

No. J-12011/7/2009-IA.I
Government of India
Ministry of Environment & Forests
[IA.I – Division]

Paryavaran Bhavan
CGO Complex, Lodhi Road
New Delhi – 110 003
Telefax: 011 2436 2827

Dated: 05.01.2010

The Executive Engineer,
Karnataka Neeravari Nigam Ltd,
Upper Bhadra Project, Division No-2,
B.R.Project – Bhadravanthi (Tq),
Shimoga Dist., Karnataka.

Sub: Upper Bhadra Lift Irrigation Project Stage-I near Mutthinakoppa Village, N.R.Pura
Taluk, Chikmagalur District, Karnataka – Environmental Clearance – regarding.

Sir,

This has reference to your letter No.WRD-17/VEBYAE-2009 dated 4.2.2009, subsequent letters dated 13.3.2009, 3.9.2009 and 17.11.2009 on the above subject.

2. The proposed project is located near Mutthinakoppa Village, N.R.Pura Taluk, Chikmagalur District of Karnataka State. The project involves lifting of water from Tunga River to Bhadra reservoir in two stages. The dam already constructed for Bhadra reservoir. Thereafter, it is proposed to construct the canal from Bhadra reservoir to delivery chamber including 3 lifts and a tunnel of 6.90 km length and canal network to provide irrigation facility to 107265 ha. of land in Chikmagalur and Chitradurga Districts and is likely to benefit 191 drought affected villages (17 - in Chikmagalur District & 174 in Chitradurga District). The total land requirement for the project is about 5245.37 ha. Out of which, Forest land is 230 ha and Private land is 5015.37 ha. The total estimated cost is about Rs.5985 Crores. The project would be completed in 60 months.

3. The above referred proposal was considered by the Expert Committee for River Valley & Hydroelectric Projects at its meeting held on 17.2.2009, 20.3.2009 & 21.10.2009.

4. The Ministry of Environment and Forests hereby accords environmental clearance as per the provisions of Environmental Impact Assessment Notification, 2006 subject to strict compliance of the terms and conditions as follows:

Part A: Specific Conditions

- i. The land holding of project affected persons whose land is being acquired to be submitted to this Ministry. The R&R benefits for the land losing households will be as per the National Rehabilitation and Resettlement Policy, 2007 (NRRP, 2007). Adequate publicity of the compensation package of NRRP 2007 should be circulated in the affected villages.
- ii. The commitment made during the public hearings should be fulfilled.
- iii. All the equipment which are likely to generate high noise levels are to be fully (noise reduction measures) to meet the ambient noise level standards.
- iv. The total quantity of muck to be generated is 74493500 m³ due to excavation. As proposed 27376000 m³ should be utilized for construction material & casing in embankments. The remaining 47117500 m³ should be dumped in 6 identified areas in the project site. Consolidation and compilation of the muck should be carried-out in the muck dump sites and the dump sites should be above high flood level. The allocated amount of Rs. 644 should not be diverted for any other purpose.
- v. Conjunctive use of surface water has to be planned in the project to check water logging as well as to increase productivity.
- vi. Water user association/Co-operative and involvement of the whole community for disciplined use of available waters should be formed.
- viii. The On Farm Development OFD works are to be completed by the project proponent before the commencement of irrigation. WUA's (Water Users Associations) should be made functional to undertake the OFD works immediately when irrigation starts and this should be strictly followed as mentioned vide letter no.CE/KNNL/UBPZ/TA-2/AE-1/MOEF/2009-10/1091 dated 17.11.2009
- ix. The proposed Compensatory Afforestation Programme in 230 ha. using 17 different Non Timber Forest Produce (NTFP) plant species with 200-300 plants per hectare should be taken-up strictly and the allocated amount of Rs. 59.34 lakhs for this purpose should not be diverted.
- x. The proposed greenbelt development to enhance project site environment should be strictly adhered. The proposed nursery of 1 ha. should be developed to raise the suitable plant seedlings. Apart from compensatory afforestation & greenbelt development, the proposed single row of Canal Bank Plantation for 118 km @ 100 plants for kilometer should be strictly adhered to.
- xi. Occurrence of stagnant pools/slow moving water channels during construction and operation of the project providing breeding source for vector mosquitoes and other

parasites. The river should be properly channelised so that no small pools and poodles are allowed to be formed. Even after taking precaution, due to unforeseen situations, breeding of mosquito and resultant malaria or mosquito borne diseases can increase. If such a situation arises, It will be the responsibility of project authorities to take all steps i.e. residual insecticidal spray in all the project area and surrounding 3 km. area keeping the flight range of mosquitoes in consideration

xii. Bhadra Wildlife Sanctuary is in the vicinity of the project. The nearest point of the main canal is 3.5 km from wildlife sanctuary. The statutory clearance, such as approval under Wildlife (Protection) Act 1972 should be obtained (if applicable), from the competent authority. Similarly prior forest clearance should be obtained under Forest (Conservation) Act, 1980.

xiii. Any other clearance from any other organization/department if required should be obtained.

Part-B: General Conditions

- (i) Adequate free fuel arrangement should be made for the labour force engaged in the construction work at project cost so that indiscriminate felling of trees is prevented.
- (ii) Fuel depot may be opened at the site to provide the fuel (kerosene/LPG) to the labour force.
- (iii) Medical facilities/First Aid centres should be provided to the labourers with regular health check-up.
- (iv) All the labourers to be engaged for construction works should be thoroughly examined by health personnel and adequately treated before issuing them work permit.
- (v) All the labourers to be engaged for construction works should be provided with PPE (Personal Protective Equipments like Helmets/Gloves/Earplugs/Shoes etc..) depending upon their nature of work.
- (vi) Water sprinkling arrangements shall be made to suppress the dust and fugitive emissions.
- (vii) Potable drinking water and proper sanitary facilities should be provided for the labour force..
- (viii) Solid waste from the labour camps shall be collected in Bins/Masonry vats and the same shall be dumped/disposed to nearby municipal landfills/authorized

dump sites. No dumping of solid waste will be allowed near any water body or a stream to exclude any health hazard problem to the community.

- (ix) Restoration of construction area including dumping site of excavated materials should be ensured by leveling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.
- (x) Financial provision should be made in the total budget of the project for implementation of the above suggested safeguard measures.
- (xi) Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Bangalore for review.
- (xii) The project proponent shall also submit six monthly reports on the status of compliance to the stipulated EC conditions (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF/State Pollution Control Board.

5. Officials from Regional Office, MoEF, Bangalore who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection and review.

6. The responsibility of implementation of environmental safeguards as proposed in the EIA Report and others as stated above rests fully with the Karnataka Neeravari Nigam Limited.

7. The total amount reserved for implementation of Environmental Protection Measures should be strictly adhered and not to be diverted for any other purpose.

8. In case of change in the scope of the project, project would require a fresh appraisal.

9. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary and to take action including revoking of the clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time-bound and satisfactory manner.

10. This clearance letter is valid for a period of 10 years from the date of issue of this letter for commencement of construction works.

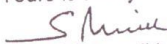
11. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban local body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

12. The proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>

13. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional office of MoEF, the respective Office of CPCB and the SPCB.

14. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.

Yours faithfully


(Dr.S.Bhowmik)
Additional Director

Copy to:

1. The Secretary, Ministry of Water Resources, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Adviser (I & CAD), Planning Commission, Yojna Bhawan, New Delhi - 110001.
3. The Secretary (Irrigation), Water Resources Department, Vikas Soudha, Bangalore.
4. The Secretary, Department of Forest, Ecology and Environment, Government of Karnataka, M.S. Building, Dr. Ambedkar Veedhi, Bangalore.
5. The Chief Engineer, Project Appraisal Directorate, Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi-110066.
6. The Regional Office, Ministry of Environment & Forests, Bangalore.
7. The Member Secretary, Karnataka State Pollution Control Board, 5th Floor, Parisara Bhavana, #49, Churchstreet Road, Off. M.G Road, Bangalore - 560 001.
8. E1- Division, Ministry of Environment & Forests, New Delhi-110003.
9. Guard file.

(Dr. S. Bhowmik)
Additional Director

No. J-12011/7/2009-IA.I (Vol-II)
Government of India
Ministry of Environment, Forest & Climate Change
[IA.I - Division]

Indira Paryavaran Bhavan
3rd Floor, Vayu Wing
Jor Bagh Road
New Delhi —110 003.

Dated: 10th July, 2017

To

The Chief Engineer
M/s. Vishweshwaraya Jala Nigam Limited
Government of Karnataka
Upper Bhadra Project Zone
Chitradurga – 577 501
Karnataka

Sub: Upper Bhadra Lift Irrigation Project in Chikkamagalur District of Karnataka by M/s. Vishweshwaraya Jala Nigam Limited, Government of Karnataka – Environmental Clearance (EC) for Expansion Project - regarding.

Sir,

1. This has reference to your letter No. CEC/KNNL/UPBZ/Pak-2/TA-2/TS-1/MoEF/2016-17/2914 dated 8.12.2016, 20.12.2016 and 9.3.2017 on the above mentioned subject.
2. The Upper Bhadra Lift Irrigation Project (Stage-I) was accorded environmental clearance on 5.1.2010. The project neither involved submergence nor construction of new dams/weirs. The project involves lifting of water from Tunga river to Bhadra reservoirs in 2 stages. The dam has already been constructed for Bhadra reservoir and now, it is proposed to construct the canal from Bhadra reservoir to delivery chamber including 3 lifts and 6.90 km long tunnel and canal network. This canal would convey water to the drought-prone areas of Chikkamagalur and Chitradurga Districts utilizing 21.5 TMC of water to provide irrigation facility to 1,07,265 ha of dry land through gravity flow irrigation system. The project also involves filling up of 37 MI tanks to cater the needs of drinking water supply in Chitradurga, Tumakur and Kolar Districts. Considering the availability of water for the project and needs of the farmers of Davanagere and Tumakuru Districts, it was decided to provide irrigation facility to these Districts within the availability of water.
3. The expansion project (Stage-2) utilizes the same infrastructure of Stage-I to irrigate additional 1,18,250 ha of drought prone area and fill up additional 367 MI tanks in command area, thus improving water table and providing a major source of drinking water. Further, to achieve water conservation, the entire command (existing 1,07,265 ha + proposed 1,18,250 ha) area is proposed for drip irrigation system by utilizing 29.9 TMC of water. After tunneling, it is planned to irrigate an extent of 2,25,515 ha of irrigation (Stage-II) in the Districts of Chikkamagalur, Chitradurga, Tumakuru and Davanagere benefiting 787 villages.




4. The project envisages utilization of 29.9 TMC of water. Out of which, 19.04 TMC of water is required for irrigating 2,25,515 ha command area and remaining 10.86 TMC of water for filling up of MI tanks. Total land requirement for the project is 2114 ha and the land required is only for construction of main canals, tunnel and delivery chambers. The land will be acquired as per the Right to Fair Compensation and Transparency in Land Acquisition Act, 2014. For implementation of Stage-I of the project, 318.62 ha of forest land is required and Stage-I FC Clearance was obtained on 12.11.2015, 11.2.2016 & 4.3.2016. No forest land is required for implementation of Stage-II of the project. Total cost of the project is Rs. 12,340 crores.

5. The above referred proposal was considered by the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric Projects in its meetings held on 30th December, 2016 and 2-3rd March, 2017. The comments and observations of EAC on the project may be seen in the Minutes of these meetings which are available on the web-site of this Ministry. The Public Hearings were conducted in all the 2 Districts viz. The public hearings were conducted in 2 Districts viz., Huliya village, Tumakuru District on 19.10.2016 & at Jagalur, Davanagere District on 8.11.2016 of Karnataka.

6. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and clarification furnished in response to its observations, have recommended for grant of Environmental Clearance for the project mentioned above. Accordingly, the Ministry of Environment, Forest & Climate Change hereby accords necessary environmental clearance for the above project as per the provisions of Environment Impact Assessment Notification, 2006 and its subsequent amendment in 2009, subject to compliance of following conditions:

Part - A. Specific Conditions:

- i. The Catchment Area Treatment (CAT) Plan as has been proposed in the Chapter-8 of EMP (8.1 - CAT Plan; December, 2016) shall be implemented in consultation with the Karnataka State Forest Department. The allocated grant of Rs. 2936.50 lakhs for this purpose should be fully utilized and not be diverted for any other purpose. As per plan, the area of CAT is 15,000 ha.
- ii. The project involves acquisition of 2114 ha of land. The R&R benefits for the land losing will have to comply with The Right to Fair Compensation and Transparency in land acquisition, Rehabilitation & Resettlement Act, 2013 which has come into force on 1.1.2014. Adequate publicity of the compensation package should be circulated in the affected villages. All R&R issues shall be completed before commissioning of the project.
- iii. A Monitoring Committee for R&R shall be constituted which shall include representatives of project affected persons including representative from SC/ST category and a woman beneficiary.
- iv. All commitment made during the public hearing should be fulfilled completely by the project proponent and record maintained.



- v. The Command Area Development (CAD) Plan as proposed in the EIA/EMP report (December, 2016) report shall be strictly implemented.
- vi. Consolidation and compaction of the generated muck should be carried-out in the muck dumping sites. As proposed in the muck disposal plan, out of 2,88,61,973 m³ muck generated, the entire to be utilized for service road & inspection paths, embankments, land leveling, filling trenches, construction material for CD works, road etc and restoration works for canal banks should be strictly adhered. The muck disposal sites shall be reclaimed/ restored with vegetation once capacity is utilized.
- vii. To enhance the environment of project site, greenbelt, as proposed in the EIA/EMP report (December, 2016) shall be developed. The proposed greenbelt development in all the areas of project with 32 different plant species shall be undertaken in consultation with State Horticulture Department, Government of Karnataka. The allocated grant of Rs. 1216 lakhs for this purpose should be fully utilized and not be diverted for any other purpose.
- viii. The proposed Agro-forestry development in the command area with 22.55 lakh saplings in consultation with State Forest Department, Government of Karnataka should strictly adhered. The allocated amount of Rs. 250.51 lakhs for this purpose should be fully utilized and not to be diverted for any other purpose.
- ix. The fishery development and management plan, as proposed in the EIA/EMP (December, 2016) for the conservation fish in river shall be developed. As proposed in the programme around 10 lakh fingerlings comprised of major carp shall be introduced in Krishna river above the project site & in and around the project site shall be implemented in consultation State Fisheries Department. The allocated grant of Rs. 30 lakhs should be utilized fully and not to be diverted for any other purpose.
- x. Water User Association's (WUAs) / Co-operative shall be formed and involvement of the whole community for disciplined use of available waters shall be ensured.
- xi. Conjunctive use of surface water shall be planned to check water logging as well as to increase productivity.
- xii. Water quality monitoring shall be carried out in the 5 km stretch in the upstream and downstream of lift points of Krishna River during construction phase for drinking water quality standards at suitable locations on bi-monthly basis and a copy of the test reports to be submitted to Regional Office, MoEF&CC, Bengaluru on six monthly basis. Further, aquatic ecology studies to assess the health of the aquatic biota to be conducted on a yearly basis during the period of construction.
- xiii. The equipment likely to generate high noise levels during the construction period or otherwise shall meet the ambient noise level standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000, as amended in 2010 under the Environment Protection Act (EPA), 1986. Ambient Noise level monitoring shall be conducted on a monthly basis during the period of construction at suitable locations and copy of the test reports to be submitted to Regional Office, MoEF & CC, Bengaluru on six monthly basis.

- xiv. The On Farm Development (OFD) works shall be completed and WUAs (Water User Associations) shall be made functional before commencement of irrigation.
- xv. Occurrence of stagnant pools/slow moving water channels during construction and operation of the project providing breeding source for vector mosquitoes and other parasites. The river should be properly channelized so that no small pools and puddles are allowed to be formed. Even after taking precaution, due to un-foreseen situations, breeding of mosquito and resultant malaria or mosquito borne diseases can increase. If such a situation arises, It will be the responsibility of project authorities to take all steps i.e. residual insecticidal spray in all the project area and surrounding 3 km area keeping the flight range of mosquitoes in consideration.
- xvi. Periodical soil health shall be tested in command area during operation phase to ensure the maintenance of the soil fertility.
- xvii. Any other clearance from any other organization/department if required should be obtained.
- xviii. Solid waste management should be planned out in detail. Land filling of plastic waste shall be avoided and instead proposal for various uses be identified.
- xix. Skill mapping of the human resources available around the project area is to be undertaken and on the basis of the data generated, various options of their livelihood be prepared keeping in view of the market need.

Part - B. General Conditions:

- i. Adequate arrangements for providing free fuel like LPG shall be made at the project cost for the labour engaged in the construction work so that indiscriminate felling of trees is prevented.
- ii. Medical facilities as well as recreational facilities shall also be provided to the labourers.
- iii. The labourers to be engaged for construction works shall be thoroughly examined by health personnel and adequately treated before issuing them work permit.
- iv. Water sprinkling arrangements shall be made to suppress the fugitive emissions and on monthly basis, ambient air quality to be monitored during the period of construction.
- v. Potable drinking water and proper sanitary facilities shall be provided for the labour force.
- vi. Restoration of construction area including dumping sites of excavated materials shall be ensured by leveling, filling up of borrow pits, landscaping etc. The area should be properly treated with suitable plantation.
- vii. Environmental parameters shall be monitored and six monthly monitoring reports shall be submitted to the concerned Regional Office of the Ministry, Bengaluru.

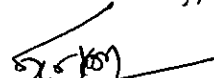
7. The Project Proponent shall provide full cooperation and all required documents / data to the Officials from concerned Regional Office of the Ministry, Bengaluru who would be monitoring the implementation of environmental safeguards.
8. The responsibility of implementation of environmental safeguards and carrying out environmental monitoring rests fully with M/s. Vishweshwaraya Jala Nigama Limited, Government of Karnataka.
9. Besides the above stated conditions, the Project Proponent shall also implement all environmental safeguards, as proposed in the EIA/EMP report and other reports from time to time. The Regional Office of the Ministry, Bengaluru shall monitor implementation of EMP at regular intervals.
10. The Environmental Management Plan (EMP) shall be strictly adhered to. The total cost of implementation of mitigation measures as per EMP is Rs 43,080.01 lakhs during construction phase and 219.68 lakhs during operation phase. In case of revision of the project cost or due to price level change, the cost of EMP shall also be updated proportionately.
11. In case of change in the scope of the project, the same shall be intimated to the Ministry and fresh approval, if required, shall be taken from the Ministry.
12. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary and to take action including revoking of the clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time-bound and satisfactory manner.
13. This clearance letter is valid for a period of 10 years from the date of issue of this letter for completion of the project.
14. Based on the site visit of the project RO, MoEF & CC, Bangalore on 16-19th February, 2017, a certified copy of the point-wise EC conditions of the project was issued. The status of compliance conditions is reported to be satisfactory.
15. A copy of the clearance letter shall be marked to concerned Panchayat/ Zilla Parishad/Municipal Corporation, Urban local body and local NGO, if any, from whom any suggestion/representations were received while processing the proposal. The clearance letter shall also be put on website by the project proponent.
16. State Pollution Control Board / Committee shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's / Tehsildar's Office for 30 days.
17. The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment, Forest & Climate Change at <http://www.moef.nic.in>.

18. 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.

19. The project proponent shall also submit six monthly reports on the status of compliance of stipulated EC conditions including the results of monthly monitored data (both in hard copies as well as by email) to the respective Regional Office of MoEF & CC, Bengaluru.

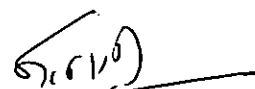
20. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days from the date of issue, as prescribed under Section-16 of the National Green Tribunal Act, 2010.

Yours faithfully,


(S. Kerketta)
Director

Copy to:

1. The Secretary, Ministry of Water Resources, RD & GR, Shram Shakti, Bhawan, Rafi Marg, New Delhi 1.
2. The Principal Secretary (WRD), Government of Karnataka, Vidhana Soudha, Bengaluru-560 001.
3. The Secretary, Department of Ecology and Environment, Government of Karnataka, Floor, 4th Gate, M.S Building, Bengaluru -560 001
4. The Chief Engineer, Project Appraisal Directorate, Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi-110066.
5. The Addl. PCCF (Central), Regional Office (SR), Ministry of Environment, Forest & Climate Change, Kendriya Sadan, E&F Block, Koramangala, Bengaluru-560 034
6. The Member Secretary, Karnataka State Pollution Control Board, Parisara Bhawan, Church Street, Bengaluru — 560 001.
7. PPS to JS (GB)/Director (SKK)/Scientist-C(SP)
8. NIC Cell — with a request for uploading in MoEF & CC's website.
9. Guard file/Notice Board.


(S. Kerketta)
Director