

Key Initiatives

- **Development of NW-1** - With a length of 1620 km, NW1 is the longest waterway in India. It is a stretch of the Ganga-Bhagirathi-Hoogly river system from Allahabad to Haldia. Key opportunities lie in 11 major power plants being located on the banks of NW-1 with a cumulative capacity of 12,000 MW.

For capacity augmentation on Haldia-Varanasi stretch, Jal Marg Vikas Project (JMVP) has been implemented on National Waterway (NW)-1 with the technical and financial assistance of the World Bank at an estimated cost of Rs. 5369.18 crore.

Funding pattern:-

- IBRD loan component: Rs. 2, 512 crore (US\$ 375 million)
- Government of India counterpart funds: Rs. 2, 556 crore (US\$ 380 million), to be sourced from budgetary allocation and proceeds from bond issue
- Private sector participation under PPP mode: Rs. 301 crore (US\$45 million)

Major Interventions:-

(i)	Fairway Development
(ii)	Construction of the multi-modal terminal at Varanasi
(iii)	Construction of the multi-modal terminal at Sahibganj
(iv)	Construction of the multi-modal terminal at Haldia
(v)	Construction of an inter-modal terminal at Kalughat
(vi)	Construction of an inter-modal terminal at Ghazipur
(vii)	Construction of a new navigation lock at Farakka
(viii)	Provision of navigational aids
(ix)	Construction of five pairs of Roll on-Roll off (Ro-Ro) terminals
(x)	Construction of Integrated Ship Repair and Maintenance Complexes
(xi)	Provision of River Information System (RIS) and Vessel Traffic Management System (VTMS)
(xii)	Bank Protection works

Implementation strategy/and targets:-

- Fairway development through performance based contract for least assured depth of 2.2 m to 3 m and bottom channel width of 45 m, bank protection works, and provisions of navigation aids.
- Civil works through EPC contract.

Major interventions and their completion timeline:-

Sl. No.	Major milestones	Time Frame for completion/ Target date
1.	Fairway Development	March, 2023
2.	Construction of Phase-I of multi-modal terminal at Varanasi	November, 2018 (Completed)

3.	Construction of Phase-I of the multi-modal terminal at Sahibganj	March, 2019
4.	Construction of multi-modal terminal at Haldia	March, 2019
5.	Construction of inter-modal terminal at Kalughat	March, 2020
6.	Construction of inter-modal terminal at Ghazipur	March, 2020
7.	Construction of intermodal terminal at Tribeni/Kalyani	March, 2020
8.	Construction of new navigational lock at Farakka	March, 2019.
9.	Integrated Vessel Repair & Maintenance Complexes	March, 2020
10.	Construction of Ro-Ro jetties	March, 2020
11.	Vessel Procurement	March, 2019
12.	Land Acquisition and R&R/RAP	March, 2019
13.	Provision of River Information System (RIS) and Vessel Traffic Management System (VTMS)	March, 2020
14.	Bank protection works	December, 2019

Major Impact:-

- Alternative mode of transport that will be environment friendly and cost effective. The project will contribute in bringing down the logistics cost in the country.
- Mammoth Infrastructure development like multi-modal and inter-modal terminals, Roll on- Roll off (Ro-Ro) facilities, ferry services, navigation aids.
- Socio-economic impetus; huge employment generation.
- **Development of NW-2:-** This waterway, stretching for a distance of 891 km from Dhubri to Sadiya, has immense potential to cater to the traffic in the north eastern region of the country. Basic commodities like food grains, fertilizers, etc. can be transported through the route. Three pairs of Ro-Ro services: At Dhubri-Hatsingmari, Neamati-Kamlabari and Guwahati- North Guwahati introduced by IWAI. A permanent Ro-Ro -cum-IWT terminal had been constructed at Dhubri. A Ship repair facility is being set up at Pandu. NW-2 is being planned for enhance connectivity with NW-1 through IBP Route.
- **Development of NW-3:-** This waterway stretching for a distance of 205 km from Kottapuram to Kollam including Champakara and Udyogmandal Canals. NW-3 is fully navigable & operational. 24 hours navigational aids in entire stretch of NW-3 are provided for round the clock navigation. Eight (08) nos. permanent terminals have been constructed for transportation of cargo along the waterways.
- **Development of NW-4:-** Out of total stretch of 3000 Km in NW-4, IWAI is implementing phase-I i.e. Muktyala to Vijaywada stretch of Krishna river covering a distance of 82 Km with an investment of Rs. 96 crore. This stretch of NW-4 has been made operational for cargo and passenger movement. The project is facilitating the movement of construction material for Amravati, the new capital of Andhra Pradesh. This waterway which connects the upcoming

capital of Amaravati to the coastal parts of the state is extremely important for the development of new industrial hinterlands proposed under the various nodes of Visakhapatnam Chennai Industrial Corridor. The stretch will have a potential to transport 3-5 MTPA of bulk commodities by 2020.

- **Development of NW-5** - The significance of NW-5 lies in its location close to Talcher-Paradip region which is abundant in resources and industries and therefore provide opportunities for evacuation of different commodities including thermal coal, coking coal and iron-ore. Financial considerations in terms of revenue and expenditure for both the barge owners and IWAI present a strong case for moving cargo on NW-5 after relevant infrastructural improvements. A number of steps in terms of infrastructural projects are required to be undertaken to make the project feasible. These include dredging to ensure minimum draft of 2.5-3 m and ensuring channel width of 55-60 m. Other steps include building at least 5 barrages with navigational locks and a barge jetty/terminal at Paradip, Talcher and Kalinganagar.

- **Other potential Waterways :-**

- (i) **River Barak (NW-16):-** Proposal for development at a cost of Rs. 76.01 crore has been approved for phase -1 of NW-16 from Silchar to Bhanga. Maintenance dredging for fairway development work in Silchar-Bhanga stretch is to be completed shortly. DPR for the upgradation of terminals at Badarpur and Karimganj completed and to be tendered by Jun, 2019.

- (ii) **River Gandak (NW-37):-** Proposal for development at a cost of Rs. 12.91 crore had been approved and fairway maintenance work has commenced.

- (iii) **Waterways in Goa (NW-27-Cumberjua, NW 68 – Mandovi & NW 111 – Zuari):-** A proposal for the development of NWs in Goa at an estimated cost of Rs. 22.65 crore had been approved. Work is being executed through Mormugao Port Trust in consultation with Government of Goa. A Tripartite MoU had signed for the commencement of works.

- (iv) **Alappuzha – Kottayam – Athirampuzha Canal (NW-9):-** Proposal for development of the waterway at an estimated cost of Rs. 1.60 crore had been approved. Tendering for night navigation facilities had been completed. Dredging is proposed departmentally.

- (v) **River Rupnarayan (NW-86):-** Proposal for development of the waterway at an estimated cost of Rs. 24 crore had been approved. Work had been awarded for setting up of floating terminal.

- (vi) **Sunderbans Waterways (NW-97):-** Proposal for the development of waterway at an estimated cost of Rs. 18.10 crore has been sanctioned/approved. Work of dredging and floating terminals awarded.

- **International Cooperation in Inland Water Transportation:-**

- (a) **Bangladesh**

- Cooperation governed by the Protocol on Inland Water Transit and Trade (PIWTT), 1972.

- Agreements signed on Coastal Shipping, Cruise Shipping and Chattogram and Mongla Ports.

- Project for dredging in selected stretches of Bangladesh waterways, to attain connectivity between NW-1 (Ganga) and NW-2 (Brahmaputra) approved, tendered and commenced. India to undertake 80% of the project cost of Rs. 326 crore.

(b) Myanmar-Kaladaan project

- Connectivity between Haldia/Kolkata by sea up to Sittwe (539 km) through IWT up to Paletwa (158 KM) and by road (121 km) to Indo – Myanmar Border to Mizoram.
- Phase-I completed- Sea-dredging and IWT terminal in Sittwe port, dredging on Sittwe – Paletwa stretch of Kaladan river, IWT terminal at Paletwa and 6 IWT vessels.
- Phase II- Container handling facility at Sittwe & Paletwa (in tender stage) and Wreck removal (completed)
- Road construction has just commenced

(c) Nepal

- Inland Waterway connectivity with Nepal through –
- NW-37 (Gandak) and NW-58 (Kosi).
- Sahibganj MMT and Kalughat Terminal under JMVP.
- Indo-Nepal Protocol Treaty to be modified to include ‘Inland Waterways’ as a new mode of transport connectivity.
- Technical visits undertaken by delegations of Nepal and India to study the IWT potential and facilities.

(d) Upcoming interventions on National Waterways :-

- Development of NW-53 (Thane-Kalyan-Vasai Creek) in Maharashtra from Vasai to Kalyan for a distance of 50 km for implementation of Ro-Pax services
- Development of NW-4, phase-II (Kakinada canal, Eluru canal & Rajahmundry to Pollavaram)
- Development of NW-5, phase-I from Dhamra/Paradip Port to Pankapal in Odisha
- Development of NW-8 (Alappuzha – Changanassery canal) linking NW-3 in Kerala
- Implementation of Ro-Ro services on NW-95 (Subansiri River) in Assam
- Fairway development in Indo-Bangladesh Protocol route for assured connectivity with North East region i.e. NW-2 (Brahmaputra) & NW-16 (Barak)
- Operationalization of Kolaghat terminal on NW-86 (Rupnarayan river), proposed “Extended Port of Call” for to and fro movement of cargo from Bangladesh.
