Bharat Jhunjhunwala
Lakshmoli, Maletha, Kriti Nagar, UKD 24161
bharatjj@gmail.com; Tel 99171-44777

August 26, 2014

Sushri Uma Bharati, Minister
Ministry of Water Resources
Shram Shakti Bhawan,
Rafi Marg,
New Delhi 110001

Sub: Waterway from Haldia to Allahabad

Madam:

We are much concerned with the proposal to build a series of barrages on the Ganga from Haldia to Allahabad in order to enable movement of large ships for transport. We are attaching herewith a representation outlining the various problems that will arise in this project. Our considered assessment is that the project as conceived presently will impose huge environmental, social and cultural costs on the people of the country. It will also not be economically viable if proper cost-benefit analysis is undertaken after taking on board various environmental costs.

Madam, the NDA Government is committed to rejuvenating the Ganga and re-establishing riverbed connectivity. The proposed project will do the opposite. It will cause further fragmentation.

We request that the Government may scrap this project and explore ways of promoting waterway transport within free flow of the Ganga.

Yours truly,

Bharat Jhunjhunwala

For Ramaswamy Iyer, Gopal Krishna, Samir Mehta, Dinesh Kumar Misra, Anil Prakash, Debasis Ray, Dr.V.N.Sharma, Debadityo Sinha, Shiva Kumar Upadhyaya and Paritosh Tyagi

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August 26, 2014

The Secretary
Ministry of Environment and Forests
Paryavaran Bhawan,
CGO Complex,
Lodhi Road,
New Delhi,110003

Sub: Waterway from Haldia to Allahabad

Sir:

We are much concerned with the proposal to build a series of barrages on the Ganga from Haldia to Allahabad in order to enable movement of large ships for transport. We are attaching herewith a representation outlining the various problems that will arise in this project. Our considered assessment is that the project as conceived presently will impose huge environmental, social and cultural costs on the people of the country. It will also not be economically viable if proper cost-benefit analysis is undertaken after taking on board various environmental costs. We request that the Government may scrap this project and explore ways of promoting waterway transport within free flow of the Ganga.

We request that:

1 Receipt of representation may kindly be acknowledged at **bharatjj@gmail.com**.

2 A personal hearing may kindly be granted to us so that we are fully able to place our concerns before you.

3 A reasoned reply to our submissions may kindly be provided and we may be given an opportunity to respond to the same.

We are constrained to bring to your kind notice that we shall have no option but to approach the Courts if we do not receive any response from you by September 25th, 2014.

Yours truly,

Bharat Jhunjhunwala

For Ramaswamy Iyer, Gopal Krishna, Samir Mehta, Dinesh Kumar Misra, Anil Prakash, Debasis Ray, Dr.V.N.Sharma, Debadityo Sinha, Shiva Kumar Upadhyaya and Paritosh Tyagi

REPRESENTATION BEFORE GOVERNMENT OF INDIA

On

GANGA WATERWAY FROM HALDIA TO ALLAHABAD

By

Bharat Jhunjhunwala, Former Professor, IIM Bengaluru

Ramaswamy Iyer, Former Secretary, GOI

Gopal Krishna, Ganga Bachao Samiti, ToxicsWatch Alliance

Samir Mehta, International Rivers and River Basin Friends

Dinesh Kumar Misra, Barh Mukti Abhiyan, Bihar

Anil Prakash, Ganga Mukti Andolan, Bhagalpur

Debasis Ray, Eco-One BHU, Rajiv Gandhi South Campus, Mirzapur

Dr.V.N.Sharma, Chairman, Jharkhand Vigyan Manch

Debadityo Sinha and Shiva Kumar Upadhyaya, Vindhya Bachao, Mirzapur

Paritosh Tyagi, Former Chairman, Central Pollution Control Board

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Introduction

The Government plans to make about 16 barrages on the Ganga between Haldia and Allahabad for enabling navigation in the river. The main consideration appears to be lowering of transport costs. We welcome the government's resolve in this respect. Our submission is that these Barrages will impose huge environmental and social costs. The objective of cheaper transport can be better achieved by other ways without incurring these costs. In this respect we wish to make the following submissions.

Deposition of Sediments

Sediments will be arrested in the reservoirs behind the Barrages. The level of water in the river will rise as the river will be flowing above the deposited sediments. The water will hit at the banks leading to erosion.

Photo 1: Erosion on Left Bank upstream of Farakka. A village used to exist here.

Erosion will also take place downstream because release of water from the barrages is made suddenly with full opening at a particular gate so that the high velocity pulls the sediments and flushes them downstream. However, this

same high velocity leads to erosion of banks downstream as can be seen at Farakka.

A Report of the Planning Commission accepts that there is a problem of erosion of banks both upstream and downstream of Farakka Barrage (**Annexure 01**).

There is evidence that the Farakka Barrage has caused huge sedimentation, increasing flood intensity and aggravating tendency of bank failures in both Malda (upstream) and Murshidabad (downstream) (**Annexure 3**).

The deposition of sediments and raising of river bed will lead to increased risk of the Ganga outflanking these barrages. The entire area of 1600 km will become devastated in event of this happening in a high flood. The Irrigation Department of West Bengal has expressed such a danger for Farakka: "The continued swing of the river Ganga on the left bank in the district of Malda upstream of the Farakka Barrage is not only eroding densely populated villages, fertile cultivable lands, roads and communication systems and causing floods almost every year, but also holds a possibility of the Farakka barrage being outflanked once the Ganga if allowed to avulse[1] into one of its abandoned paleo-channel[2] on the left bank" (**Annexure 02**).

The deposition of sediments in the reservoirs behind the barrages will lead to less flow of sediments at the mouth of the Ganga and lead to increase in coastal erosion. The natural hunger of the sea for sediments will not be met and the seas will erose the coasts to meet its hunger. The sea will advance towards the mainland accompanied with salinity ingress . The IPCC[3] 4th Assessment Report says that 1 million people will be affected by coastal erosion due to decreased sediment delivery by the rivers (**Annexure 04**). This has been happening at Ganga Sagar at increased rate. A study by National Institute of Oceanography indicates that the Delta at Diamond Harbour is sinking rapidly (**Annexure 07**). Therefore, there is need for extreme caution in

[1] To tear off, to separate.

[2] Old or ancient channel.

[3] Inter-Governmental Protocol on Climate Change

undertaking any activity that will further reduce the flow of sediments to the Harbour.

The sediment that is flowing into the Ganga will be arrested in the multiple barrages that are proposed. This has to be flushed out for the Project to be sustainable. Presently huge amount of sediments get flushed out during the high flows. This entire sediment will have to be dredged. The cost dredging will be prohibitive. The Kolkata Port Trust is constantly facing financial burden of dredging. This means that the revenue from dredged material is small in comparison to the cost. This is the situation at Kolkata where demand for construction is large. The situation would be much worse upstream.

A further problem is that of storage or use of the dredged material. The prevalent practice is to dump the excavated material near the riverbanks from where it flows back into the river repeatedly.

There may be positive impact on Sunderbans due to increased flow of water in the Hooghly. However, there will be negative impact due to this water carrying less sediments. Presently available evidence indicates that the diversion of Ganges water at Farakka Barrage has led to an increase in both sedimentation and salinity in the Sunderbans which is threatening its ecosystem. The Sundari and Goran species are affected by top-dying disease (**Annexure 08**).

*Counterargument: MOWR has contended that there is no increase of flooding due to the Farakka Barrage because there is no ponding during lean season (**Annexure 09**).*

Reply: This is correct to the extent that there is no increase in flooding due to release of impounded waters. However that is not relevant. Flood intensity has increased because of deposition of sediments upstream and consequent rise in level of water of the Ganga upstream. The Indian branch of the Mahananda faces one foot of rise of the Ganga water during the flood season.

Counterargument: Construction of several barrages upstream will arrest the sediments and reduce sedimentation at Farakka.

Reply: It is true that there will be reduction of problem at Farakka. However, this only transfers the problem upstream. The sediment that is presently deposited at Farakka will in future be deposited upstream at other barrages

and have similar consequences. Secondly, a good amount of sediment is flushed out at Farakka during monsoons presently. This flushing will get restricted because multiple barrages will prevent the Ganga from carrying them to the sea.

Counterargument: Dredging will enable utilization of the sediments for other construction purposes. The revenue generated from regulated river bed mining will be further used for maintenance activities of the river.

Reply: The cost of dredging the sediments is exorbitant. The demand for sediments in upstream areas will be less.

The Kosi brings huge amount of coarse sediments which has found no use at all as construction material. As said previously, Kolkata Port Trust is not able to generate net revenue from dredging.

Counterargument: The sediment runoff will be controlled by plantation of suitable native trees with strong soil holding capacity. This green belt along the bank of Ganga will help in minimizing the sediment load of the river greatly.

Reply: Large areas have been planted in the last few decades but sedimentation becomes worse by the year. Sediments are released from bank erosion as well as fields. These are not managed by plantations.

Counterargument: Embankments will be made to solve the problem of river bank erosion.

Reply: Embankments are helpful only in the short run. The sediments get deposited and lead to rising of the riverbed between the embankments. Soon the river starts flowing above the level of the surrounding ground level. This requires further increase in level of the embankments. There is a limit to the increase in height of embankments. And, the water gushes out if there is a breach and causes sudden floods.

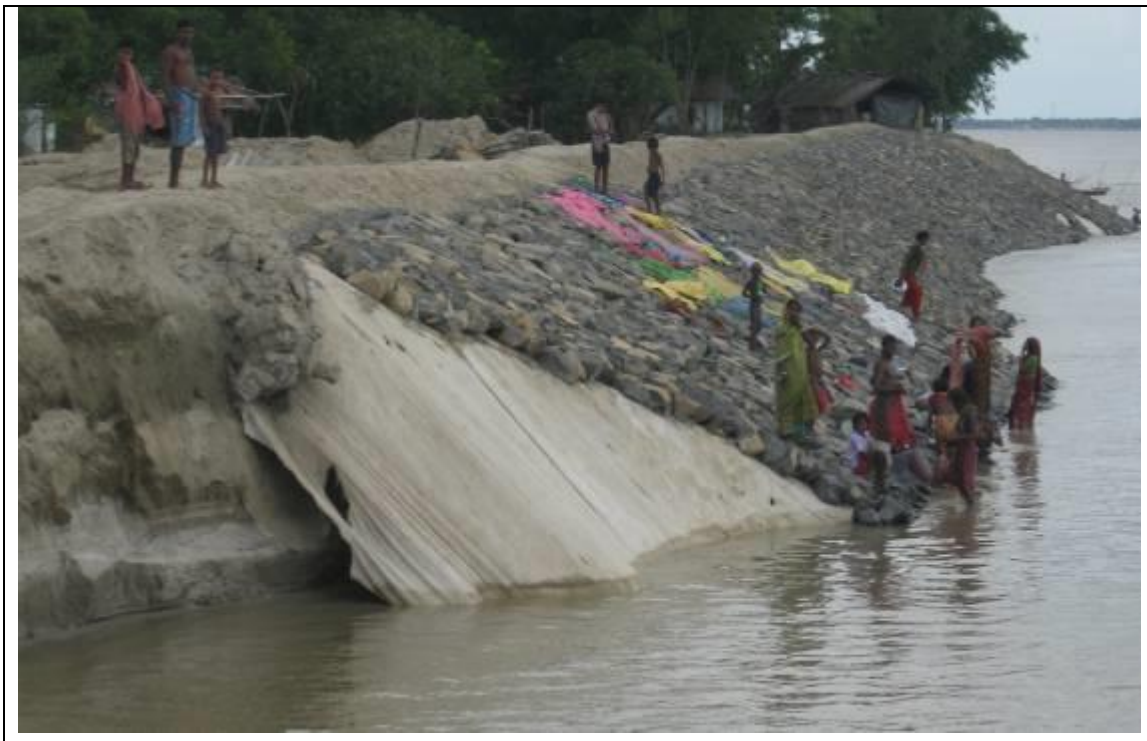

Photo 2: This embankment was made to prevent erosion at Village Madanpara downstream of Farakka on left bank. The embankment was itself eroded within one month of being made.

Flood Conveyance

The Ganga carries the flood waters of the many tributaries including the flood-prone Ghaghra, Gandak and Kosi. The capacity of the Ganga to carry the flood waters of the incoming tributaries depends upon the velocity and volume of water that the Ganga can carry. The gates of the barrages may be fully opened during such flood events. However, the cross section of the river would be reduced due to sediment deposition. The gradient of the river will also become less in large stretches due to this deposition. The reduction of live cross-section of the river and gradient will lead to flood waters of incoming tributaries not being carried by the Ganga and the flood intensity in the tributaries will be much aggravated.

Counterargument: The sediments will be flushed out from the Barrages.

Reply: Flushing leads to removal of sediments for only a small distance upstream of the Barrage. The deposited sediments form a slope and only

sediments above this slope are flushed out. One can see deposition of sediments about 1 km upstream of Farakka. Sediments in long stretches of 100 km will not be flushed out.

A Report of the Disaster Management Department, Government of West Bengal explains that one of the causes of flood is backing of water in tributaries at their confluence with main river. The Ganga is not able to drain the waters of Mahananda and other rivers when the Ganga rules high upstream and downstream of the Farakka Barrage (**Annexure 10**). This situation will be created in the entire stretch of 1600 km where barrages will be made leading to increase in damages due to floods.

Counterargument: The backward flow of water into the tributaries will be checked by regulating the flow of river by upstream barrages.

Reply: Barrages do not have any storage capacity. They will have to release all the water that they receive. Some sediments may be held in the upstream barrages but volume of water released will remain unchanged. Therefore there will be no change in downstream flood situation.

Climate Change

A Study by National Institute of Hydrology indicates that the rainfall and river flow in the Ganga may increase due to climate change (**Annexure 11**). Simultaneously the number of rainy days will be fewer and heavy rain events will be more (**Annexure 12**). WWF[4] has assessed that the rainfall will be concentrated in the month of August only (**Annexure 13**). This means that the there will be increased demand on the flood conveyance capacity of the Ganga in August. The cascade of Barrages will have the opposite impact of reduction of flood conveyance capacity.

Fragmentation of Habitat of Aquatic Life

Construction of a cascade of Barrages will led to multiple fragmentation of the migration path of fish—Hilsa and Prawns in particular. The Farakka Barrage has already led to the fragmentation of the habitat of these fish as indicated by a

[4] World Wide Fund for Nature

report by Central Inland Fisheries Research Institute (**Annexure 14**). Hilsa and prawns are no longer found above the Farakka Barrage. Making a series of barrages will limit migration of these fishes to a many disjointed stretches of 100 km each and prevent them from reaching areas that are suitable for their different life cycle requirements like spawning, etc. This will totally decimate these fishes.

Livelihood of fishermen dependent on fishing will be affected.

Former Chief Minister Nitish Kumar has said that the Farakka Barrage has led to accumulation of sediments, reduction of depth of watercourse and decline in the number of dolphins (**Annexure 15**). Dolphins are the keystone species to assess the health of the riverine ecosystem. Decline in dolphins indicates that the entire ecosystem is degrading.

Moving of ships will create disturbance from the turbulence, noise and pollution. The Dolphin is a blind animal which navigates and preys using sound to locate objects. The noise from ships will create disturbance to the Dolphin's ability to sense and navigate. The barrages will fragment their natural path by creating obstructions.

The Project will have a negative impact on the Turtle Sanctuary at Varanasi and Vikramshila Dolphin Sanctuary at Bhagalpur.

The quality of river water is a function of aquatic biodiversity and the same will be adversely impacted.

*Counterargument: There has been an increase in catch of Hilsa downstream Farakka due to the expansion of the mixing zone (**Annexure 16**). Increased water in the Hooghly has led to an increase in the contact zone between incoming sweet river water and receiving salt water. This zone is most productive.*

Reply: The increase of fish catch in the mixing zone would be much less than the loss in 1600 km length upstream.

Counterargument: The cause of decline of Hilsa is bagnet fishing.

Reply: This is true but barrages will exacerbate this negative impact. Need is to put a stop to bagnet fishing.

Counterargument: Reservoirs behind the barrages will lead to an increase in fish catch.

Reply: The experience of Farakka indicates otherwise. The total fish catch has declined. Number of fishermen coming to the area is nearly one-half of the pre-Farakka period. The catch of preferred species such as the Hilsa, has much declined. Artificial prawn cultivation has also not succeeded.

Floral Biodiversity

The cascade of barrages will lead to increased impoundment of water and correspondingly much reduced velocity of flow. This will lead to growing of water hyacinth on the river banks. Water hyacinth can be seen growing in the Ganga upstream on right bank above Farakka Barrage (Photo 3). The hyacinth kills other aquatic flora which are habitat and food for fishes.

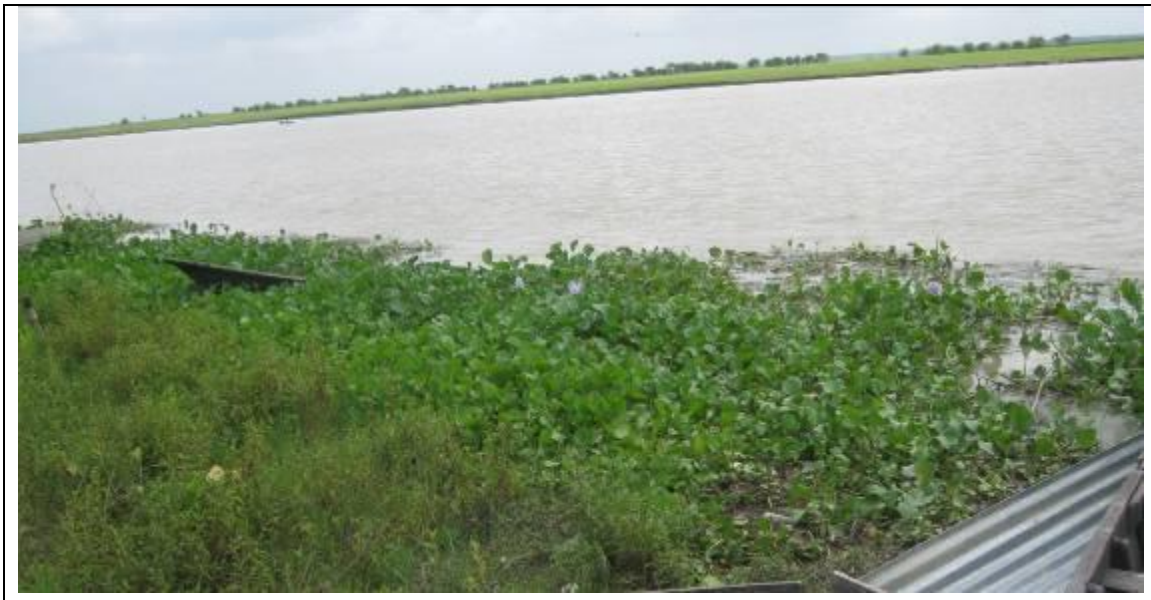

Photo 3: Water hyacinth at Village Palasi on Right Bank upstream Farakka.

A US Army Corps of Engineers (USACE) Report on the cascade of barrages on the Mississippi says that “in the late 1980s large beds of underwater plants, such as wild celery, all but disappeared in much of the Upper Mississippi. While some plant beds have partially recovered, they may never return to their previous state, taking with them thousands of acres of habitat for young fish

and the small animals that fish and other wildlife eat" (**Annexure 23**). The growth of Hyacinth upstream of Farakka indicates similar impact in India.

The riverine ecosystem requires variation of water levels and velocity of flows. A seasonal and gradual variation in river flows takes place in natural condition. The aquatic flora and fauna get time to adjust to the varying levels. Making a cascade of barrages will lead to the water level remaining almost constant for most of the year. There will be sudden variation in flows as and when water is released from the barrages for flushing. This sudden variation will be another impediment to the ability of flora and fauna to adjust and harm the riverine and riparian ecosystems.

Socio-cultural Impacts

The four Shankaracharyas are on record that obstruction of the flow of Ganga due to the construction of dams and barrages leads to decline in the spiritual quality of its waters (**Annexure 17**). Ganga has been declared as National River because of this socio-cultural value which is sacrosanct and should not be destroyed.

People living along the banks of the Ganga will have to immerse the ashes of their dead in the reservoirs. The ashes will settle in the lakes instead of being carried to the sea.

Water Quality

The series of reservoirs will lead to increased groundwater recharge. This is a fortuitous impact. But this will also lead to reduction of downstream flow and may even lead to zero flow in downstream stretches during lean season leading to anaerobic conditions. The water may stink and will not be fit for religious or tourism purposes.

Discharge of carbon emissions by ships will be more absorbed by the river water because of close proximity leading to decline in its quality. Some amount of lubricant or other oil is leaked by ships. The colour of water near the ports becomes nearly black for this reason. These leakages will have a negative impact on water quality.

Disasters take place in shipping. Barges loaded with coal, fuel oil or other materials may sink or otherwise spill their cargo into the river leading to deterioration of water quality. These discharges by the ships will remain stagnant due to the formation of barrages and the natural purification of the river will not take place.

Cost-Benefit Analysis

It is necessary to undertake a comprehensive cost-benefit analysis of the project. The Ganga Flood Control Commission has prescribed a format for assessment of Cost-Benefit Analysis of flood management schemes (**Annexure 18**). This format excludes many costs. The Indian Institute of Forest Management has drafted guidelines for undertaking cost-benefit analysis of irrigation projects which are more comprehensive (**Annexure 19**). The IIFM Guidelines indicate the following costs that must be accounted for: human resettlement costs, reduction in value of land, habitat fragmentation costs, loss of public infrastructure, loss due to increase in water-borne diseases, loss of flood-recession agriculture, loss of fisheries, decreased sand harvesting, decline in water quality, loss of aesthetic value of the river, landslides and impact on terrestrial and aquatic biodiversity. These are enumerated here only to indicate the wide range of costs that need to be included in such a analysis.

Of particular importance are non-use, passive-use or existence values. People may not use the river but they are willing to pay a price to keep the river free flowing. They derive satisfaction from the knowledge that the sacred river is flowing freely. The Elhwa Dam in the United States was removed mainly because these passive values (**Annexure 20**). These values are routinely ignored in Cost-Benefit Analysis done in India. Inclusion of these values will tilt the scales in favour of free flow of rivers.

The Directive Principles enshrined in our Constitution require the Government to make policy that is equitable. The negative impact of the Barrage Project will mostly affect the poor due to coastal erosion, riverbank erosion, loss of fisheries, increase in water-borne diseases, loss of aesthetic value of free-flowing river, etc. The benefits, on the other hand, accrue mostly to the well-off sections—tourism on luxury ships, etc. An assessment of the differential

impact of the project on different strata of the society is necessary before a decision to implement this project is made.

Strategic Impact Assessment

It is necessary to make a holistic strategic assessment of various alternatives to water transport. The factors to be induced in such an assessment would be:

1 Shipping necessarily involves increased dependence on fuel oil while rail transport is undertaken by electricity that can be generated from renewable energy; and, as second option, by coal or nuclear power. Increase of shipping will lead to greater import dependence and impair our economic sovereignty.

2 Indications are that price of solar power may decline to levels of other sources in a few years; on the other hand fuel oil may become more expensive. This is one of the reasons why there has been a thrust on solar and wind power in the budget for 2014-15. In such a scenario the shipping project will become unviable yet we would have destroyed our river.

3 The environmental costs of waterway are high while those of rail transport are relatively less. The assessment of alternative modes of transport should be made after including these environmental costs.

4 Shipping can be undertaken by small ships on the presently free-flowing river. Some increase in size of ship can be obtained by dredging a channel in the Ganga though environmental impacts of such dredging will have to be separately assessed. The correct comparison, therefore, is not between waterway, road and rail. The correct comparison is between (1) Small ships on presently available waterway; (2) Medium ships on dredged waterway; and (3) Large ships after construction of barrages.

5 It would be possible to design barges that have reduced draft requirement and that can ply on present natural flows or dredged flows of the Ganga without making barrages.

6 The demand for shipping on the Ganga waterway is arising mainly from the need to ship imported coal to upstream thermal power plants. These power

projects can be located nearer to the ports such that it minimises transportation costs.

Any decision on the project must be taken after considering these factors.

Alternative Design of Farakka Barrage

Ways must be explored to redesign the Farakka Barrage to enable free-flow of the Ganga while also providing increased water to the Hooghly. We give below three examples of similar structures.

Tajewala

The old Tajewala Barrage on Yamuna was a partial obstruction. This has since been decommissioned and Hathnikund Barrage has been made upstream. The Tajewala Barrage was made in a 'L' shaped structure with Offtake on the west bank of the river. The abutment in the river did not extend across the river. The river flows in a circular fashion at this point thus water naturally flows towards the west bank.

Photo 4: Tajewala Barrage supplying to Western Yamuna Canal

The above system of partial obstruction was in operation for nearly 100 years. Problem was that water supply to the canals was not 'proper'. This can be managed by better engineering designs.

Bhimgoda

An agreement was reached between the British Government of India and representatives of the Hindu community under the leadership of Shri Madan Mohan Malviya in 1916 providing that a ungated opening will be kept open at the Bhimgoda Barrage which was supplying irrigation water to Western UP. The structure was like two spurs from two sides with an ungated opening in the middle which established riverbed connectivity.

The opening was progressively reduced and sometime in the last decade it has been totally blocked. The Bhimgoda Barrage now is a conventional barrage extending across the riverbed. Nevertheless, this indicates that a ungated opening is technically feasibly as was in operation for nearly eighty years.

Ruparel

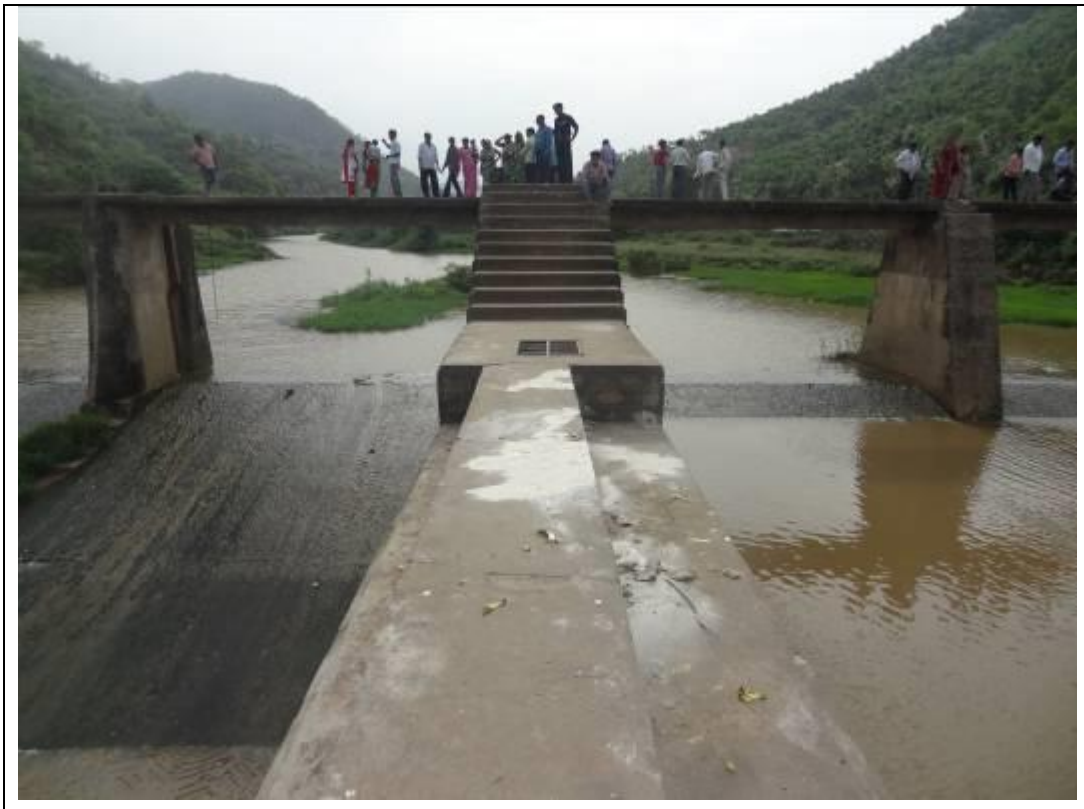

Photo 5: Structure on Ruparel River

The water of Ruparel River in Alwar had to be divided between the States of Alwar and Bharatpur. A structure was made such that the water got divided between the two states in ratio of 55:45. There is no gate in the structure. There is aviral flow on both offtakes. This structure is still operative.

Similar structures can be made to divide the water of the Ganga in two parts. One part can be diverted to the Hooghly and other can be allowed to flow to the Padma.

Mississippi Experience

A cascade of barrages have been built on the Mississippi River in the 1930s in the United States to enable shipping. However, many negative impacts of that project have become known and there is even a call for "letting the river go its own way."

Photo 6: View of Lock and Dam 27 on the Mississippi River (**Annexure 21**).

Environment

The US Government Accountability Office has said that the USACE, which maintains the barrages, assesses the hydrologic impacts but not the environmental impacts of the barrages on the Mississippi. This means that the environmental aspects of the barrage system have not been taken on board. The Report says "Researchers have highlighted two key areas of concern with river training structures—degradation of river habitat and increased flooding" (**Annexure 22**). These are precisely the major impacts of Farakka Barrage that are noticed in India.

A study by USACE pointed out that the ecosystem of the Illinois River, which is a tributary of the Mississippi, collapsed in 1950s. Many plant, duck and fish populations declined very quickly. Similar collapse of the Mississippi is feared.

Sediments

A Report by US Geological Survey says: "Since the early 20th century, approximately 4,900 km^2 of coastal lands have been lost in Louisiana. One of the primary mechanisms (for this happening)… is believed to be the disconnection of the river distributary network from the delta plain by the massive system of levees on the delta top, which prevent overbank flooding and replenishment of the delta top by sediment and nutrient deliveries. Efforts by Federal and State agencies to conserve and restore the Mississippi River Delta Plain began over three decades ago and have accelerated over the past decade. Regardless of these efforts, however, land losses are expected to continue because the reduced upstream sediment supplies are not sufficient to keep up with the projected depositional space being created by the combined forces of delta plain subsidence and global sea-level rise" (**Annexure 21**). A similar loss of coastal lands is already happening at Ganga Sagar.

In 1996, the State of Louisiana created a document named Coast 2050, which outlined strategies and measures needed to restore the state's wetlands and barrier islands. Coast 2050 proposed that the Mississippi River be re-engineered to imitate natural processes. Some portion of the river's flow should be re-diverted via pipelines or canals to flush into the delta so that

South Louisiana's sinking ecosystems could be built up (**Annexure 24**). There is much criticism of this report. Many observers feel this will not work. Be that as it may this debate indicates that after nearly 80 years the US Government is still trying to grapple with the problem of coastal erosion created by the cascade of barrages on the Mississippi.

Other observers give a grave warning: "Oliver Houck, who directs the environment program at Tulane University Law School, says that nothing less than letting the river go its own way will solve the land loss problem… What has to be done now is to let the Mississippi River take its natural course and allow the full bed load of the river to rebuild the marsh." He adds, "The problem with Coast 2050 and other restoration plans is that they fail to halt wetland destruction in the same areas they are trying to restore. New canals, deeper canals, expanded ports are all on the table. No way that works."

A Report in Popular Science says the Mississippi is topping its banks and barriers more frequently and with greater consequences than flood models tend to predict. The writer says, "one thing is abundantly clear: the mighty Mississippi wants out of the path that humans have determined for it, and it is increasingly finding ways to escape" (**Annexure 25**). Similar fears that the Ganga may outflank the Farakka Barrage have been expressed by the Government of West Bengal (quoted above).

Economics of the Waterway

A Report by Institute of Agriculture and Trade Policy says that transport of cargo by barges on the Mississippi waterway is economical only because it is not taxed while user fees are charged from rail and road transport (**Annexure 26**). The proposed cascade of barrages on the Ganga is similarly likely to be economical only due to subsidies provided by the Government. Our situation is likely to be worse. The Mississippi Waterway is used to transport bulk agricultural exports from upstream states to the coastal ports for exports. The Ganga Basin does not have such export-oriented bulk commodities. The Ganga Waterway will be mainly used for transport of imported coal. This will be small in quantity to make the Waterway economically viable.

Counterargument: A study was commissioned by the USACE to assess the feasibility of expanding the locks and dams to accommodate more shipping on the Mississippi River.

Reply: There is a tendency among engineers to make big structures. This does not mean that these structures will be sustainable or viable. USACE has made a mistake in making bigger structures on the Mississippi. We must learn from their continuing mistake and not follow that path.

Humble Submission

The NDA Government is committed to the maintenance of Aviral flow of the Ganga. The present project will break this. It will additionally impose huge environmental and social costs, especially due to intensification of flood and riverbank and coastal erosion.

We welcome the efforts of the Government to reduce the cost of transport and exploring the option of shipping. The way forward is to explore various ways of promoting shipping without obstructing free flow of the Ganga. We request the Government to scrap this project and commission a Strategic Impact Assessment of various non-obtrusive alternatives.