Minutes of the 83rd Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects constituted under the provisions of EIA Notification 2006, held on 23-24th April, 2015 at Teesta Meeting Hall, 1st Floor, Vayu Wing, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-3

The 82nd meeting of the Expert Appraisal Committee (EAC) for River Valley and Hydroelectric Projects was held during 26-27th February, 2015 at Brahamaputra Meeting Hall, 1st Floor, Vayu Wing, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi110003. The meeting was chaired by Shri Alok Perti, Chairman. Shri. P. C. Chaudhury and Dr. G. M. Lingaraju, Members could not attend the meeting. The EAC Members and officials/consultants associated with various projects and who attended the meeting is at **Appendix**.

The following Agenda items were taken-up in that order for discussions:

1st Day (23.04.2015)

Agenda Item No.1: Welcome by Chairman and confirmation of Minutes of the 81st EAC meeting held on 26-27th February, 2015. The minutes of 82nd EAC meeting was confirmed as was circulated. Thereafter, following agenda items were taken up:

Agenda Item No. 2.1

Tubachi-Babaleshwar Lift Irrigation Scheme at old Janawad Village, Jamakhandi Taluk, Bagalkot District of Karnataka by M/s Karnataka Neeravari Nigam Ltd, Government of Karnataka - For consideration of ToR

Tubachi-Babaleshwar Lift Irrigation Scheme envisages diversion of 3.80 TMC of water from the Krishna River near old Janawad Village, Jamakhandi Taluk in Bagalkot District (Karnataka), to provide drip irrigation for 45,500 ha of dry land, benefitting 37 villages duing Kharif season (June - October). The project cost is estimated to be Rs. 2488.97 crores. The total land requirement is about 221 ha. No forest land is involved and no submergence is involved.

2. The interstate boundary with Maharashtra is at a distance of 3 km from the nearest boundary of command area and thus the general conditions apply for the project, treated as Category 'A'. Hence, the proposed project is submitted to this Ministry for consideration by the EAC.

3. The annual rainfall in Jamakhandi Taluk is 664.70 mm, Athani Taluk is 687 mm and Bijapur Taluk is 545 mm and the proposed villages lies in rain shadow area. Thus there is a need to extend irrigation facilities to these areas for the benefit and upliftment of the farmers and to address the regional imbalance. 3.8 TMC of water is proposed to drawn through an intake canal for a length of 1.3 km on left bank of Krishna River near old Janawada village in Jamakhandi Taluk which is 19 away from Jamakhandi town. Thereafter, the water is proposed to pumped to Delivery Chamber -1 through MS Raising main of 30.3 Km length to irrigate 19600 ha of command area and to Delivery Chamber - 2 through gravity main of 13.3 Km to irrigate 22900 ha. The cropping pattern adopted for the proposed scheme during Khariff season is Maize, Jowar, Groundnut, Hybrid Jowar, Bajra, Pulses and Vegetables.

4. The project proponent clarified that by virtue of interbasin transfer of 80 TMC of water (from Godavari to Krishna Basin), the State of Karnataka has been allocated 23 TMC of water. Out of which, the present project has been carved-out to utilize 3.8 TMC of water. After deliberations, EAC recommended the project for ToR clearance with the following conditions:-

(i) Water allocation agreement between Karnataka and Andhra Pradesh is to be provided/ submitted while submitting EIA/EMP reports.

(ii) The impact of proposed project on Almatti dam is to be studied in detail and presented in the EIA report.

(iii) Details of existing upstream & downstream projects with their water utilization are to be studied and provided in the EIA report.

(iv) The command area of the proposed project is adjacent to Reserve Forest and hence NOC from the respective Deputy Conservator of Forests (DCF), Forest Department has to be provided along with the EIA/EMP report.

(v) The Secretary, Water Resource Dept., Govt. of Karnataka is to certify that the proposed project works are not initiated until obtaining Environmental Clearance on ground and a copy of the same has to be enclosed in EIA/EMP report.

(vi) Biodiversity study to be conducted by a suitable institute as per OM of MoEF dated 28.5.2013.

Agenda Item No. 2.2

Upper Bhadra Lift Irrigation Scheme near Muthinakoppa Village, NR Pura Taluk, Chickmagalur District of Karnataka by M/s Karnataka Neeravari Nigam Limited, Government of Karnataka - For consideration of ToR

The Upper Bhadra Project-Stage-I was accorded environmental clearance (EC) on 5.1. 2010. The project involves lifting of water from Tunga River and Bhadra Reservoir in two stages. The dam is already constructed for Bhadra reservoir and thereafter, it is proposed to construct the canal from Bhadra reservoir to delivery chamber including 3 lifts and a tunnel of 6.90 km and canal network to convey water (21.5 TMC) to the drought-prone Chikmagalur and Chitradurga Distrcts to provide irrigation facility to 107265 ha of dry land through flow irrigation system. The project also involved in filling-up of 156 Minor Tanks (MI) tanks to cater the needs of drinking water needs in Chitradurga, Tumkur and Kolar Districts.

2. Upper Bhadra project neither involved submergence nor construction of new dams/weirs. However, as Bhadra Tiger Reserver is located within 10 km from the main canal, the project was considered as '**A**' and appraised at Central Level. Public consultations were conducted in Chickmagalur and Chitradurga Districts. As per the environmental clearance conditions, six monthly compliance reports are being regularly submitted to Regional Office of MoEF, Bangalore and KSPCB regularly. Total land requirement is about 5245.37 ha. Out of which forest land is 230 ha and private land is 5015.37 ha. Forest Clearance is yet to be obtained.

3. Initially, the project was planned to utilize 21.5 TMC of water. In order to extend irrigation facilities to additional 118250 ha of drought prone areas of Chickkamaglur, Tumkur &

Davanagere Districts, the Kanartaka Neeravari Nigam Ltd proposed for expansion by utilizing 29.9 TMC of water. The current proposal also involves filling-up of additional 211 Minor Irrigation tanks to facilitate ground water recharge and thereby augment drinking water needs. The original & revised project features are presented below in a tabular form:

Table- Comparison of project features

S. No	Details	Original Proposal	Revised Proposal
1	Water allocation	21.5 TMC	29.9 TMC
2	Command area	107265 Ha	225515 Ha
3	MI Tank filling	156	367
4	No. of Districts & villages benefitting	4 Districts (Chickmagalur, Chitradurga, Tumkur & Kolar) 237 villages	4 Districts (Chickmagalur, Chitradurga, Tumkur & Davanagere) 787 villages
5	Type of Irrigation	Flow irrigation	Drip irrigation
6	Canals	➢ Tunga river to Bhadra Reservoir canal (main canal) ➢ Bhadra reservoir to Ajjampura (main canal) ➢ Tarikere flow & lift canal ➢ Chitradurga branch canal	➢ Tunga river to Bhadra Reservoir canal (main canal) ➢ Bhadra reservoir to Ajjampura (main canal) ➢ Tarikere flow & lift canal ➢ Chitradurga branch canal ➢ Jaglur branch canal ➢ Tumkur branch canal ➢ Feeding water to tanks of Molakalmuru, Holalkere, Challakere & Pavagada Taluks ➢ Feeding water to Vanivilassagr
7	Total Land requirement	5245.37 ha	2114 ha
8	Forest land	230 ha	364.50 ha
9	Total Cost	Rs 5985 Crores	Rs 12340 Crores

4. The EAC observed that the EC was accorded in 2010 for this project and construction work has already been initiated. Neither the project was accorded FC nor has the wildlife clearance since been obtained. Further, the scope of the project has been changed due to increase in command area, water requirement, forest land and canal network to meet the irrigation requirements. The irrigation pattern changed from flow irrigation to drip irrigation. Therefore, the

project needs a fresh scoping clearance. While examining the documents, EAC observed that the project proponent submitted Form-I, expansion proposal and TOR. The FC/Wildlife clearance is also pending.

5. After deliberations, EAC recommended the project for fresh ToR clearance with the following additional conditions:-

(i) At the time of submission of final EIA, submission of Stage-I forest clearance for the project is mandatory and without that, the project will not be considered/taken up for further appraisal.

(ii) Wildlife clearance under the Wildlife (Protection) Act, 1972 or recommendation of the Chief Wildlife Warden is mandatory along with separate Wildlife Management Plan.

(iii) Compliance to the earlier Environmental Clearance (EC) conditions has to be reported in EIA/EMP report.

(iv) The data collected for compliance to the EC conditions could be utilized for preparation of EIA/EMP report. However, 3 season data needs to be collected.

(v) Project proponent has to conduct fresh Public Consultation in the other 2 Districts viz. Davanagere and Tumkur Districts.

Agenda Item No. 2.3

Shiggaon Lift Irrigation Scheme near Halasur Village, Savanur Taluk in Haveri District of Karnataka by M/s Karnataka Neeravari Nigam Limited, Government of Karnataka - For consideration of ToR

The project was accorded environmental clearance (EC) on 22.10.2014. The Bankapura Peacock Conservation Reserve is in the vicinity of the project area, the proposal was considered at Central Level as per EIA Notification, 2006 as per General Conditions.

2. The Shiggaon Lift Irrigation Scheme envisages construction of a diversion weir across Varada river near Halsur village of Savanur Taluka in Haveri District of Karnataka for diversion of 1.5 TMC of water and providing irrigation facility to 9900 ha command area benefitting 30 drought prone villages. The project also involved drinking water facility by filling-up of 5 minor irrigation tanks (MI) tanks within the command area and construction of 6 bandaras. Filling of existing tanks in command area helps in stabilization and recharge of the groundwater in the region. Total land requirement is about 45 ha. No forest land is involved. Total cost of the project is about Rs.238 Crores.

3. The total water allocated for the scheme is 1.5 TMC. While considering the project for TOR, the EAC in its meeting held in March, 2010, the entire command area of the project has been converted from flow irrigation to sprinkler irrigation system thereby, reducing the total water required for the project to 1.12 TMC (0.98 TMC for irrigation and 0.14 TMC for filling MI Tanks) and achieved 0.38 TMC of water conservation. Considering demand of farmers adjacent to the command area, Karnataka Neeravari Nigam Ltd proposes to utilize the balance 0.38 TMC of water allocated for the scheme by providing drip irrigation to 3600 ha benefitting additional 7 villages.

4. The proposed addition of command area will utilize the existing infrastructure of Shiggaon LIS including the rising main, pump house, intake canal, delivery chambers, pumps, etc and involves extension of MS rising main and distributory network which are buried underground. The State Government has accorded revised administrative approval to the modified scope of the project.

5. The EAC observed that the EC was accorded in November,2014 for the project and by adding 3600 ha command area using saved water by providing drip irrigation is welcoming exercise and appreciated the Government's initiative. The committee also noted that the project scope has not been changed and all parameters are within the original project layout, except 3600 ha of additional command area. However, the committee mentioned that in order to lay underground pipelines, the muck generation, land use pattern & irrigation pattern has slightly changed. Therefore, the project needs at-least a season's study in proposed command area.

6. EAC mentioned that since new command area involved, amendment in revision of EC is not applicable in the present case. Therefore, recommended for a fresh study at-least for one season (monsoon) to collect the data on hydrology/water, soil, flora/fauna etc with the following additional TORs for the expansion in the command area:-

(i) Compliance to the Environmental Clearance (EC) conditions has to be reported in EIA/EMP report.

(ii) The data collected for compliance to the EC conditions could be utilized for preparation of EIA/EMP report. Apart from this, one season (Monsoon) data needs to be collected in the proposed additional command area. The collected data should be incorporated in the EIA/EMP report.

(iii) Revised Muck management & disposal plan in the new command area has to be prepared with cost escalation.

(iv) Greenbelt development in the new command area has to be prepared with cost escalation.

(v) Water quality monitoring in the 5 km stretch in the upstream and downstream of Varada River during construction phase for drinking water quality standards at suitable locations on bi-monthly basis to be reported.

(vi) Environmental Management plan (EMP) has to be prepared with revised cost and a revised EMP report has to be submitted.

(vii) The proposed additional command area of the project remains in the same District and Taluka and hence fresh public consultations may not be required in the present case.

Agenda Item No. 2.4

Sippi HEP (96 MW) in Upper Siang District of Arunachal Pradesh by M/s Meenakshi Arunachal Power Pvt Ltd - For consideration of ToR

The project envisages construction of 20 m high concrete gravity un-gated weir across Ringong River (a right bank tributary of Siang River) in Upper Siang District of Arunachal Pradesh to generate 96 MW of hydropower. This is a run-of-the-river scheme. Total land

requirement is about 40 ha, which is forest land. Total catchment area at the project site is 732 Sq.km. A surface powerhouse is proposed on the right bank of the river with 3 units of 32 MW each. The project falls within the buffer zone of Dibang Dihang Biosphere Reserve. Total estimated project cost is about Rs.786.89 crores.

2. There is no upstream project on Ringong river. However, the proposed Ringong HEP (150 MW) just d/s of Sippi HEP is yet to be allotted. Based on the levels available for Ringong HEP, minimum 1 km of free flowing stretch between FRL of Ringong and TWL of Sippi HEP has been ensured.

3. The project proponent mentioned that water availability at the proposed location has been worked out based on the already approved series of Yamne-I on catchment area proportion basis and the flow series for 25 years (1978-79 to 2008-09) has been arrived. The water availability in 90% dependable year is calculated and flow duration curve for the water availability in 90% dependable year has been drawn. The design discharge is considered as 73.5 cumecs at 90% dependability, which is the required discharge for the proposed power development of 96 MW Sippi HEP.

4. EAC observed that the project falls in Siang Basin for which cumulative impact assessment study has been completed and accepted by the Ministry. Therefore, environment flow recommendations for Sippi HEP should be adopted as per the Siang basin study.

5. After deliberations, EAC recommended the project for scoping clearance with the following conditions:-

(i) All recommendations of Siang River Basin Study, especially in respect of e-flow, minimum free flowing stretch between the two projects etc shall be complied with and incorporated in the EIA/EMP reports.

(ii) Environmental flow will be 20% of average of four consecutive lean months of 90% dependable year, 25% of the average monsoon flow. The flow for remaining months will be in between 20%, depending on the site specific requirements.

(iii) The project proponent has yet to approach CWC for approval of hydrology. EAC observed that if there is any change in installed capacity after approval by CWC, developer will have to approach again for revised scoping as per the revised installed capacity.

(iv) Muck disposal sites should be selected at least 30 m away from the bank corresponding to HFL of river/stream and shall be shown including location, quantity of muck to be deposited off vis-à-vis the total area for dumping in a clear map.

(v) Biodiversity study shall be carried-out by associating a reputed organization as recommended by WII, Dehradun or by ICFRE, Dehradun. The list of Institutes is available on MoEF & CC portal.

(vi) FC application form has to be submitted to appropriate authority and a copy sent to MoEF not later than 6 months from the date of issue of the TOR for this project. IA Division of MoEF&CC shall be informed when such Application is submitted.

(vii) Compensation for land acquisition, R & R plan and other benefits shall be in accordance with the relevant Act in this regard, as applicable.

Agenda Item No. 2.5 to 2.7

Mago Chu HEP (96 MW) project in Tawang District of Arunachal Pradesh by M/s Sew Mago Chu Power Corporation Pvt. Ltd - For consideration of Environmental Clearance

Nyukcharong Chu HEP (96 MW) project in Tawang District of Arunachal Pradesh by M/s New Sew Nyukcharong Chu Power Corporation Pvt. Ltd - For consideration of Environmental Clearance

New Melling HEP (96 MW) project in Tawang District of Arunachal Pradesh by M/s Sew New Melling Power Pvt. Ltd - For consideration of Environmental Clearance

The project proponent written to Ministry due to pre-occupation & pressing works, unable to attend the meeting on 23.4.2015 and requested the Ministry to postpone their projects for next EAC meeting. Hence the committee deferred the projects to next EAC meeting.

Agenda Item No. 2.8

Extension of balance portion of Main Ravi Canal from Basantpur to upstream of Ranjit Sagar Dam at Satwain, District Kathua, Jammu & Kashmir- For consideration of ToR

The project promoted by Ravi-Tawi Irrigation Complex, a part of Irrigation & Flood Control Department of the State of J&K, envisages providing irrigation facilities in District Kathua (J&K). The project attracts 'General Condition' due to being in proximity of inter-state boundary (J&K and Punjab) and passing through notified Thein Conservation Reserve, and as such treated as category A.

2. The project involves the following:-

- Construction of canal to withdraw water from Ranjit Sagar dam (Thein dam) at Satwain to existing Basantpur Lift station in District Kathua (J&K) to provide irrigation in culturable command area of 32186 ha,
- Construction of a canal head regulator on upstream at the J&K end of Ranjit Sagar Dam to divert 0.475 MAF water,
- Construction of 9.084 km of canal from upstream of Ranjit Sagar dam to existing canal at Basantpur,
- Two power houses of 12 MW (4 MW x 3) and 9 MW (3 MW × 3) at the falls available,

3. Total land requirement for the project is nearly 18.23 ha. That also involves diversion of 10.668 ha of land of Thein Conservation Reserve. The details of existing and proposed project are as under:-

S. No.	Particulars	Existing	Proposed
1	Share of water	0.215 MAF	0.475 MAF
2	Length of canal	76 km	9.084 km
3	Carrying capacity	700 cusecs	1150 cusecs
4	CCA	11134 ha	32186 ha

4. After long deliberations, EAC observed the following:-

(i) Intake structure of proposed canal (9.084 km) at Satwain is very close to core of Ranjit Sagar Dam, and as such, feasibility of the project needs to be studied by Geological Survey of India for its stability in view of likely puncturing of rim of the reservoir. Their recommendations would be required to consider the case for grant of scoping clearance.

(ii) Withdrawal of water from the reservoir has to be in line with the water sharing agreement between the riparian states of Punjab and J&K, and also the International Treaty as applicable.

EA C decided to seek clarifications from the project proponents on the above lines.

Agenda Item No. 2.9

Pancheshwar Multipurpose Project on Mahakali River by Pancheshwar Development Authority - For consideration of ToR

The Pancheshwar Multipurpose Project (PMP) is envisaged on the Mahakali River (known as Sarada in India) where the River forms the international boundary between India and Nepal, dividing the Far Western Development Region of Nepal from the Uttarakhand State in India.

2. It is a bi-national scheme, primarily aimed at energy production. In addition, the project aims at to enhance food grain production in both the countries by providing additional irrigation resulting from augmentation of dry season flows. Due to moderation of flood peak at reservoir(s), incidental flood control benefits for both the countries are also envisaged from the project.

3. The project would comprise of a rock-fill dam with central clay core of 315 m height from the deepest foundation level. It shall have two underground powerhouses, one on each bank of Mahakali river with the total installed capacity of nearly 5600 MW. The power plant at main dam will be operated as the peaking station to meet energy demand in India and Nepal. A re-regulating dam at Rupaligad, 25 km downstream, is proposed to even out powerhouse releases into continuous river flows and irrigation demands in the downstream.

4. While considering the proposal, EAC observed the following:-

(i) The project is being promoted by Pancheshwar Development Authority (PDA) constituted under Article-10 of the Mahakali Treaty between India and Nepal. The Governing Body of PDA consists of officers also from Ministry of Water Resources/CWC. Since the EAC has also representatives from CWC, the matter needs to be taken note by MoEF&CC.

(ii) The project is proposed in the Ganga Basin, and as such needs to have been deliberated by National Ganga River Basin Authority (NGRBA) in terms of their mandate. The Authority may also examine the project vis-à-vis the Ganga River Basin Management Plan as well as Eco-sensitive Zone notified in the state of Uttarakhand.

(iii) Hon'ble Supreme Court vide their orders dated 13th August, 2013 in Civil Appeal No.6736/2013, has directed for no Environmental and Forest Clearance to be granted in the State of Uttarakhand until further orders.

EAC decided to seek clarifications from the project proponents on the above lines.

Agenda Item No. 2.10

Dugar HEP Project in Chamba District in Himachal Pradesh by M/s Dugar Hydro Power Ltd- for consideration of capacity enhancement from 380 MW to 449 MW.

The project envisages construction of a 97 m high concrete gravity dam on river Chenab near Killar town in Chamba District of Himachal Pradesh to generate 380 MW of hydropower. This is a run-of-the-river scheme. The total land requirement for the project is about 330 ha, out of which 290 ha is forest land and 40 ha is private land. The catchment area of the project is about 7811 Sq.km. An underground powerhouse is proposed on the right bank of the river with 4 units of 95 MW capacity each. There is no National Park/Wildlife Sanctuary/Biosphere Reserve/Historical Monuments within 10 Km radius of the project. The total estimated cost of the project is reported to be Rs. 2250.99 crores.

2. The project was accorded Scoping/TOR clearance on 31.12.2012. M/s Dugar Hydro Power Ltd sought revision of TOR due to enhancement in its capacity from 380 MW to 449 MW and change in domain levels. The capacity of the project has been increased from 380 ME to 449 MW by Central Electricity Authority. The domain level of the Project has been changed from earlier FRL 2105m and TWL 2006m to FRL 2114m and TWL 2015m. The Reservoir Submergence has been increased from 160 ha to 190 ha and the project features have been optimized to minimize the overall forest land requirement from 330 ha to 269 ha. The capacity of the project has been changed mainly on the account of the E- flow mandated by MoEF & CC. The capacity of the main power house project remains unchanged which is 380 MW. However the capacity of auxiliary units of 69 MW has been made to cater the mandatory E- flow as prescribed by MoEF & CC.

3. Now, the revised project envisages construction of a 128 m high concrete gravity dam (from the deepest foundation level) on river Chenab near Killar town in Chamba District of Himachal Pradesh to generate 380 MW of hydropower. This is a run-of-the-river scheme. The total land requirement for the project is about 269 ha and total submergence area is 190 ha. An underground powerhouse is proposed on the right bank of the river with 4 units of 95 MW capacity each and an auxiliary powerhouse 2 units of 34.5 MW each to cater to e-flow requirements. The case for enhancement was considered by EAC in its December, 2014 meeting for extension of the validity of TOR as well as capacity enhancement. While examining the case, the EAC accepted the change in domain level and extended the validity of TOR. However, EAC did not agree for the utilization of water allocated towards e-flow for power generation. Accordingly, the Ministry vide letter dated 11.2.2015 given the extension of the validity of TOR for 1 year i.e. from 1.1.2015 to 31.12.2015 for 380 MW capacity with the following additional conditions:-

(i) Feasibility to provide longitudinal connectivity is to be explored and provided. E-flow releases during lean, Monsoon and Non-monsoon, Non-lean periods of adequate quantity are to be ensured by project authorities.

(ii) A proper study for uninterrupted e-flow release without passing the same through turbine, with proper provision for energy dissipation should be undertaken and submitted.

(iii) E-flow release shall be on a continuous basis i.e. during 24 hours a day throughout the year and should be released through unregulated means at least during lean & non-lean non-monsoon seasons. Automatic monitoring mechanism for e-flow release shall also be in place.

4. The project proponent carried out the aforementioned studies and presented before the EAC. The committee observed the following:-

(i) Longitudinal connectivity through 'Open Channel' will extend beyond the allotted domain level of project and will have substantial environmental challenges due to slope stabilization & very high exit velocity.

(ii) Un-gated/Uncontrolled release of E-flow through various means (Steel Pipe in dam body, Opening in NOF block) would not fulfil the required objective. Due to variation of Reservoir level, the downstream release would keep on varying irrespective of season (lean, non-lean/non-monsoon & monsoon). Varying velocity in pipe and silt content in monsoon season would damage the pipe, which would be difficult to repair or replace. High velocity of water downstream would lead to erosion in river bed and would damage the downstream face of dam block.

(iii) As E-flow is to be maintained continuously (24 hours, throughout the life of project), very high exit velocity would damage ecosystem significantly.

After deliberations, EAC was of the view that the proposal for enhancement of capacity by 69 MW to dissipate energy in the environmental discharge was admissible and recommended the enhancement in capacity from 380 MW to 449 MW with ToR validity for a period of 2 years beyond 31.12.2015.

Agenda Item No. 2.11

Krishna Marathwada Irrigation Project in Osmanabad District (Maharashtra) by M/s Godavari Marathwada Irrigation Development Corporation, Government of Maharashtra - For reconsideration of Environmental Clearance

The Krishna-Marathwada Irrigation Project (KMIP) envisages providing irrigation facility to drought prone Western part of the Marathwada Region, includes 87188 ha of area in Osmanabad District and 27543 ha of area in Beed District in Maharashtra. The project involves lifting of 21 TMC of water from existing Ujjani Reservoir (acting as enroute reservoir) and 2.66 TMC of water from Bhima Sub basin. Water availability of 23.66 of TMC for the project is based on surplus water in sub basins of Bhima and Krishna sub basins, and allocation awarded by various Tribunals. The project is being promoted by Godavari Marathwada Irrigation Development Corporation with the approval of the State Government of Maharashtra.

2. The project was earlier planned for the command area of 87188 ha in Osmanabad District by 2 lift irrigation schemes (LIS), which has been subsequently revised to include LIS-III. The Lift Irrigation Scheme-I proposes to utilize 10.41 TMC of water in five stages from Ujjani reservoir, LIS-II proposes to divert 4.91 TMC of water through Bhima Sina Link existing tunnel. Remaining 2.66 TMC of water to be utilized from free catchment below Sina Kolegaon project up-to Ghatne barrage on Sina river. Through LIS-III, it is proposed to utilize 5.68 TMC of water in six stages from Ujjani Reservoir to Bhosekhind tunnel.

3. The gross command area is 136431 ha, culturable command area - 108985 ha and irrigable command area is 87188 ha. The project involves construction of 6.65 m high and 220 m long barrage across river Sina for irrigating 87188 ha. The total land requirement is about 4559.9 ha, which is mainly barren & agricultural land which will be utilized mainly for construction of tunnel, rising main & pump houses and canal storage. No forest land is involved. There is no national park/wildlife sanctuary/biosphere reserve/historical monuments are present in the project area. Total estimated cost of the project is about Rs. 4845.05 crore.

4. The project was earlier considered by EAC in its meeting held in December, 2013 and committee sought additional information. During the discussions, the committee noted that the construction was already started on the project, and as such there was violation of EIA Notification, 2006. EAC was informed that such cases are to be dealt in terms of the MoEF OM No.J-11013/41/2006-IA.II (I) dated 12.12.2012 & 27.6.2013. Accordingly, the project proponents were required to submit an affidavit along with an undertaking not to execute works without obtaining EC and furnish photographs of the site from all four sides of the project. MoEF, issued directions to the project proponent u/s 5 of the EP Act, 1986 on 12.2.2014 to 'stop and suspend all works on the project'. Simultaneously, the Department of Environment, Govt of Maharashtra was requested vide letters dated 12th February & 26th June, 2014 to take necessary action under the relevant provisions of the Act, for the said violation.

5. The project was reconsidered by EAC in its 76th meeting held in August, 2014. The committee noted that the process to deal with the violation occurred into the matter was already started, and the MoEF & CC had written letters to Govt of Maharashtra to take necessary action under the relevant provisions of the EP Act, 1986. In response to the directions issued by the Ministry on 12th February, 2014, GMIDC submitted resolution of Board of Directors and an undertaking to the Ministry. The project proponent categorically stated that there will not be recurrence of violation of EIA Notification, 2006 and subsequent amendments thereon, and committed to protect and improve the overall environment through appropriate measures as per the proposed Environment Management Plan (EMP). After examination, EAC observed the following:-

(i) The scheme has been formulated with water availability corresponding to 50% dependable year by Maharashtra Government. Whereas, norms followed nationally is corresponding to 75% dependable year. In view of this, Maharashtra Government was asked to submit requisite Government order or approval of appropriate Authority such as Central Water Commission (CWC) in this regard. EAC observed that this is a very crucial parameter of the project and has to be judiciously selected.

(ii) Regarding the issue of violation by way of undertaking construction activity without environmental clearance, reply has been submitted by project proponent only to the Ministry of Environment, Forests & Climate Change (MoEF & CC). The State Environment Department is required to initiate action as per extant OM of MoEF & CC, which was already sent to State Environment Department by the Ministry.

(iii) It was noted that State Environment Department is yet to initiate necessary action against the project proponent. EAC advised MoEF & CC to remind the State Environment Department in this regard for early action.

(iv) Once the project proponent submits requisite information/ clarification on the applicability of dependable year, and State Government initiates necessary actions against the violator, the case may be considered by EAC again.

6. EAC in its meeting meeting held in April, 2015, noted that based on the MoEF &CC directions, Department of Environment, Government of Maharashtra vide letter dated 25.2.2015 hase written to Maharashtra Pollution Control Board to take action against the unit under clause (a) of Section 19 of the Environment (P) Act, 1986. Accordingly, the Maharashtra Pollution Control Board has filed a case (RCCNo.21/2015) against M/s Godavari Marathwada Irrigation Development Corporation, Osmanabad and vide their letter dated 27.1.2015 informed the Department of Environment, Government of Maharashtra (Registration receipt of District Courts, Maharashtra, Registration No. 300021/2015 dated 17.1.2015 & Case code.203003001042015- Chief Judicial Magistrate, Osmanabad).

7. The Committee after due consideration of the relevant documents submitted by the project proponent and clarifications furnished in response to its earlier observations, mentioned the all actions/procedures were completed. The EAC also noted that the project proponent has submitted Irrigation & Power Department, Government of Maharashtra letter No. MIP-2273/19368-IP (I) dated 18.8.1973 which stated that projects serving drought prone areas should be planned at 50% dependability.

8. The Committee after long deliberations recommended the project for grant of Environmental Clearance, subject to submission of the order of Krishna Water Dispute Tribunal (KWDT) regarding inter-state water allocation concerning the project, and strict compliance of the following additional conditions:-

(i) Water user association/Co-operative and involvement of the whole community for disciplined use of available waters should be formed.

(iii) No project work shall be undertaken till the EC is granted. Any violation reported at any later stage shall lead to revocation the EC.

Agenda Item No. 2.12

Pinjal Project in Palghar District of Maharashtra by M/s Municipal Corporation of Brihan Mumbai, Government of Maharashtra- For re-consideration of ToR

This is a water supply project with irrigation and hydropower component. The EAC was not convinced as to why irrigation & HEP component has been added which will cause more submergence and environmental damage. This project was considered by EAC in

its meeting held in January, 2014. The committee after critically examining the environmental issues mentioned the following:

- The EAC was not convinced as to why irrigation & HEP component has been added which will cause more submergence and environmental damage. Therefore, calls for a thorough review and reconsideration by the project proponent.
- Proper techno-economic study and option analysis be carried-out at the first place to "zero in" on the most viable option. The project in its present form has enormous potential to damage to environment and entail huge capital cost.
- Need for 65 Km long tunnel may be reviewed critically and techno-economically most viable option be adopted.

Accordingly, the Ministry rejected the proposal in May, 2014.

The project proponent presented the case again before the EAC for reconsideration for scoping/TOR clearance. The committee observed that instead of revising the proposal and submitting fresh Form-I & project report, the project proponent have only complied with the earlier observations of EAC. Therefore, the committee reiterated its earlier stand and advised to revise the project and submit the same as contained in the EIA Notification.

Agenda Item No. 2.13

Tagurshit HEP (74 MW) project in West Siang District of Arunachal Pradesh by M/s L & T Arunachal Hydro Power Ltd – For consideration of Environmental Clearance (EC)

Tagurshit hydroelectric power project is proposed on the River Tagurshit (a tributary of Siyom River) near Tado-gitu village in District West Siang of Arunachal Pradesh. The Project envisages construction of 40 m high dam (from the river bed level) across River Tagurshit to generate 74 MW of Hydropower. This is a run-of-river scheme. The total land requirement for the project is 39.7 ha and entire land is unclassified forest land. The total catchment area of the project is 191.7 Sq.km. Total submergence area is 2.49 ha. A surface powerhouse is proposed on the right bank of river with 3 units of 24.67 MW capacity each. A total of 96 families are likely to be affected due to this proposed project. The families will lose their land partially and no lose of homestead. Therefore, no displacement of people involved in the project as there is any habitation. The estimated project is about Rs. 556.82 crores and the project will be completed in 4 years.

2. The committee noted that based on the approved 10 daily flow series for the 90% dependable year, the e-flows have been calculated. The project proponent informed that that environmental flow releases to the downstream in different seasons has been recommended & approved by the earlier EAC committee during the 55th & 56th meetings held on 10th February & 31st March, 2012. The Environmental Flows to be released in various seasons is given in following Table:

Table: Environmental Flows for Tagurshit HEP

Season	Avg. inflow (m^3/s)	% of Inflow	Avg. EF to the downstream(m^3/s)
Lean (December – March)	4.21	20	0.84
Non-Monsoon Non-Lean (October, November– April, May)	12.28	21	2.58
Monsoon (June- September)	25.52	23	5.76

3. Based on the scrutiny and examination during the meeting, EAC observed as under:

(i) The project is situated at a distance of 9.5 km from the boundary of Yordi Rabe Supse Wildlife Sanctuary. Considering the presence of eco-sensitive zone within 10 km of the project site, the NBWL proposal has been submitted to PCCF (wildlife) Govt. of Arunachal Pradesh. The proposal was considered in State Board of Wildlife and the same has been recommended. The Govt. Of Arunachal Pradesh vide letter No.FOR.282/Cons/2010/10, 317-18 dated 27.11.2014 forwarded the case to Standing Committee of NBWL for clearance from wildlife angle.

(ii) The public hearing was conducted on 23.2.2015 at Volleyball Ground, Tado- Gitu village in West Siang District of Arunachal Pradesh as per the EIA notification 2006 & its subsequent amendments. The main issues raised during the public hearing were construction of community hall, bus stand, vollely-ball ground, water supply, medical facilities, employment etc. The project proponent has complied all the issues raised by the public pertaining to them.

(iii) The project is likely to generate 8.55 lakh m^3 of muck due to excavation. Out of which 3.42 lakh m^3 is to be utilized for construction purpose and remaining 5.13 lakh m^3 will be dumped in an area of 6.78 ha at 4 designated disposal sites. The muck disposal sites should be reclaimed/ restored with vegetation once capacity is utilized.

(iv) The compensatory afforestation programme is proposed in 79.4 ha of forests land which is double of the forest land diverted for the project and will be implemented in consultation with State Forest Department. Biodiversity conservation measures like anti-poaching, habitat improvement programme for avi-fauna, cultivation of medicinal plant etc. are also proposed under the Environmental Management Plan.

(v) Greenbelt will be de developed around the reservoir periphery to TRT. Selection of local plant species & its implementation will be done in consultation with the State Forest Department, Govt. of Arunachal Pradesh

(vi) Fishery development and management plan is proposed for the conservation fish in river. Under this programme stocking of reservoir, upstream/ downstream of the river will be done. The rate of stocking is proposed as 100 fingerlings/ km. The plan will be implemented in consultation State Fisheries Department.

4. After detailed deliberation committee sought clarification/additional information on the following:

(i) The committee noted the e-flow calculations based 10 daily flow series for the 90% dependable year and the e-flows values prescribed to this project by earlier EAC. However, the committee suggested that all recommendations of Siang River Basin Study, especially in respect of e-flow, minimum free flowing stretch between the two projects etc shall be complied with and incorporated in the EIA/EMP reports.

(ii) The project proponent has to formulate R&R Plan based on the provisions /guidelines as given in the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013. The various activities like educational, health and infrastructural facilities will be developed under local area development plan (LADA). The provisions made in these activities are very meager and should be considerably enhanced at least 4 times.

(iii) The total amount proposed for implementation of Environmental Management Plan (EMP) is Rs.47.55 crore and the details are given in Table.

Table: Cost Estimate of Environmental Management Plan

Sl. No.	**Item**	**Total Cost (Rs. in lakhs)**
1	Compensatory Afforestation, and Bio-diversity conservation	317
2	Catchment Area Treatment	852
3	Fisheries Management	265
4	Public health delivery system	256
5	Environmental Management in labour camp	692
6	Muck disposal Plan	124
7	Restoration and Landscaping of construction sites	161
8	Environmental management in road construction	138
9	Greenbelt development	8
10	Air pollution Control	121
11	Noise control measures	25
12	Water pollution control	20
13	Energy Conservation measures	100
14	Resettlement & Rehabilitation Plan	911.30
15	Local Area Development Plan	518
16	Disaster Management Plan	105.50
17	Environmental Monitoring during construction phase	142.10
Total		**4755.9 lakhs or say 47.55 crores**

The committee suggested enhancing the cost estimates of EMP and revised EMP has to be submitted.

(iv) The project proponent must submit response to the various issues raised by SANDRP in their representation submitted to this Ministry. A copy was handed over to project proponent for compliance.

On receipt of the above information, the proposal may be reconsidered by the EAC.

Agenda Item No. 2.14

Nakthan HEP (460MW) in Kullu District of Himachal Pradesh by Himachal Pradesh Power Corporation Ltd - For Consideration of Environment Clearance

The Project is proposed to utilize the water of Tosh Nalla and Parbati River (both streams are tributaries of river Beas). The project will have two (2) diversion sites with common surge shaft and and underground powerhouse. Out of 2 diversion sites; one will be on the river Parbati at Dhara Thach with 13.5 m high barrage & second on the Tosh nalla at Wanshi Thach with 12 m high barrage. This is run-of-the-river scheme. An underground powerhouse is proposed on the right bank of Parbati River at Nakthan village with 4 units of 115 MW each. Total land requirement is about 90.07 ha. Out of which 81.85 ha is forest land and 8.22 ha is private land. The total project cost is about Rs. 4508.16 Crores.

While considering the proposal, EAC observed the following:-

(i) Nakthan project was accorded Scoping/TOR clearance in 2011 for 520 MW and thereafter, the validity of TOR was extended 2 times. Now, the present project is for 460 MW capacity. Hence, HPPCL has to submit the approval of the State Government & MoP/CEA for the downward revision of the capacity.

(ii) As per the OM dated 28.5.2013, the State Governments were to take up river basin studies for consideration of project for TOR/Environmental Clearance. The proposed project is on tributaries of Beas river. Recently, the TOR clearance for Beas river has been accorded. Therefore, the committee desired to know the status of river basin study and clarification as to whether the committee can consider this project for EC clearance, pending the river basin study as per the OM dated 28.5.2013.

(iii) The e-flow study for the project should be as it was done in the case of their earlier project Shongtong-Karcham HEP.

Agenda Item No. 2.15

Etalin HEP (3097MW) in Dibang District of Arunachal Pradesh by M/s Etalin Hydro Electric Power Company Ltd – For reconsideration of Environment Clearance

In the 82nd meeting held in February, 2015, the project proponent was handed over the representations from SANDRP and was asked to submit response to that. Further, based on

the presentation, discussions and deliberations, EAC had sought clarification/additional information in respect of the following:-

(i) To submit the breakup of Rs.250 lakhs allocated against preparation of Disaster Management Action Plan.

(ii) The cost of land against land acquisition of the project as included in the DPR should be reflected in the EMP and submitted.

(iii) Project proponent in consultation with District Administration should resolve the pending issues raised during public hearing of the project and inform to this Ministry.

(iv) Project proponent must follow the recommendations of CIFRI on minimum environmental flow and also obtain approval of CEA for any increase in IC from the two dam toe powerhouses.

(v) The project proponent must submit response to the various issues raised by SANDRP in their representation to this Ministry.

2. EAC took note of a number of representations received in the mean time for not considering the project in its present form for grant of EC. The Committee handed over all the representations received, and asked the project proponents to adequately respond to them. EAC deferred the matter till a satisfactory reply from the project proponents is received in this Ministry.

The meeting ended with vote of thanks to Chair.

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List of EAC members and Project Proponents who attended 82nd Meeting of Expert Appraisal Committee for River Valley & Hydro Electric Power Projects held on 23rd and 24th April, 2015 in New Delhi

Members of EAC

1.	Shri Alok Perti	-	Chairman
2.	Shri H. S. Kingra	-	Vice Chairman
3.	Shri Vinay Kumar	-	Member
5.	Dr. Vijay Kumar	-	Member
6.	Dr. K.D. Joshi	-	Member
7.	Dr. S. Sathyakumar	-	Member
8.	Shri N.N. Rai	-	Member
9.	S. K. Srivastava	-	Member Secretary
10.	Dr. P.V. Subba Rao	-	MoEF & CC

Agenda No. 2.1

1.	Shri B.S. Chandrashekar	-	Sr. Engineer
2.	Shri Manoj N. Charantiwath	-	Deputy Chief Engineer
3.	Shri Shivanand M. Dambar	-	EIA Consultant
4.	Shri Santhosh Kumar TM	-	FAE Bangalore

Agenda No. 2.2

1.	Shri R. Cheluvarga	-	
2.	Shri Satish M.	-	Sr. Engineer
3.	Shri Shivanand M. Dambar	-	EIA Consultant
4.	Shri Santosh Kumar TM	-	FAE

Agenda No. 2.3

1.	Shri S.S. Paleger	-	Ex Engineer
2.	Shri S.H. Athani	-	Asst Exe Engineer
3.	Shri Shivanand M. Dambar	-	EIA Consultant
4.	Shri Santosh Kumar TM	-	FAE

Agenda No. 2.4

1.	Shri P. V. Prasad	-	General Manager (Technical)
2.	Shri M. Jagan Mohan Rao	-	Chief Consultant
3.	Shri Arun Bhaskar	-	EIA Consultant
4.	Shri Ravinder Bhatia	-	EIA Consultant

Agenda No. 2.5 to Agenda No. 2.7

Nobody attended the meeting

Agenda No. 2.8

1.	Shri K. K. Gupta	-	Executive Engineer
2.	Shri Sumit Verma	-	Environmental Engineer
3.	Capt (Retd) H. K. Sharma	-	Executive Director
4.	Shri R. K. Khanna	-	Retd. Chief Engineer

Day 24th March, 2015

Agenda No. 2.9

1.	Shri Tanmoy Das	-	Consultant WAPCOS
2.	Shri Amitabh Tripathi	-	Head (CD)
3.	Shri Munni Lal	-	Sr. Jt. Commissioner
4.	Shri Anupam Mishra	-	Sr. G. M. WAPCOS
5.	Shri H. K. Sharma	-	Ms, UYRB
6.	Shri S. M. Dhiman	-	Consultant WAPCOS
7.	Shri O. P. Chibber	-	GM, WAPCOS
8.	Shri S. P. Kakran	-	Advisor (Civil)
9.	Dr. Aman Sharma	-	GM (Environment) WAPCOS
10.	Shri S. M. Dixit	-	Dy. Chief Engineer, WAPCOS

Agenda No. 2.10

1.	Shri Gulbagh S. Gulati	-	
2.	Shri Asesh Nayak	-	
3.	Shri Pramod Shrirastam	-	
4.	Shri Asim Thakurta	-	
5.	Dr. Aman Sharma	-	GM (Environment) WAPCOS
6.	Sh. V. K. Nori	-	Dy. Chief Engineer, WAPCOS
7.	Shri S. M. Dixit	-	
8.	Dr Sharat Ranjan	-	
9.	Shri Pradeep Yadav	-	

Agenda No. 2.11

1.	Shri C. A. Birajdar	-	Executive Director, GMIDC
2.	Shri R. K. Nittarkar	-	Chief Engineer (WRD)
3.	Shri B. D. Tande	-	Sr. Engineer (OIC)
4.	Shri Kamble	-	Sr. Engineer AIC)
5.	Shri L. G. Patil	-	Executive Engineer (KMID)
6.	Shri R. K. Nihurkar	-	Chief Engineer
7.	Shri Awalgan	-	Executive Engineer

Agenda No. 2.12

1.	Dr. I Gupta	-	NEERI
2.	Dr. Shalini A Tandon	-	NEERI
3.	Shri N.P. Mane	-	Dy. Chief Enginee, MCGN
4.	Shri Umehi Bhutkar	-	

Agenda No. 2.13

1.	Shri Ratrakar Pandey	-	Manager (Environment) L&T PDL
2.	Shri B. Bhattacharya	-	GGM, L&T PDL
3.	Shri Aman Sharma	-	GM (Environment) WAPCOS
4.	Shri D. N. Kat	-	Sr. Dam, Department, L&T
5.	Shri P. Kathiravan	-	DGM, L&T PDL
6.	Shri S.M. Dixit	-	Dy Chief Engineer, WAPCOS

Agenda No. 2.14

1.	Shri Sumit Verma	-	Env Engineer
2.	Shri H. K. Sharma	-	Ex. Director
3.	Shri Rajan Sharma	-	Snri
4.	Shri R. C. Choudhary	-	GM
5.	Shri Rakesh Sood	-	CES
6.	Shri M. Arora	-	Scientist D
7.	Dr. A. N. Singh	-	Scientist E, ICFRE, Dehradun
8.	Dr. Rajdeep	-	PA, EM, ICFRE
9.	Shri Anshul Teotia	-	MANTEC

Agenda No. 2.15

1.	Shri M. M. Madan	-	President
2.	Shri Arun Gaur	-	
3.	Shri Anil Dhar	-	AVP
4.	Shri J. K. Soni	-	Manager
5.	Shri Sunil Kumar	-	Manger
6.	Shri Gagendra Sharma	-	Dy Manager
7.	Mrs. R S Bhatia	-	Consultant
8.	Dr. Arun Bhaskar	-	Consultant

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