Date: 06-06-2023

To
Shri Amrit Lal Meena, IAS
Secretary
Ministry of Coal
Shastri Bhawan, New Delhi-110001

Sent by email to hitlar.singh85@nic.in

Subject: Comments on the Integrated Coal Logistics Plan for Efficient Coal Evacuation 2023(draft)

Dear Sir,

Please find enclosed the comments by Manthan Adhyayan Kendra, Pune on the Draft Integrated Coal Logistics Plan for Efficient Coal Evacuation 2023 dated 23.05.2023.

Manthan Adhyayan Kendra is an organization researching and monitoring issues of water, environment and development. We have been studying the inland waterways programme for the past many years. Our comments are based on the inland waterways component mentioned in the draft document. We hope these comments will be considered and incorporated in the final Plan. We request you to please send us acknowledgement of the receipt of these comments.

Sincerely,

Avli Verma
Researcher
Manthan Adhyayan Kendra

Comments on the The Integrated Coal Logistics Plan for Efficient Coal Evacuation (Draft) 2023 by Manthan Adhyayan Kendra

The Integrated Coal Logistics Plan for Efficient Coal Evacuation 2023 mentions the inland waterways -specifically National Waterway -5 (Brahmani and Kharsua rivers), National Waterway -64 (Mahanadi) and the Indo Bangladesh Protocol route as a mode for coal transportation.

Manthan Adhyayan Kendra, an independent non-profit research centre, has been studying the inland waterways in the country including the transboundary waterways movement on the Indo Bangladesh Protocol route for the last seven years. As the movement of coal on inland waterways is proposed through the National Waterway -5 and National Waterway -64 in Odisha and on the Indo Bangladesh Protocol route, we would like to direct your attention on the following compilation of concerns and recommendations regarding the development of waterways and movement of barges on the rivers.

1. Safety Risks

Seven capsizes of fly ash laden barges have taken place on the Indo Bangladesh Protocol routes since March 2020. The same route is proposed to be utilized for 15-17 MTPA of coal movement in the Integrated Coal Logistics Plan for Efficient Coal Evacuation 2023. It is therefore to be noted that safety measures on these protocol routes need to be strengthened for movement of cargo such as coal and fly ash.

The Techno-economic Feasibility Report of the Indo Bangladesh Protocol route under the National Waterway -97 (Sundarbans Waterways) on the website of the Inland Waterways Authority of India notes that, "Movement of barges on the rivers also pose a risk of accidents due to collisions, grounding, overtaking, poor visibility, excessive gross tonnage and barging into permanent structures like bridges. The barges may also pose an environmental hazard risk such as oil spill, leakage of hazardous material etc." Further, it is also mentioned in the same report that Current barge operations are not of desired specification and cause ecological degradation (operate on diesel) and noise pollution.

Further, the proceedings of these capsized fly ash barges case (OA 64/2020, Eastern Bench) in the National Green Tribunal also mention the impacts of cyclones and rough weather on the movement of barges on the Indo bangladesh Protocol routes in causing navigational obstructions leading to accidents and capsize of vessels. The Information obtained by Manthan using the RTI Act in 2020 reveals the delays and difficulties in salvaging the sunken barges and due to the cyclones in 2020.

The recommendations of the various authorities like the Syama Prasad Mookerjee Port Trust, West Bengal Pollution Control Board and the Committee set up by the National Green Tribunal in the same case deliberating on the fly ash barge cases need to be implemented considered before proceeding on the coal movement through inland waterways.These include
a) Comprehensive ElA report (including short/long term impact of such accidents) on the National Waterway-97
b) Barges should be adequately certified to withstand the strong tidal current of 4 to 6 knots and

norwesters being frequently experienced in Hooghly river, with respect to its build, engine power, anchors, mooring arrangements etc.
c) Barges plying the Indo- Bangla Protocol route, be mandatorily asked to have AIS (Automatic Identification Systems) Transponders, (at least Type-B), fitted on board, alongwith a good Marine VHF for communication, so that they can be tracked and monitored by the Ports VTMS system, for safe navigation.

The Central Pollution Control Board's Guidelines for loading, unloading and nuisance free transportation of all types of fly ash, including bottom ash etc. generated by Thermal Power Stations 2013 states a provision of transportation of fly ash through dedicated boats and barges which should only carry fly ash. Similar Provisions should also be evolved for barges for coal transportation.

The Techno-economic Feasibility Report of the Indo Bangladesh Protocol route under the National Waterway -97 (Sundarbans Waterways) also recommends the government and the private operators to take the prerogative of setting up checks and jurisdiction in place to ensure the adherence of external contracts to stipulated quality and timelines. It states that the environmental risk can be mitigated through safer navigation, safer loading and unloading operations and improved training of inland vessel operators.

These safety protocols should be made applicable to other inland waterways also where coal movement is proposed and ongoing.

2. Impacts due to maintenance dredging

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 a reputed research institute on the impacts of maintenance dredging.

It is important to note here that development of National Waterway -5 in Odisha will not only require periodic maintenance dredging but also 16 Mcum of Capital dredging for the entire NW-5 project as mentioned in the TOR letter granted by the Ministry of Environment, Forest and Climate Change for the development of NW-5 on 12th January 2015. Along with dredging and excavation in tidal and non-tidal reaches of the rivers, the NW-5, according to the abovementioned TOR letter, would also require dismantling and reconstruction of two barrages with navigation locks at Sujanpur and Jokadia, Bank Protection Works with widening of narrow stretches, construction of terminals, storage facilities, construction of connecting roads, etc.

Techno-economic Feasibility Report of the Indo Bangladesh Protocol route under the National Waterway -97 (Sundarbans Waterways) mentions that, "the reclamation of land from the waterway and dredging of the sediments might affect the flora and fauna in the region and might affect the structural stability of the

area." In terms of mitigation measures, the report suggests a detailed study including sediment transport, siltation and environmental impact assessment needs to be carried out.

3. Adverse Impacts on biodiversity rich areas and Protected Areas

The impacts of these interventions should be carefully assessed as the part of NW-5 also falls under the CRZ area. The dredging and other activities including the movement of coal laden barges will also be needed in the estuarine stretches which are the most dynamic, productive and biodiversity rich stretches of the river ecosystem. National Waterway-5 is located within 5 km from the boundary of Protected Areas and Eco-sensitive areas. In the above-mentioned TOR letter for NW-5 by the MoEF&CC, it is noted that, "(a)The Bhitarkanika Wildlife Sanctuary is about 1 km from the project site. Kalibhanj Dian Reserved Forest is an island located at the mouth of Dhamra River. The proposed waterway skirts off the Reserved Forest for about a stretch of 9.7 km. This island is a part of Bhitarkanika WildlifeSanctuary. (b)The waterway passes parallel to the boundary of Gahirmatha Marine National Park at a varying distance of 3.0 to 5.0 km on the shore side through the Jambu Creek from the mouth of Hansua River to the mouth of Kharinasi River. (c)Waterway passes through Hatamundia Reserved Forest."

Similarly, the Indo Bangladesh Protocol route is in the vicinity of the ecologically fragile Sundarbans, the largest mangrove forest in the world, which is shared by India and Bangladesh. According to the Techno-economic Feasibility Report of the Indo Bangladesh Protocol route under the National Waterway -97 (Sundarbans Waterways), the Indo Bangladesh Protocol route on the Indian side is under the CRZ-1 category and has presence of various eco-sensitive zones and national conservation areas. The Sundarbans region of West Bengal is also categorised as the Critically Vulnerable Coastal Areas (CVCA) under Environment (Protection) Act, 1986 and has to be managed with the involvement of coastal communities including fisher folk.

4. Impacts on Fisherfolks

The report on 'Impact Assessment of coal transportation through barges on National Waterway -1 along the river Ganga' conducted by ICAR-Central Inland Fisheries Research Institute (CIFRI) in 2017 notes that "Frequent movement of barges along the waterways, although an economical proposition, may exert certain impact on the distribution as well as on well being of aquatic communities in the river stretch, which in turn might affect the fishers and other riparian population, depending directly or indirectly on the goods and services of the river for livelihoods." Further, continuous movement of barges leads to river bank erosion and weakening of the river banks. These changes in the narrow tidal reaches can seriously impact the fish breeding areas. Continuous dredging in the estuarine stretches can also lead to sea water ingress which can have consequences for the agricultural productivity in the region.

Fisher people are doubly affected, as fish populations could be affected due to the dredging activities, water pollution, spillages/leakages while loading/unloading, accidents/collisions etc.; the movement of large vessels often requires restricting or prohibiting access of fisherpeople to their fishing areas. Frequent barge movement could also lead to the tearing apart of nets by barges and other vessels, and necessitates relocation of fishing jetties. The CIFRI report reveals monetary loss faced by the fishers due to coal

transportation: “The fishers largely depend on the fish catch for their daily livelihoods. Disturbance caused by the movement of barges has direct bearing on the fishing operations. Around 38% of the fishers reported loss in fishing time. The average monetary loss per fishermen was found to be Rs. 0.75, 4.35 and 17.63 per incidence of barge(s) movement in lower, middle and upper stretches, respectively.”

The earlier mentioned CIFRI report notes that impacts of barge movement on fish community composition can only be assessed by studying the fish community composition over a longer period of time as the shift in species composition is a slow and gradual process which requires continuous monitoring.

Our Suggestions:

1. Expert Committee of the MoEF&CC (headed by Shri S. R. Wate) in 2017 recommended that EIA Notification 2006 be amended to include the inland waterways projects as projects which attract the utmost scrutiny as Category A projects. The Expert Committee set up by the NGT in the fly ash barge capsizes case (OA 64/2020) also recommended in 2023 a comprehensive EIA exercise for National Waterway -97 (which covers the Indo Bangladesh Protocol route). Therefore, we urge you to implement these recommendations by conducting a Comprehensive ElA report of the waterways development and movement of coal on the barges under the legally binding and time-bound framework available with the EIA Notification, 2006 including the following:

    a) Detailed and Impact Assessment of impacts of waterways and movement of coal barges on the fish population along with the impacts on fishing community.Such assessments must be long-term and continuous monitoring should be a part of the assessments. These could be designed while including and utilizing the traditional knowledge of fisherfolks by involving them in the studies.
    b) Considering the presence of protected areas and for the larger conservation of river ecosystems, a Biodiversity Impact Assessment should be conducted with full participation of the fisherfolk and other coastal communities dependent on River Hooghly under the provisions of Section 36 (4) of the Biological Diversity Act, 2002
    c) detailed study of sediments, siltation including disposal of dredged material

2) We urge that following two recommendations by the Syama Prasad Mookerjee Port Trust, Kolkata in the abovementioned NGT case (OA 64/2020, Eastern Zone) regarding the fly ash barge capsizes on the Indo Bangladesh Protocol routes should be implemented:
   a) Certification mechanisms should be evolved to check the sufficiency of barge conditions for safe transportation of coal. Barges should be adequately certified to withstand the strong tidal current of 4 to 6 knots and norwesters being frequently experienced in the Indo Bangladesh Protocol routes, with respect to its build, engine power, anchors, mooring arrangements, etc.

   b) Security installations of AIS (Automatic Identification Systems) Transponders, (at least Type-B), fitted on board, alongwith a good Marine VHF for communication should be mandated in all barges plying on the waterways so as to avoid collisions and minimize the chances of

accidents with other vessels.

3) In the same abovementioned NGT case on fly ash barge capsizes on the Indo Bangladesh Protocol routes, a major gap was revealed with regards to defining clear jurisdiction and establishing clearly defined duties in case of disaster or accidents. Hence, clear jurisdictions should be defined with mechanisms to work on clearly defined duties amongst the regulators and stakeholders.

4) Focus on improved training of inland vessel operators, crew of the vessel and Disaster Management Teams.