देश व केन्द्र में "भारतीय जनता पार्टी" की सरकारें हैं इन उक्त सरकारों में भी परियोजना कार्य को लटकाए रखना बाँध से प्रभावित जनता के साथ खिलवाड़ व भद्दा मजाक है तथा दिल्ली में बैठे कुछ स्वार्थी व राजनीतिक लोग कभी पर्यावरण व N.G.T में प्रार्थना पत्र देकर लखवाड़ बाँध बहुउद्देशीय परियोजना को लटकाया जा रहा है।

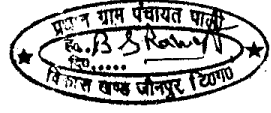
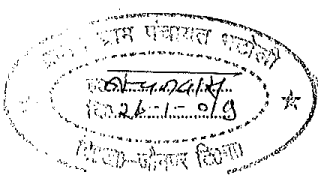
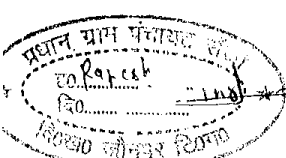
अतः हम लखवाड़ बाँध परियोजना से प्रभावित समस्त जनता आपसे अन्तिम बार हाथ जोड़कर विनम्र आग्रह करती है कि आगामी लोकसभा चुनाव की अधिसूचना जारी होने से पूर्व 300 मेगावाट लखवाड़ बाँध बहुउद्देशीय परियोजना को पर्यावरणीय/वित्तीय स्वीकृति प्रदान करने तथा समस्त प्रभावितों को व्याप्ति बाँध परियोजना की भांति अनुगृह अनुदान सहायता / पुनः स्थापन अनुदान / (कृषि मजदूरी) तथा अन्य भत्तों का वितरण करने एवं रोजगार उपलब्ध कराने का कष्ट करें। अन्यथा सभी भूमि प्रभावितों को उनकी अधिगृहित भूमि को वापस दिए जाने तथा राजस्व अभिलेखों में नाम दर्ज कराने एवं बंजर एवं बेकार हो चुकी भूमि को पूर्व स्थिति (कृषि योग्य) में लाने के आदेश पारित करने का कष्ट करें ताकि समस्त जनता अपना जीवन यापन सुचारु कर सके।

दिनांक -



प्रतिलिपी :-

1. माननीय श्री मुख्यमंत्री त्रिवेन्द्र सिंह रावत, उत्तराखण्ड सरकार को दिनांक 23.12.2018 को कालसी में की गई घोषणा के संबंध में।
2. माननीय केन्द्रीय मंत्री श्री डा० हर्षवर्धन जी, वन पर्यावरण मंत्रालय, भारत सरकार 8/30 जनवरी मार्ग, नई दिल्ली।
3. सचिव, जल संसाधन मंत्रालय, भारत सरकार, रफी मार्ग, श्रमशक्ति भवन, नई दिल्ली।
4. माननीय केन्द्रीय मंत्री नितिन गडकरी जी, जल संसाधन मंत्रालय, भारत सरकार, रफी मार्ग, श्रमशक्ति भवन, नई दिल्ली।



॥ श्री गुरुभ्यो नमः ॥
 ॥ श्री गणेशाय नमः ॥

ढेङ्गलदून • शनिवार • 06 सितम्बर 2014 •

100 100

1. The first step is to identify the problem. In this case, the problem is that the company is not meeting its sales targets. The second step is to analyze the data. The third step is to develop a plan. The fourth step is to implement the plan. The fifth step is to evaluate the results.

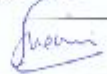
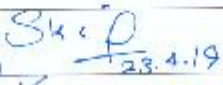


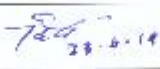
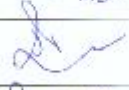


2. *Chlorophyll a* and *Chlorophyll b* contents were determined by spectrophotometry using the method of Lichtenthaler and Whaley (1987).

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LIST OF MEMBERS

23rd MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) FOR RIVER VALLEY & HYDROELECTRIC PROJECTS

DATE : 23rd April 2019
TIME : 10:30 am onwards
VENUE : Narmada Hall, Indira Paryavaran Bhawan, New Delhi

Sl.No.	Name of Member	Signature
1.	Prof. Sharad Kumar Jain, Chairman	
2.	Shri. T. P. Singh Member	- Ab -
3.	Shri. Sharvan Kumar, Member	 23.4.19
4.	Shri N. N. Rai, Member	
5.	Dr. J.A. Johnson, Member	 23/4/19
6.	Dr. AK Sahan, Member	- Ab -
7.	Dr. Vijay Kumar, Member	- Ab -
8.	Prof. Govind Chakrapani, Member	- Ab -
9.	Dr. Chetan Panthi, Member	- Ab -
10.	Dr. Dinkar Madhavrao More, Member	 23.4.19
11.	Prof. R.K. Kohli, Member	- Ab -
12.	Prof. S.R. Yndav, Member	- Ab -
13.	Dr. Jai Prakash Shukla, Member	
14.	Dr. Poonam Kumria, Member	
15.	Dr. Kerketta, Member Secretary Director (IA-1)	

Subject: **Re: Draft MoM of 23rd EAC (RVP) meeting-approval reg.**

To: Dr Sharad Kumar Jain <skj.nihr@gov.in>,
Dr S Kerketta <s.kerketta66@gov.in>

Cc: S Kerketta <suna1466@rediffmail.com>

Date: 05/09/19 09:34 PM

From: Sharad Jain <s_k_jain@yahoo.com>

Reply-To: Sharad Jain <s_k_jain@yahoo.com>

23_MoM_RVP_23.04.2019_EAC_CM_.docx (117kB)

Dear Dr Kerketta,

I am sending the approved minutes of the 23rd meeting of EAC (RVH).

Regards,

Sharad K Jain / शरद कुमार जैन
Director, NIH Roorkee and
Chairman EAC
Tel: 01332 272106

On Thursday, 9 May, 2019, 5:53:36 pm IST, Dr S Kerketta <s.kerketta66@gov.in> wrote:

Sir,

Please find the attachments. Only few representations have been enclosed. Request to kindly approve the draft.

regards,

On 05/08/19 12:39 PM, **Sharad Jain** <s_k_jain@yahoo.com> wrote:

Dear Dr Kerketta,

Pls see the highlighted text in yellow colour and correct in track change mode.

Regards,

Sharad K Jain / शरद कुमार जैन
Director
NIH Roorkee
Tel: 01332 272106