

Manthan Adhyayan Kendra
मंथन अध्ययन केंद्र

29 April 2020

To,
Secretary,
Ministry of Environment, Forest and Climate Change,
Indira Paryavaran Bhawan,
Jor Bagh Road,
Aliganj,
New Delhi-110 003

SENT BY: EMAIL to eia2020-moefcc@gov.in

Subject: Comments on the Draft Environment Impact Assessment Notification, 2020
PART 1 of 3: "Comments specific to provisions related to Inland Waterways."

Dear Sir,

Please find enclosed the PART 1 of 3 part comments by Manthan Adhyayan Kendra, Pune on the Draft Environment Impact Assessment Notification, 2020. Manthan Adhyayan Kendra is an organization researching and monitoring issues of water, environment and development.

With this email / letter, we are enclosing PART 1 of our comments, namely "Comments specific to provisions related to Inland Waterways."

The other parts will be sent separately. The other two parts are:

Part 2: Comments related to restructuring of the EIA/EC process and amendments needed in Draft 2020 Notification for the same.

Part 3: Additional comments on specific clauses / section of the Draft Notification 2020

We hope these comments will be considered and incorporated in the final Notification. We request you to please send us acknowledgement of the receipt of these comments.

Sincerely,



Shripad Dharmadhikary,
Coordinator,
Manthan Adhyayan Kendra,
Pune

Comments from Manthan Adhyayan Kendra, Pune on Draft Environment Impact Assessment Notification, 2020

PART 1 of 3: Comments Specific to provisions for Inland Waterways in the EIA Notification, 2020 (Draft)

1. Definition of Capital Dredging –definition needs to be amended

Provision in EIA Notification, 2020 Draft: In the EIA Notification, 2020 Draft at Clause 3 (8), the definition of ‘Capital Dredging’ is stated as “means one time process involving removal of virgin material from the sea bed to create, or deepen a shipping channel in order to serve larger ships. This includes dredging activity inside and outside the ports or harbors and channels;”

Reasoning for suggested change: Capital dredging also takes place in the river beds. In the EIA Notification, 2020 draft, the definition implies that capital dredging is only a sea/marine process whereas capital dredging has taken place/will take place for the development of many of the inland waterways projects. Detailed Project Reports of the National Waterway -16 (Barak) and National Waterway-5 (in Odisha), for instance, specifically mention Capital Dredging as an intervention to provide adequate depth and width for the proposed waterways. Capital dredging will also be required for terminals and riverine ports for inland waterways since development of inland waterways would require construction of river ports and terminals, and many of the Indian rivers would not have the required adequate depth and width naturally. Further, the definition in the abovementioned provision in the EIA Notification, 2020 draft shows capital dredging as a onetime process, whereas capital dredging in other countries, for example New Zealand, is defined as an infrequent process¹, which means it can take place more than once. Similar provision is there in the definition provided by UK Marine Special Areas of Conservation² which refer to capital dredging as a process which takes places ‘*usually but not always the first time.*’ Further this definition by UK Marine SACs posits capital dredging as ‘*excavation that generally (emphasis supplied) takes place in virgin material that has become consolidated under the existing hydraulic regime.*’

Our recommendations: On the basis of the above reasoning, and in the interest of environment, we recommend definition of Capital dredging to be amended as follows: Capital Dredging: “means an infrequent, usually but not always first time, process involving removal of sediment, which is generally virgin material from the sea bed or

¹ Source: Environment Canterbury, New Zealand, <https://ecan.govt.nz/publications/General/lhwig-capital-maintenance-dredging-consents-factsheet-0812.pdf>, information provided by Ministry of Shipping on 25.01.2018 in response to RTI Application by Manthan Adhyayan Kendra.

² Source: UK Marine Special Areas of Conservation http://ukmpa.marinebiodiversity.org/uk_sacs/activities/ports/ph5_0_2.htm

river bed to create, or deepen a shipping channel in order to serve larger ships. This includes dredging activity inside and outside the ports or harbours, channels, river ports and terminals ;”

2. Category of Inland Waterways Projects as B2 in the Schedule–Inland Waterways need to be listed as Category A project

Provision in EIA Notification, 2020 Draft: Refer item 37 Column 5 of the Schedule to the EIA 2020, Notification draft, ‘B2 – All projects in respect of inland waterways’

Reasoning for suggested change:

MoEFCC’s Own Expert Committee Recommended Waterways as Category A

We want to direct your attention to the recommendations of the MoEFCC’s own Expert Committee³ through the minutes of the meeting held on 18.05.2017 in the Ministry of Environment, Forest and Climate Change for streamlining environmental procedures for inland waterways projects. Two categorical recommendations were given by the said Expert Committee after detailed deliberations during the meeting. These are -

i. In order to bring more clarity on the applicability of EIA Notification, 2006 for inland waterways projects, the Expert Committee recommended amending the EIA Notification, 2006 to include ‘Inland Waterways, Jetties, and Multi-modal terminals’ under the list of items requiring prior *environmental clearance* (emphasis supplied).

ii. With regards to the Jal Marg Vikas Project (National Waterway-1), the Expert Committee clarified that this project is covered under the EIA Notification, 2006 and be appraised as Category A project. The Expert Committee stated that,

“..in the interest of such project and their sustenance, both during the time of creation or operation for longer duration with environmental and social viability of the project, (this project) must be included in the EIA Notification, 2006 and be appraised as ‘Category A’ project with reference to specific issues addressing the river as living entity, changing hydrology, riparian rights, transboundary impacts, protection of banks, and floodplain zones of the river systems”

Appraisal of Several Waterways Begun as Category A

Further, Terms of References were provided by the Ministry of Environment for the National Waterway -5, National Waterway -4, National Waterway -53, National

³ “Minutes of Meeting of Expert Committee for streamlining procedures including examination and recommendation on various technical issues like review of projects/activities for its inclusion under EIA Notification, 2006, categorization of Category ‘B’ projects/activities into Category ‘B1’ & ‘B2’ under EIA notification, 2006, review of classification of projects/activities into ‘A’ & ‘B’ and General conditions as contained in the aforesaid Notification, held on 18.05.2017,” (Headed by Dr. Wate)

Waterway-27, 68, 111 with specific and general conditions. In many of these cases Public Hearing was mandatory.

Categorisation as B2 Will Lead to Large Impacts that are Not Assessed

Categorization of inland waterways projects in category B2 has significant ramification on the already stressed rivers and estuaries of the country. With the implementation of National Waterways Act 2016, 111 National Waterways have been declared on many rivers, estuaries, canals, and backwaters of India. In addition to these National Waterways, other inland waterways projects such as Loktak Inland Waterways Project are taking shape in India.

With this provision in the EIA Notification, 2020 draft, applications for waterways will only require environmental permission as Category B2 projects without any appraisal, and this permission will be granted to them without any meaningful scrutiny within 15 days. No detailed Environment Impact Assessment will be done for them; Environmental Permission will be given with only the submission of environmental management plan. An EMP for projects that are so complex and have such wide impacts can hardly be prepared without an EIA.

Waterways Have Massive Environmental Impacts

The categorization of inland waterways in the B2 category in the EIA notification, 2020 draft is presumably done on the understanding that waterways have little adverse impact on the environment. This is far from truth because the creation, maintenance and operation of inland waterways has huge adverse environmental and social impacts on the morphology, habitats, ecology, flora and fauna of rivers and other water-bodies, and on livelihoods of communities depending on them. This is clearly reflected in the recommendations of the abovementioned Expert Committee of the Ministry.

Waterways involve interventions like dredging the river bed, a highly intrusive activity that can damage the river bed habitats, and river straightening and training works, river protection works, all leading to severe impacts on the river habitat and ecology. Dredging can release toxic pollutants that have previously settled on river beds, as well as create noise and turbidity. Operation of vessels leads to leakage of oil and lubricants, heightened noise and increase in turbidity, all with serious impacts on the flora and fauna. Dust pollution from bulk cargo to be carried on these waterways like coal, fly ash, and other ores also poses risks for the riverine ecology. Construction of facilities on the river banks like terminals, jetties, depots etc. would also lead to severe impacts. Accidents of vessels carrying hazardous cargo pose additional risks⁴.

⁴ From “Open Letter to Ministry of Environment, Forests and Climate Change, urging to Make Environmental Clearance Process Mandatory for Inland Waterways”, written by more than 50 experts to the MoEFCC on 1 Jan 2019 <http://www.manthan-india.org/wp-content/uploads/2019/01/Letter-to-MoEF-Dec-2018-FINAL.pdf>

Further, many of the river stretches on which inland waterways are proposed pass through eco-sensitive zones and protected areas. Movement of barges carrying bulk and hazardous goods such as coal, fly ash, chemicals, fertilizers, cement, etc. through such areas make these stretches especially susceptible to pollution and contamination due to leakage, spillages and accidents. Recent accidents of fly ash barges in the Hooghly and Muriganga Rivers have made it clear that movement of such commodities in bulk through the rivers should be strictly regulated.

Recent scientific study by Mayukh Dey et al. (2019)⁵ has brought to the fore the adverse impacts of such movements on the Gangetic Dolphins due to the impact of noise pollution. Night navigation aids would further lead to impacts which are yet to be studied due to exposure of artificial light.

Similarly, adverse social impacts are also associated with the inland waterways projects. These pertain to the emerging issues of land acquisition for terminals for farmers; damages to fishing nets, and loss of income due to adverse impacts on fish population and other aquatic biodiversity for small scale fishworkers; and loss of livelihood and income for small boat operators as cruises start plying on the waterways.

Members of Manthan during the field visit to operational stretches of National Waterway-1 in West Bengal were told by the local fishworkers that dredged material is disposed on their fishing channels. Many of the fishworkers suffer from damages to their fishing nets as the barges often move outside the designated navigation channel. Similarly in the Dharamtar creek of National Waterway-10, local population has to face daily battle between the dredgers and the barges.

Climate related Changes and increased anthropogenic pressure on the fresh water systems is only bound to make these impacts even worse for the environment, aquatic diversity as well as for the people directly dependent on the rivers.

First of a Kind Projects Need More Baseline Study, Higher Scrutiny

Majority of the proposed inland waterways projects are first of their kind in the country with adverse social and environmental impacts. This necessitates proper environmental impact assessment with baseline study for each of these projects on the rivers which represent an ecosystem in themselves. Categorizing inland waterways projects in Category B2 would result in a loss of opportunity in creating the baseline data for each of these waterways which can become a benchmark on assessing the extent of impacts due to the development and maintenance of inland waterways and aid in compliance monitoring. With regards to the adverse social and environmental impacts of the waterways, wider public discourse and public hearing is required to make the

⁵ Dey, Mayukh, Jagdish Krishnaswamy, Tadamichi Morisaka, and Nachiket Kelkar. "Interacting effects of vessel noise and shallow river depth elevate metabolic stress in Ganges river dolphins." *Scientific reports* 9, no. 1 (2019): 1-13.

development and operations on inland waterways more inclusive and sustainable.

Our recommendations: Inland Waterways projects in entirety –that is waterways, related infrastructure and all components and activities related to creating, maintaining and operating these waterways (including but not limited to capital and maintenance dredging, river training works, all ancillary infrastructure like terminals, jetties etc.)- be included as Category A projects in the Schedule; strict protocols should be developed for their scoping process; public hearing be made mandatory as livelihoods of people directly dependent on the rivers are at stake.

3. Exemption from prior EC/prior EP for maintenance dredging and dredging of rivers for maintenance, upkeep and disaster management - these exemptions should be withdrawn or explicit clarification should be made that maintenance dredging as part of waterway development and maintenance and operation is excluded from these exemptions

Provision in EIA Notification, 2020 Draft: Refer Clause 26 in the EIA Notification, 2020 draft regarding exception of projects from prior EC or prior EP for sub-clause (7) Dredging and de-silting of dams, reservoirs, weirs, barrages, river, and canals for the purpose of their maintenance, upkeep and disaster management; and (39) Maintenance Dredging

Reasoning for suggested change: Maintenance dredging and dredging especially in rivers is an intrusive mechanical process with serious adverse environmental and social impacts. We want to highlight the observation during the meeting of the reconstituted Expert Appraisal Committee (Thermal Power) held on 14.02.2017 regarding the proposal of amendment in the EC for transport of coal through National Waterway-1 (Farakka Super Thermal Power Project at Farrakka, District Murshidabad, West Bengal by M/s NTPC). The EAC while noting that the continued movement of barge requires maintenance dredging of the river channel stated that,

“Dredging, even if in some stretches and limited in frequency, involves removal of 50cm to 1m of the river bottom causing disturbance to the river bottom.”

Hence, this EAC asked for the studies to be carried out by reputed research institute on the impacts of maintenance dredging.

Many of these impacts, as the literature suggests, can only be ascertained over long term studies. Numerous rivers and their tributaries are to be utilised for navigation through inland waterways projects. This will require regular maintenance of navigation channels by maintenance dredging. Hence, on the basis of precautionary principle, both these sub-clause (7) and (39) should not be exempted from rigorous legally binding protocol of impact assessment and clearance.

Amongst the serious concerns on maintenance dredging, increase in turbidity and hence reduction in the penetration of sunlight can cause significant short term changes in the riverine ecosystem. Many of the river stretches on which the inland waterways are proposed are classified as critically polluted river stretches. Maintenance dredging in the river stretches can lead to further spread of the settled pollutants including heavy metals in the longer and wider stretches of the rivers.

Since many of the river stretches are already under pressure due to anthropogenic activities, dredged material could contain potential contaminants. Strategic measures and protocols are required to dispose the dredged material. In the absence of strict regulations, many negative externalities can emerge due to the disposal of dredged material.

In a fairly recent scientific paper by Rehitha et al. (2017)⁶, it is established that dredged stretches in the Cochin estuary are characterized by 'lower faunal density, biomass, and diversity and sustained distinct benthic faunal communities,' when compared with the non-dredging sites. This is however, findings of one paper; dredging activities could cause significant specific varied changes which can vary in the different rivers.

Further, for seeking exemption from the process of Environmental Clearance, attempt has been made in the past to re-designate 'capital dredging' to 'maintenance dredging' on-paper for National Waterway-5. Blanket exemption to maintenance dredging and dredging for maintenance, upkeep and disaster management in the rivers for navigation purposes would further lead to such changes on paper to seek exemption from the scrutiny of environmental impacts.

Our recommendations: Exemption from prior environmental clearance as given in the EIA Notification, 2020 draft to "maintenance dredging" and "Dredging and de-silting of dams, reservoirs, weirs, barrages, river, and canals for the purpose of their maintenance, upkeep and disaster management;" should be withdrawn, OR an explicit clarification be introduced that maintenance dredging as part of waterway development and maintenance and operation is excluded from these exemptions.

Summary of our recommendations:

- Definition of Capital dredging as given in the EIA Notification, 2020 draft to be amended as follows:
Capital Dredging: "means an infrequent, usually but not always first time, process involving removal of sediment, which is generally virgin material from the sea bed or river bed to create, or deepen a shipping channel in order

⁶ Rehitha, T. V., N. Ullas, G. Vineetha, P. Y. Benny, N. V. Madhu, and C. Revichandran. "Impact of maintenance dredging on macrobenthic community structure of a tropical estuary." *Ocean & Coastal Management* 144 (2017): 71-82.

to serve larger ships. This includes dredging activity inside and outside the ports or harbours, channels, river ports and terminals ;”

- Inland Waterways projects in entirety –that is waterways, related infrastructure and all components and activities related to creating, maintaining and operating these waterways (including but not limited to capital and maintenance dredging, river training works, all ancillary infrastructure like terminals, jetties etc.) - be included as Category A projects in the Schedule; strict protocols should be developed for their scoping process; public hearing be made mandatory as livelihoods of people directly dependent on the rivers are at stake.
- Exemption from prior environmental clearance as given in the EIA Notification, 2020 draft to “maintenance dredging” and “Dredging and de-silting of dams, reservoirs, weirs, barrages, river, and canals for the purpose of their maintenance, upkeep and disaster management;” should be withdrawn, OR an explicit clarification be introduced that maintenance dredging as part of waterway development and maintenance and operation is excluded from these exemptions.

Comments by

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(Part 1 of 3)

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