

Subject:- Comments/Remarks on behalf of Irrigation & Water Resources Department, Haryana on report of the Joint Committee in compliance of Hon'ble NGT order dated 25.05.2023 in OA No. 581 of 2022, Vikas Kumar Vs State of Haryana & Ors.

In the context of subject cited above, it is submitted that report of the joint committee has been received on dt. 30.09.2023 through e-mail. A hearing was held on dt. 05.10.2023 in court of Hon'ble NGT and next date of hearing is on 19.10.2023 for submitting comments/remarks on this report of joint committee.

It is hereby submitted that the approved policy of Govt. of Haryana regarding temporary crossings on river Yamuna has been framed after detailed deliberation and it is an effective policy in this matter. Because, installation of circular hume pipes neither cause any damage to natural flow of river Yamuna nor divert the natural path of Yamuna. Moreover, hume pipes may carry maximum discharge and do not affect the environment and does not cause any hindrance in aquatic movement.

Hon'ble NGT vide its order dated 25.5.2023 constituted a Joint Committee comprising of

- (1) Dr. Mukesh Kumar Sinha, Chairperson, Godavari River Management Board as Chairman;
- (2) Representatives of Secretaries MoEF&CC and MOJS not below the rank of Joint Secretary/ Director as Members and
- (3) The Member Secretary, CPCB as Member Secretary.

It was also stipulated that the Joint Committee shall be entitled to seek/receive response from the applicant, project proponent, concerned departments of the Haryana Government and also to associate any other expert with it as may be considered necessary, undertake visits to the sites where bridges have been constructed/were constructed, carry out the requisite study and submit its report regarding the following aspects;

- a) Whether any mining activity be allowed across different streams of river, if more than one at any place and any temporary bridge be allowed to be constructed for facilitating extraction/transportation of the mined material and other allied activities;

**Birender Singh
HOD (Special) & PD
HIRMI, Hry., Panchkula**

- b) Whether permitting such mining activity and construction of such temporary bridge has any adverse environmental impact on the river morphology, ecology, discharge and aquatic life, etc.;
- c) Whether construction of any such temporary bridge across river for facilitating mining/allied activities be completely prohibited or permitted by imposing conditions to ensure minimum impact on river ecology and aquatic life, and
- d) In case construction of any such temporary bridge is to be kept in the category of regulated activities, by which authority and in which manner the aspects of grant of permission ought to be dealt with.

The report of the joint committee has been studied carefully and the following remarks/comments are here by submitted for kind consideration:-

4. (a) Whether any mining activity be allowed across different streams of river, if more than one at any place and any temporary bridge be allowed to be constructed for facilitating extraction/transportation of the mined material and other allied activities;

There are adverse impacts of sand mining but considering ban would result into illegal sand mining and destruction of hills/mountains to obtain construction material, which would be far more damaging. The Joint Committee submits that mining activity be allowed with certain regulatory measures. During lean season, river may flow in different streams with islands in between. Sand mining near the banks, especially towards convex bends would attract flood flows causing bank erosions, which needs to be avoided. Naturally access either through river bed/boats needs to be provided to approach islands or sand mining area. The excavation/transportation of mined material may be resorted to with different methods, but most efficient, cost effective and less environment damaging would be through temporary bridges with following regulatory measures:

- (i) Construction of temporary bridge should not restrict waterways and natural streams and entire range of expected river flows can flow uninterruptedly without any constriction.
- (i) Temporary bridges must be removed before monsoon so that flood flows uninterrupted and sections be stacked away from river banks
- (iii) Temporary bridge may be preferably built using removable box sections so that integrity of natural river bed can remain intact and aquatic movement across remain uninterrupted.


 Birender Singh
 HOD (Special) & PD
 HIRMI, Hry., Panchkula

(iv) Absolute riverbank/ riverbed/sand mining levels be determined and periodically monitored to ensure no excessive sand mining.

Remarks by IWRD, Haryana- It has been also recommended by the committee that the temporary bridges for crossings may be allowed on River Yamuna.

As per point (iii), regarding using removable box sections, it is hereby submitted that (a) Vehicular Load bridges using pipes sections for temporary bridges is better by using Circular pipes as thinner sections can distribute load through Arch effect whereas in case of rectangular box sections, higher thickness will be required for same vehicular load as it distributes load through bending action. So using Circular pipes will be much lighter and more economical for use in temporary bridges. (b) Neither the construction of box sections is easy nor these are easily available in market. Also laying and removal of these removal box sections will be cumbersome task and cost is also very high as compared to circular hume pipes. Hydraulically, water passes through hume pipes easily and without creating any obstructions because circular pipes have better fluid flow efficiency compared to square/rectangular pipes. The reason behind it is that the fluid flows more smoothly through round pipes due to their circular cross-sections, which minimizes turbulence and eddy currents. Sharp corners of square tubes can cause increased turbulence, leading to energy losses and decreased flow efficiency. Thus, using hume pipes for temporary crossings is more feasible and practical.

4. (b) Whether permitting such mining activity and construction of such temporary bridge has any adverse environmental impact on the river morphology, ecology, discharge and aquatic life, etc.;

Yes. But as explained in part 4(a) above non permitting would result into more damaging scenario. More detailed study on the impact of temporary bridge is required and Hon'ble NGT may consider directing State Government instituting a detailed study on impact of temporary bridges for sand mining with following Terms of References:

- (i) Collection of Baseline data on physical regime of the river (river discharge, flow depth/velocity, sediment load, aquatic flora and fauna, etc.) during pre- monsoon (April-May)
- (ii) Construction of temporary bridge where valid license/permission hold good with half width with circular hume pipe, another one half width removable box sections to study hindrances in aquatic movement and river regime (river discharge, flow depth/velocity, sediment load) under two scenarios.
- (iii) Repeat collection of data mentioned in part 4(b) (i) during post monsoon season (November-December) to see permanent impact, if any.


Birender Singh
 HOD (Special) & PD
 HIRMI, Hry., Panchkula

(iv) Evaluate impacts on river regime and on aquatic flora/fauna.

The above study may be carried out through reputed National Institutes. The study would provide authentic data/evidence to review existing guidelines for construction of temporary bridges for sand mining. State Governments may review their existing policies accordingly.

Remarks by IWRD, Haryana:- It is here by submitted that Irrigation department agree for detailed study on impact of temporary bridges for sand mining through reputed institutes like NIT Kurukshetra, IIT Roorkee or equivalent as per directions of Hon'ble NGT.

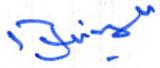
4.(c) Whether construction of any such temporary bridge across river for facilitating mining/allied activities be completely prohibited or permitted by imposing conditions to ensure minimum impact on river ecology and aquatic life, and

As explained in part 4(a) above, during lean season, river may flow in different streams with islands in between. These islands (aggraded due to sand deposition and being away from the riverbanks) are most potential sand mining areas. Access may be evolved to approach to avoid river stream channel crossing. In the event of infeasible access otherwise, access either temporary bridge may need to be provided to approach islands and/or sand mining area for transportation of mined material taking adequate environment safeguard measures.

Remarks by IWRD, Haryana:- Irrigation Department is agree with the recommendation of committee and will follow the guidelines of Hon'ble NGT.

4.(d) In case construction of any such temporary bridge is to be kept in the category of regulated activities, by which authority and in which manner the aspects of grant of permission ought to be dealt with.

As explained above, construction of such temporary bridges should be considered as regulated activities and be considered along with appraisal of sand mining proposal(s). Since sand mining is in the domain of the State Governments, State Environment Appraisal Committee (with representative from irrigation department to beco-opted, if not otherwise) should be the authority, which should consider the sand mining proposal along with river maps with absolute levels ensuring sand sustainability without river aggradations/degradation, that is, increase or decrease in natural river bed levels. Procedure prescribed in Sustainable Sand Mining Management Guidelines, 2016 and Enforcement & Monitoring Guidelines for Sand Mining, 2020 of Ministry of Environment, Forest & Climate Change may need to be adopted.


Birender Singh
 HOD (Special) & PD
 HIRMI, Hry., Panchkula

Remarks by IWRD, Haryana:-Irrigation Department is agree with the recommendation of committee and will follow the guidelines of Hon'ble NGT.

6. General Recommendation:

It is proposed that sand mining proposals be regulated as under,

A. Permitting Mining Activities/River management Aspects:

- (1) State Governments (may in association with Central Water Commission and using remote sensing/drone technology) should monitor river profiles and cross sections at regular intervals periodically to identify areas of aggradation /deposition where mining can be allowed;
- (ii) If possible and feasible, sands deposited in reservoirs and in confluence of tributaries and main rivers be considered first for mining before resorting to in stream sand mining;
- (iii) Mining in areas of bank erosion and proximity to environmental vulnerable areas/sanctuaries/reserve forests, infrastructural structures and installations should be prohibited.
- (iv) Annual rate of replenishment and allowing time for replenishment after mining in area be calculated.
- (v) On the basis of annual rate of replenishment and areas of degradation/aggradations, sand mining plans be prepared covering ways of scientific and systematic mining including provision for access through temporary bridge or otherwise be identified.
- (vi) A bench mark (BM) with respect to mean sea level (MSL) should be made essential to in stream mining channel reaches (MCR). Below which no mining shall be allowed.
- (vii) Permanent gauging facilities (for discharge and sediment both) should be made compulsory for the sites having excessive mining in consultation with Central Water Commission or any competent State Agency.
- (viii) Implementing safeguards for checking illegal and indiscrete mining including periodic inspections.

Birender Singh
HOD (Special) & PD
HIRMI, Hry., Panchkula

B. Construction of Temporary Bridges:

(1) State Government should institute a detailed study on impact of temporary bridges for sand mining with Terms of References mentioned in part 4(b) above. State Governments may review their existing policies accordingly.

(ii) Removable box sections may be used to maintain integrity of the natural river bed and full water way.

The natural resources must be utilized in environment friendly manner in scientific and systematic way and with the objective of sustainable development the policy on the subject should have provisions for protection of environment & ecology. These factors can be accounted for in a most efficient manner at district level, though river profiling may be carried out at State level for the entire river/tributary length. These should be carried out by the State Government at regular intervals, say once in five years. The sustainable mining plan needs to be dynamic.

The Joint Committee presents its compliments to Central Pollution Control Board and State Government of Haryana Department of Irrigation and Department of Geology and Mines for extending full cooperation and facilitating fruitful discussions and the site visits. The Joint Committee also extend its gratitude towards Experts, namely, Dr. S.R. Wate and Dr. R.G. Patil for providing valuable Guidance in the matter.

Remarks by IWRD, Haryana:- I&WR Department has already taken cross sections at every 1000 m throughout the length of Yamuna in Haryana as per directions of CWC and will submit report within 15 days to CWC. CWC will analyze all the technical aspects and will prepare river profile etc., and I&WRD will follow the directions/guidelines given by CWC regarding Yamuna River. Irrigation department will follow the recommendations related to this department as per orders of Hon'ble NGT.

Submitted for kind consideration please.


Birender Singh
HOD (Special) & PD
HIRM, Hry., Panchkula