

**No. J- 12011/22/2016-IA.I [R]**  
Ministry of Environment, Forest & Climate Change  
Government of India  
(I.A I Division)

Indira Paryavaran Bhavan  
3<sup>rd</sup> Floor, Vayu Wing  
Jor Bagh Road  
New Delhi-110003

**Dated: 1<sup>st</sup> August, 2019**

To

Indu Bhushan Kumar  
E-In-C (HQ)  
Water Resource Department  
Sinchai Bhawan,  
Patna, Bihar-800015

**Subject: Kosi-Mechi intrastate link project (Construction of 76.20 km long canal on the existing barrage beyond eastern Kosi main canal (41.30 km) for irrigation purpose under Kosi- Mechi intrastate link project in the state of Bihar by M/s. Water Resources Department, Govt. of Bihar for Environmental Clearance (EC)- regarding**

Sir,

This has reference to your letter no. 405, 06.07.2018 and online proposal no. IA/BR/RIV/57622/2016 submitted on 07.07.2018 on the above cited subject.

2. The above referred proposal was considered by the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric projects in its meeting held on 27.07.2018 & 27.11.2018. The comments and observations of EAC on the project may be seen in the Minutes of the meeting which are available on the web-site of this Ministry.

3. The Kosi-Mechi Intrastate Link project with its extended ayacut beyond 41.30 km originates from existing Hanuman Nagar Barrage (Birpur) located on Kosi river and proposed to be continued up to river Mechi (a tributary of Mahananda river), for providing irrigation to Arari, Purnia, Katihar and Kishanganj district of Bihar during Kharif season only.

4. The proposed Gross Command Area of the project and Culturable Command Area are 2.75 lakh ha and 2,14,812 ha (CCA 2.15 lakh ha), respectively spread over in the districts of Araria (CCA 69642 ha), Kishanganj (CCA 39548 ha), Purnia (69970 ha) and Katihar (CCA 35653 ha) in the State of Bihar. The Kosi Mechi Link Project envisages diversion of part of surplus water of Kosi River through existing Hanuman Nagar barrage to Mahananda basin. Main components of the project involve re-modelling of existing EKMC up-to 41.30 km and construction of a new canal from 41.30 km to 117.50 km long. The FSL of link canal at head is 74.371 m and at tail end is 54.239 m.

5. The project involves no displacement of population and there is no acquisition of any forest land. The total land requirement is about 1,396.81 ha. No National Park, Wildlife Sanctuary, Eco-sensitive areas, etc. are present within 10 km radius of the project. The total project cost is about Rs. 4900.00 Crore.

6. The Public Hearing for the project were conducted in 4 Districts (i.e Kishanganj on 26.2.2018; Purnia on 27.2.2018; Katihar on 28.2.2018 and Araria on 28.3.2018) by the Bihar State Pollution Control Board, Bihar as per the provisions of EIA Notification, 2006.

7. The Expert Appraisal Committee (EAC) in its 20<sup>th</sup> meeting held on 27.11.2018, after due consideration of the relevant documents submitted by the project proponent and clarifications furnished in response to its observations, have recommended for grant of Environmental Clearance for the project mentioned above. Accordingly, the Ministry of Environment, Forest and Climate Change hereby accords necessary Environmental Clearance for the above project as per the provisions of Environmental Impact Assessment Notification, 2006 and as amended thereof, subject to compliance of the conditions as given in **Annexure I** (i.e. Standard EC Conditions for River valley and hydroelectric projects)

8. The Environmental Management Plan (EMP) shall be strictly adhered to and a sum of Rs. 34539.33 lakhs, the budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also updated proportionately.

9. The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018 regarding Corporate Environment Responsibility. Project proponent shall require to invest 0.5 % of the total project capital investment. The activities under CER shall be worked out as per the para no. (V) of the aforesaid OM and shall be restricted to the affected area around the project. The entire activities under CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half-yearly compliance report and to a District Collector.

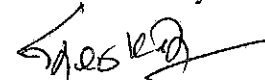
10. The environmental clearance is valid for period of 10 years from the date of issue of this letter for commissioning of the project.

11. After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment and downstream ecology. The study shall be undertaken by an independent agency, decided in consultation with the Ministry.

12. Any other clearances/permissions/approvals from any other organization/department, as applicable to the project shall be taken.

13. This issues with approval of the Competent Authority.

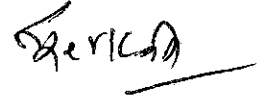
Yours faithfully



**(Dr. S. Kerketta)**  
Director

**Copy to:**

1. The Secretary, Ministry of Water Resources, RD & GR, Shram Shakti Bhawan, Rafi Marg, New Delhi -3.
2. The Principal Secretary, Water Resources Department, Government of Bihar, Vidyut Bhawan, Bailey Rd, Bihar-800001.
3. The Chief Engineer, Project Appraisal Directorate, Central Water Commission, Sewa Bhawan, R.K. puram, New Delhi-110066.
4. The Addl. PCCF(Central), Ministry of Environment, Forest & Climate Change, Regional Office (ECZ), Bugalow No. A-2, Shyamali Colony, Ranchi-834002.
5. The Member Secretary, Bihar State Pollution Control Board, Beltron Bhawan, Shastri Nagar, Jawaharlal Lal Nehru Marg, Patna, Bihar-800023.
6. PPs to JS (GM).
7. NIC Cell – for uploading in MoEFCC's website
8. Guard File.

  
(Director)

**Standard EC Conditions for River Valley and Hydroelectric projects**

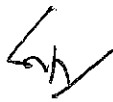
**I. Statutory compliance:**

- i. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- ii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden, if applicable. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).
- iii. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

**II. Air quality monitoring and preservation**

- i. Regular monitoring of various environmental parameters viz., Water Quality, Ambient Air Quality and Noise levels as per the CPCB guidelines at designated locations shall be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA / Monitoring purposes.
- ii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed standards.
- iii. Necessary control measures such as water sprinkling arrangements, etc. be taken up to arrest fugitive dust at all the construction sites.

**III. Water quality monitoring and preservation**

- i. Conjunctive use of surface water to be planned in the project to check water logging as well as to increase crops productivity. The field drains shall be connected with natural drainage system.
  - ii. Remodelling of existing natural drains (link drains) and connecting them with irrigated land through constructed field drains, collector drains, etc. are to be ensured on priority basis.
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- iii. As the reservoir will be acting as balancing reservoir and there would be fluctuation of water level during peaking period, efforts be made to reduce impact on aquatic life including impacts during spawning period both at the upstream and downstream of the project.
- iv. Water depth sensors shall be installed at suitable locations to monitor e-flow. Hourly data to be collected and converted to discharge data. The Gauge and Discharge data in the form of Excel Sheet be submitted to the Regional Office, MoEF & CC and to the CWC on weekly basis.
- v. Mixed irrigation shall be practised and necessary awareness be given to all the farmers and trained in the use of such systems. Proper crops selection shall be carried out for making irrigation facility more effective.
- vi. On Farm Development (OFD) works like landscaping, land levelling, drainage facilities, field irrigation channels and farm roads, etc. should be taken up in phased manner prior to the start of irrigation in the entire command area. The Command Area Development Plan should be strictly implemented as proposed in the EIA/EMP report

#### **IV. Noise monitoring and prevention**

- i. All the equipment likely to generate high noise shall be appropriately enclosed or inbuilt noise enclosures be provided so as to meet the ambient noise standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000, as amended in 2010 under the Environment Protection Act (EPA), 1986.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

#### **V. Catchment Area Treatment Plan**

Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP report shall be implemented in consultation with the State Forest Department and shall be implemented in synchronization with the construction of the project.

#### **VI. Waste management**

- i. Muck disposal be carried out only in the approved and earmarked sites. The dumping sites shall be located sufficiently away from the HFL of the river. Efforts be made to reuse the muck for construction and other filling purposes and balanced be disposed of at the designated disposal sites. Once the muck disposal sites are inactive, proper treatment measures like both engineering and biological measures be carried out so that sites are stabilized quickly.
- ii. Solid waste management should be planned in details. Land filling of plastic waste shall be avoided and instead be used for various purposes as envisaged in the EIA/EMP reports. Efforts be made to avoid one time use of plastics.

## **VII. Green Belt, EMP Cost, Fisheries and Wildlife Management**

- i. Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of river basin or as per the ToR conditions or minimum 15% of the average flow of four consecutive leanest months, whichever value is higher, shall be released as environmental flow.
- ii. Detailed information on species composition particular to fish species from previous study/literature be inventoried and proper management plan shall be prepared for insitu conservation in the streams, tributaries of river and the main river itself for which adequate budget provision be made and followed strictly.
- iii. Wildlife Conservation Plan prepared for both core and buffer zones shall be implemented in consultation with the local State Forest Department, if applicable.
- iv. To enrich the habitat of the project site, plantation shall be raised as envisaged in the EIA/EMP report. Plantation to be developed along the periphery of the reservoir in multi-layers with local indigenous species in consultation with the local State Forest Department.
- v. Compensatory afforestation programme shall be implemented as per the plan approved, if any.
- vi. Fish ladder/pass as envisaged in the EIA/EMP report shall be maintained for migration of fishes. Regular monitoring of this facility be carried out to ensure its effectiveness.

## **VIII. Public hearing and Human health issues**

- i. Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt, if any.
- ii. Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.
- iii. Preventive measures viz. fuming and spraying of mosquito control shall be done in and around the labour colonies, affected villages, stagnated pools, etc. Provisions be made to not to create any stagnated pools to avoid creation of breeding grounds of the vector borne diseases.
- iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Labour force to be engaged for construction works shall be examined thoroughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.

- vi. Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.

#### **IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018 regarding Corporate Environment Responsibility.
- ii. Skill mapping be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long time livelihood generation
- iii. The PP shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iv. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- v. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- vi. Post EIA and SIA be prepared for the project through a third party and evaluation report be submitted to the Ministry after five years of commissioning of the project.
- vii. Multi-Disciplinary Committee (MDC) be constituted with experts from Ecology, Forestry, Wildlife, Sociology, Soil Conservation, Fisheries, NGO, etc. to oversee implementation of various environmental safeguards proposed in EIA/EMP report during construction of the project. The monitoring report of the Committee shall be uploaded in the website of the Company.
- viii. Formation of Water User Association/Co-operative be made involment of the whole community be ensured for discipline use of available water for irrigation purposes.

## X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by 5 prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project. vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government. viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- vii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- viii. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- ix. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- x. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.



- x. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xiii. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**Additional conditions:**

- i. Necessary permission/clearance to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and subsequent amendments thereof.
- ii. Proposal is there for remodelling of existing canal to carry high capacity of water, therefore wherever aqua duct will be built, care should be taken to build parallel aqua duct so that excess water can be transferred.

