IWAI's cargo vessels MV AAI and MV BEKI

Movement of Fertilizers on National Waterways

Inland Waterways Authority of India

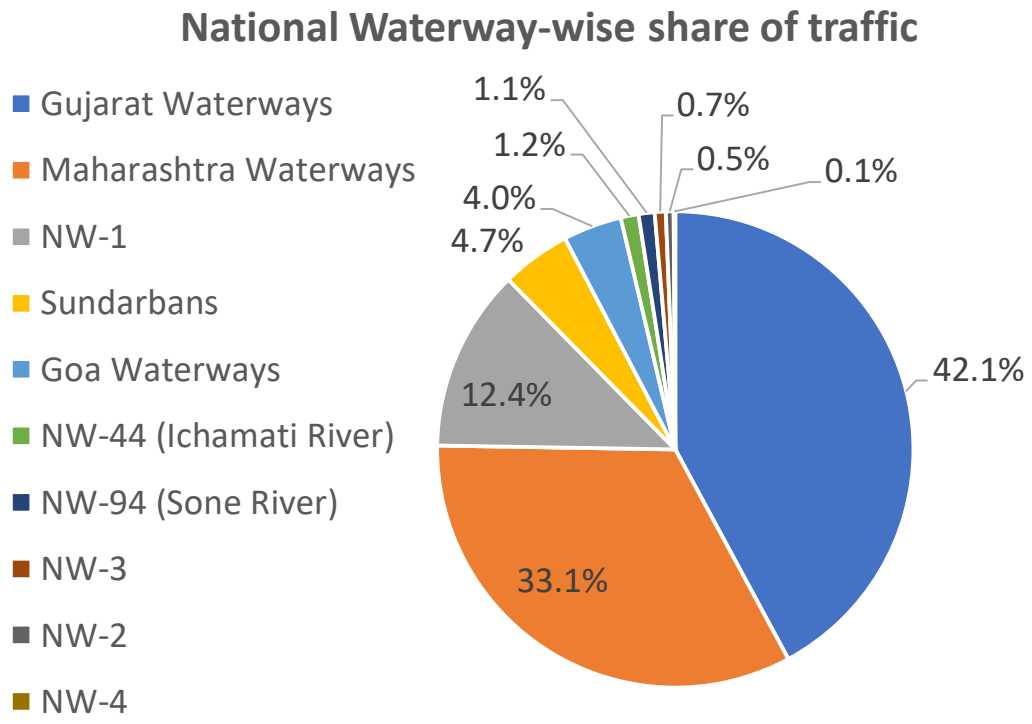
26th June 2020

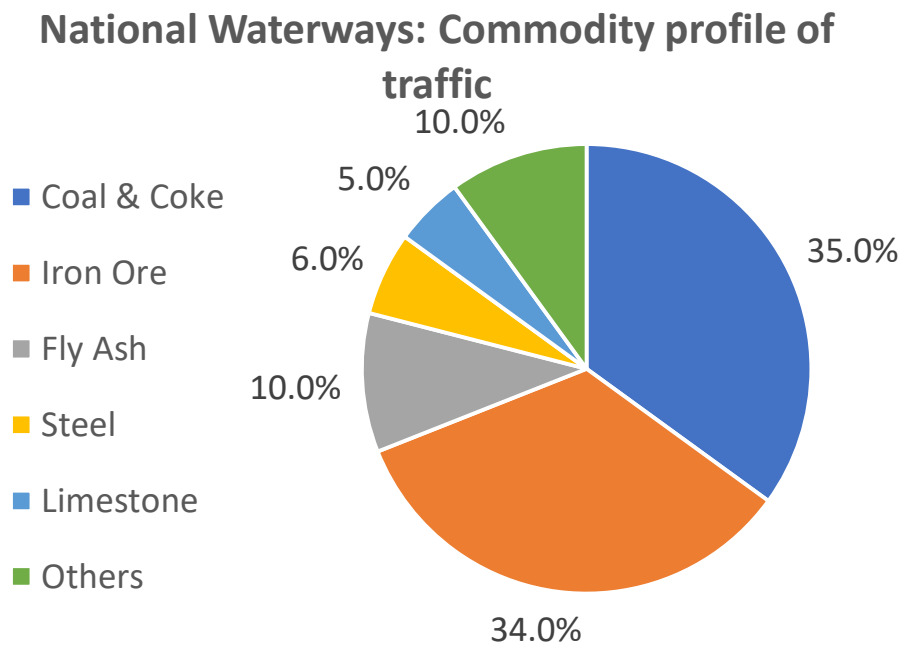
Overview

- IWAI is carrying out interventions on National Waterways for providing infrastructure for navigation of vessels
- Vessel operations does not come under IWAI's mandate
- Cargo movement on National Waterways is a commercial decision for consideration of the industry
- IWAI has been interacting with fertilizer manufacturers for the use of IWT mode
- Fertilizer movement is currently not taking place on National Waterways
- Currently 16 National Waterways are operational and can be used for the purpose of transportation

Overview: Traffic on National Waterways

- Traffic on National Waterways increased by 2% from 72.3 million tonne in FY-19 to 73.6 million tonne in FY-20
- Maharashtra Waterways, Gujarat Waterways ,NW-1 accounted for approx. 90% of the total traffic in FY-20.
- Bulk commodities viz. coal & coke, iron ore, fly ash, etc. constitute more than 90% of the overall traffic.

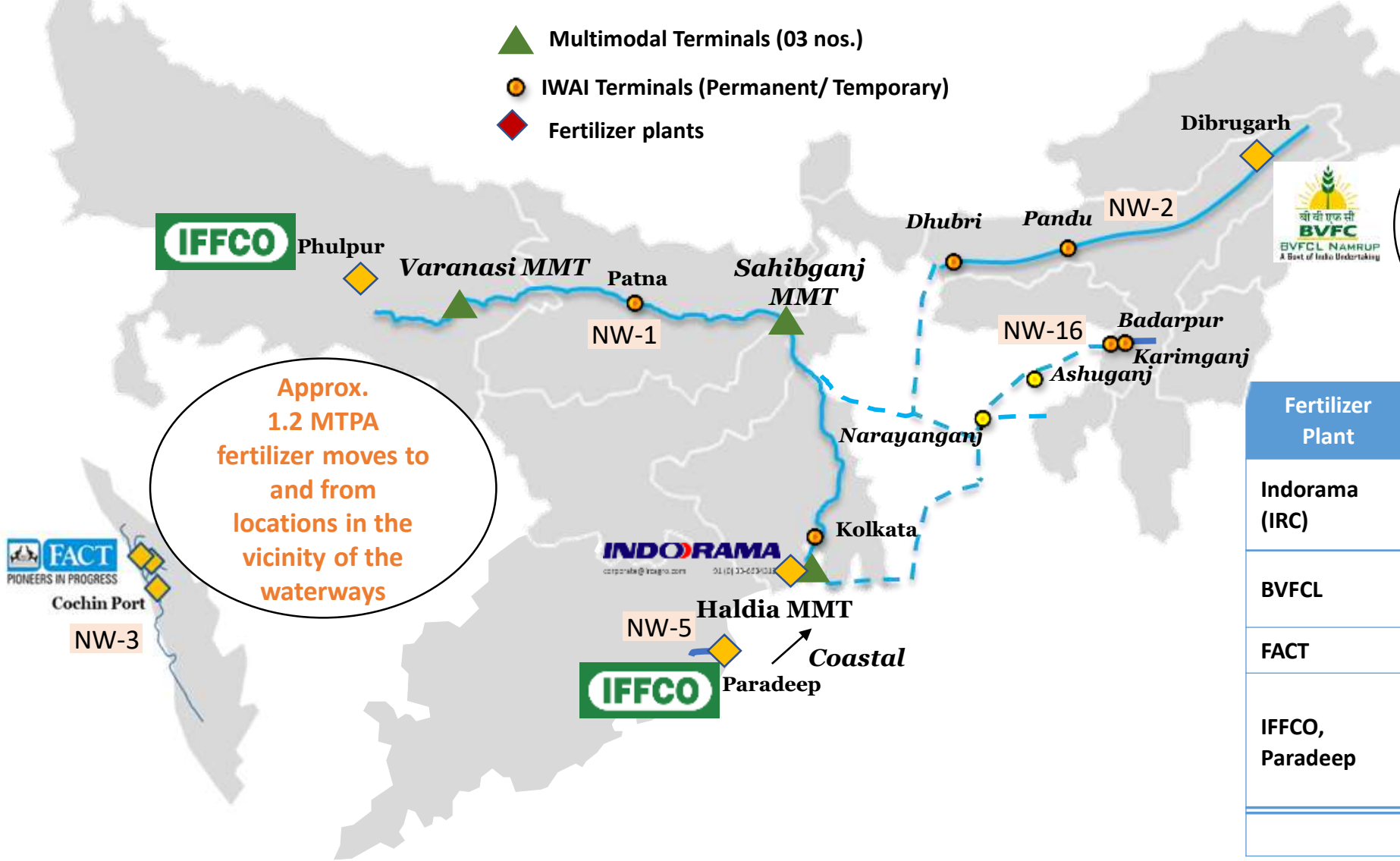




- **Movement of fertilizers on the National Waterway is currently negligible with only NW-3 being used for movement of fertilizer raw material by FACT (Fertilizers and Chemicals Travancore Limited) – approx. 0.5 million tonne in FY-20**

Fertilizer manufacturers and Demand centers in the vicinity of National Waterways

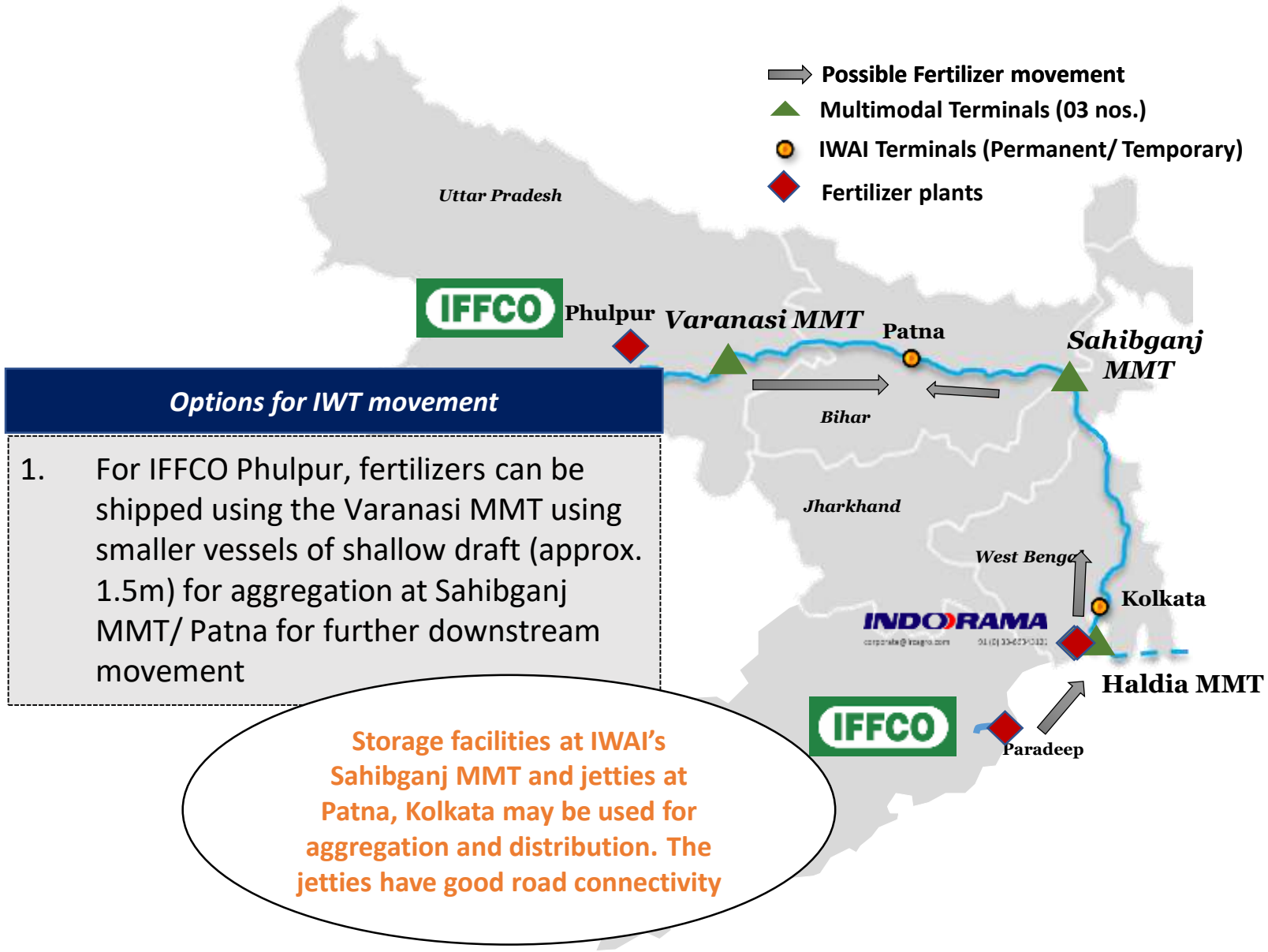
- IWT mode may be used as a complementary mode for fertilizer transportation for demand centers that lie in the vicinity of National Waterways



NW-1, NW-2, NW-3, NW-5, NW-16 could be used for fertilizer movement due to the presence of fertilizer manufacturers/ demand centres (or both) along them

Fertilizer Plant	Destination region/ state	Million tonne p.a. (approx.)
Indorama (IRC)	Assam	0.04
	Tripura	0.01
BVFCL	Assam & other NE states	0.20
FACT	Kerala	0.08
IFFCO, Paradeep	Uttar Pradesh	0.48
	Bihar/ Jharkhand	0.26
	West Bengal	0.15
	Total	**1.22**

Movement on NW-1



Options for IWT movement

1. For IFFCO Phulpur, fertilizers can be shipped using the Varanasi MMT using smaller vessels of shallow draft (approx. 1.5m) for aggregation at Sahibganj MMT/ Patna for further downstream movement

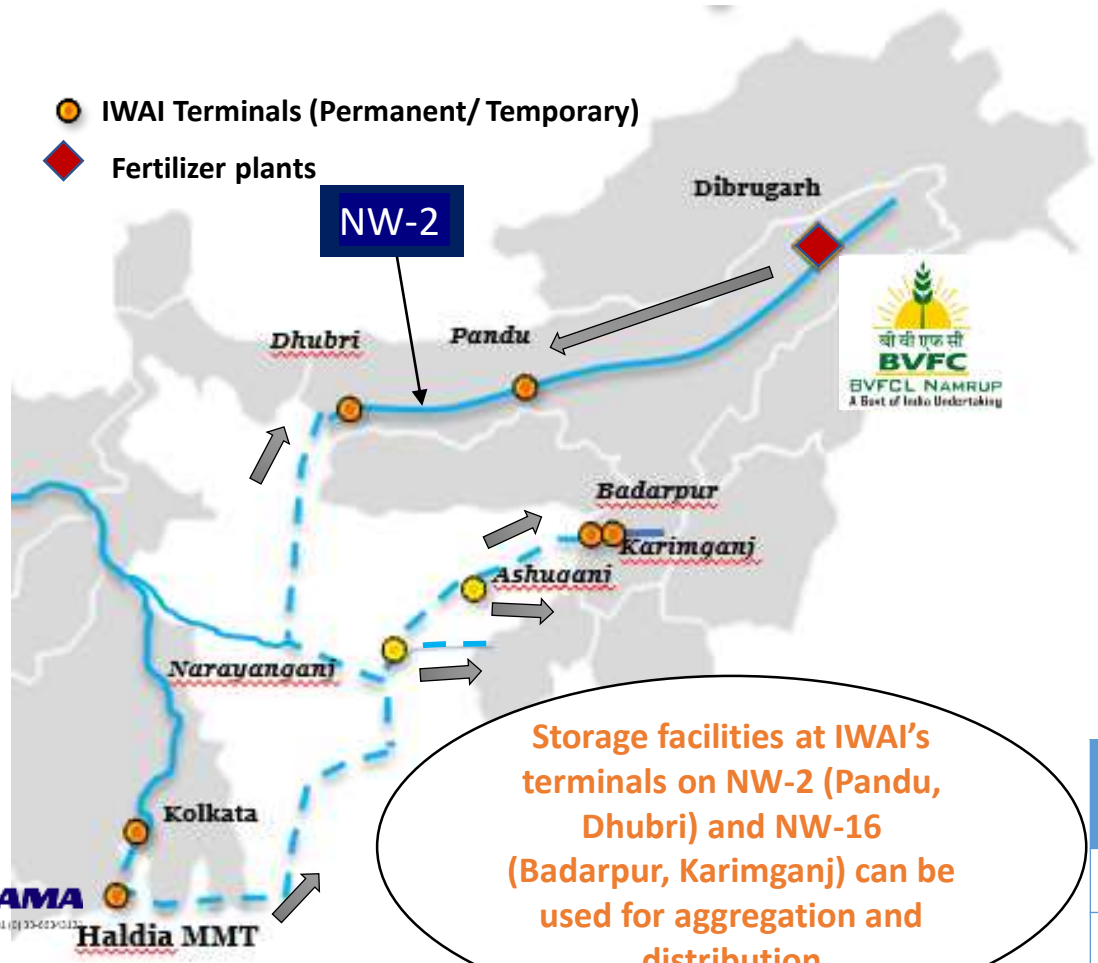
Storage facilities at IWAI's Sahibganj MMT and jetties at Patna, Kolkata may be used for aggregation and distribution. The jetties have good road connectivity

Options for IWT movement

1. End to end movement from IFFCO Paradeep plant using River Sea Vessels up to destinations with adequate draft on NW-1
2. Movement using SOC compliant inland vessel from Paradeep port/ jetty on NW-5 to destinations on NW-1 during fair weather season (December to April)
3. Movement using Coastal shipping from Paradeep port to KoPT and transshipment in KoPT area into inland vessels for onward movement on NW-1.

Movement on NW-2

Indo Rama Chemicals (Haldia)
Brahmaputra Valley Fertilizer Corporation Limited (Dibrugarh)



Storage facilities at IWAI's terminals on NW-2 (Pandu, Dhubri) and NW-16 (Badarpur, Karimganj) can be used for aggregation and distribution

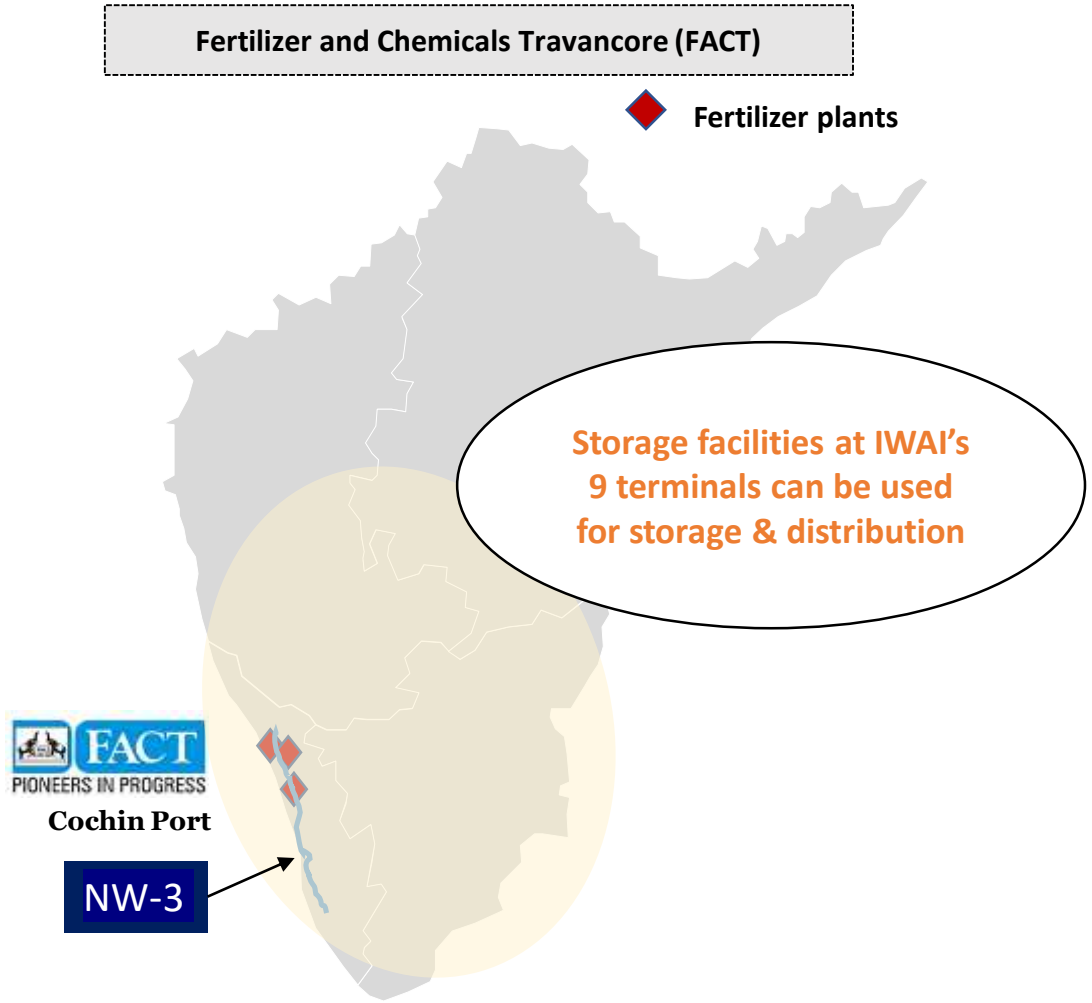
Options for IWT movement

1. Potential for fertilizer movement on NW-1 using the IBP route
   - A. Transportation to demand centers based along NW-2
   - B. Transportation to demand centers based along NW-16
   - C. Transportation to Tripura and adjoining states using Gumti river through transshipment in Bangladesh
   - D. Transportation to Tripura via Ashuganj
2. Potential for fertilizer movement of BVFC to demand centers around NW-2

Origin	Destination	IWT distance	Road distance	IWT Travel time
Haldia	Pandu	1,489 kms	1,091 kms	10-12 days
Haldia	Agartala	IWT to Ashuganj- ~950 kms Ashuganj to Agartala- 53kms	1,637 kms	~8 days

Movement on NW-3

- Connectivity between NWs in Kerala and Cochin port can be used to move FACT's fertilizers to southern Coastal states
- **In FY-20, FACT transported used NW-3 for transportation of approx. 0.5 million tonne of fertilizer raw material from Cochin port to its factories and for inter unit transport**

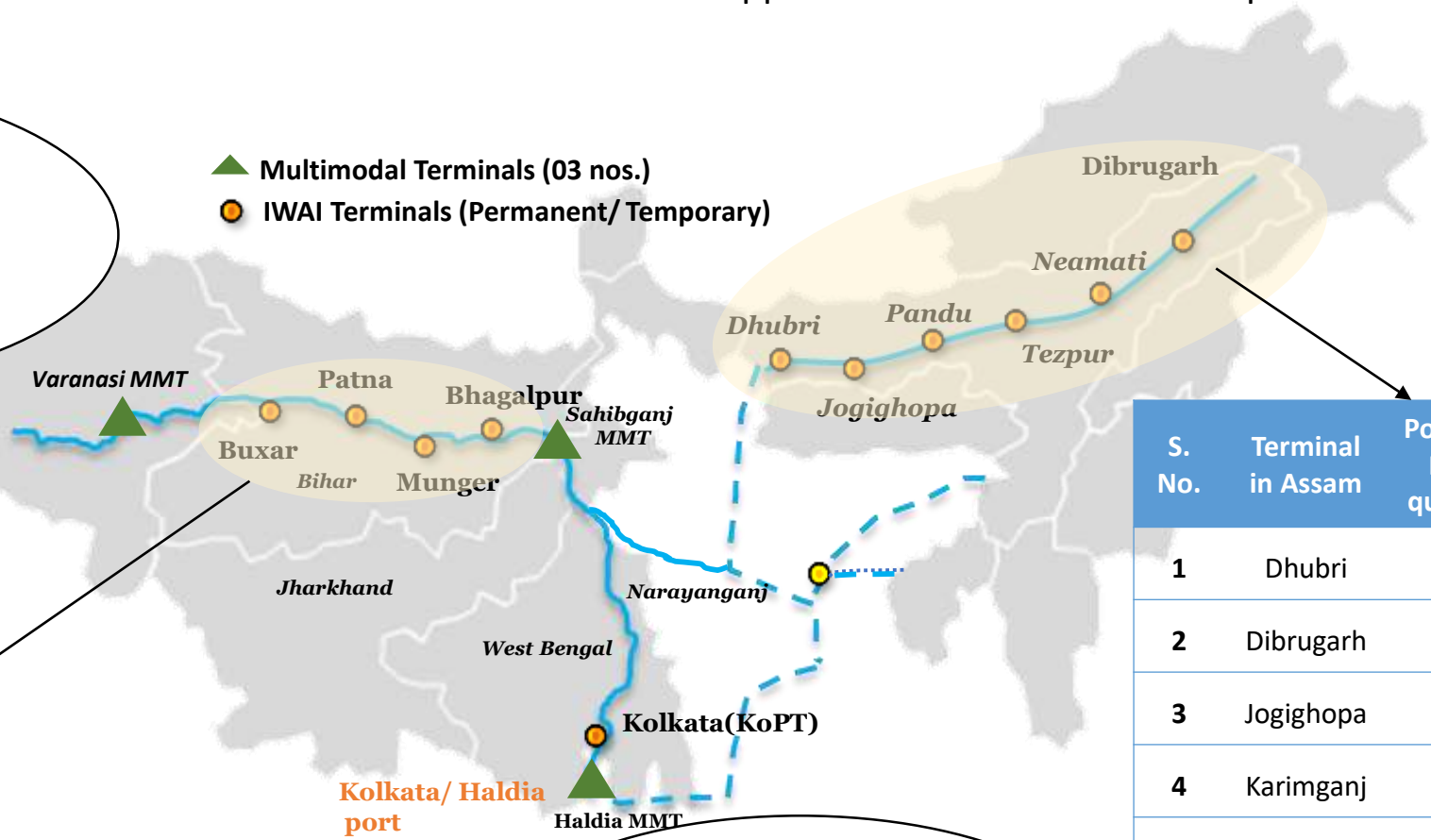


Options for IWT movement
1. Potential for FACT's finished fertilizer movement through NW-3, NW-8 and NW-9 in Kerala
2. Potential to leverage IWT+ Coastal connectivity through Cochin port to access demand centers in other southern states viz. TN, Karnataka and AP

Imported fertilizer movement (through KoPT)

- In FY19, 1.23 million tonne of imported fertilizers were consumed in Bihar and approx. 0.15 million tonne of imported fertilizers were consumed in Assam.

Storage facilities at IWAI's Sahibganj MMT can be utilized for storage and distribution. The jetty also has good road connectivity



S. No.	Terminal in Bihar	Potential Fertilizer quantity (tonne p.a.)
1	Patna	507,151
2	Bhagalpur	416,622
3	Buxar	108,361
4	Munger	4,300
	TOTAL	**1,036,434**

Fertilizers are currently imported from ports on West/ South coast. For IWT movement, fertilizers to be imported through Haldia/ Kolkata port

Tonne p.a.

S. No.	Terminal in Assam	Potential MOP quantity	Potential Total quantity
1	Dhubri	1,878	3,079
2	Dibrugarh	21,850	35,820
3	Jogighopa	7,259	11,900
4	Karimganj	3,480	5,705
5	Neamati	13,710	22,476
6	Pandu	10,074	16,515
7	Tezpur	10,228	16,767
	TOTAL	**68,479**	**112,262**

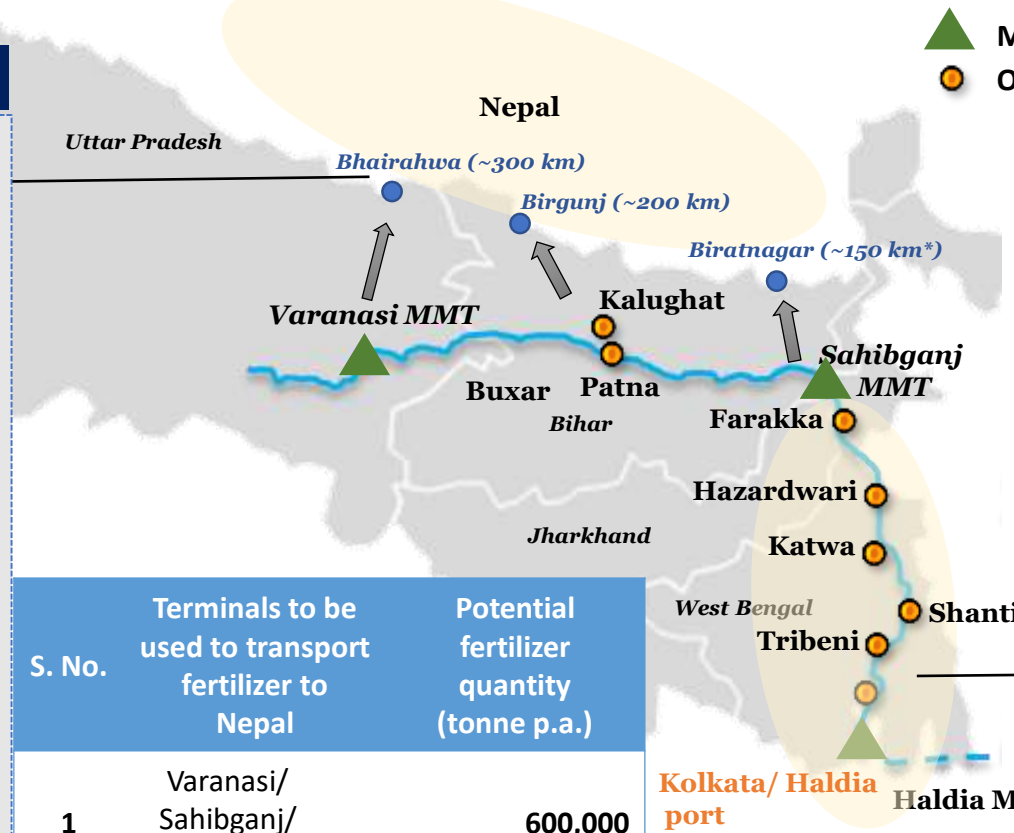
- Potential has been identified considering the district-wise consumption of imported fertilizers and based on the mapping done between rake points within each district with the nearest IWT (permanent/ temporary) terminal (within 100 km of the rake point in each district)

Imported fertilizer movement (through KoPT)

- In FY19, 0.65 million tonne of imported fertilizers were consumed in West Bengal.
- Approx. 0.6 million tonne of fertilizer gets imported at KoPT to meet the demand placed by Nepalese importers

Options for movement of Nepal cargo

1. Currently transportation of fertilizers from KoPT to different demand centers in Nepal primarily takes places using road.
2. IWT route using NW-1 and MMT at Sahibganj, Varanasi, Kalughat (upcoming) can be used post inclusion of IWT mode in the treaty between India and Nepal.
3. Subsequent transportation up to India-Nepal border by road



S. No.	Terminals to be used to transport fertilizer to Nepal	Potential fertilizer quantity (tonne p.a.)
1	Varanasi/ Sahibganj/ Kalughat	600,000

Fertilizers consumed in W. Bengal are imported from ports on South coast. For IWT movement, fertilizers to be imported through Haldia/ Kolkata port

Tonne p.a.

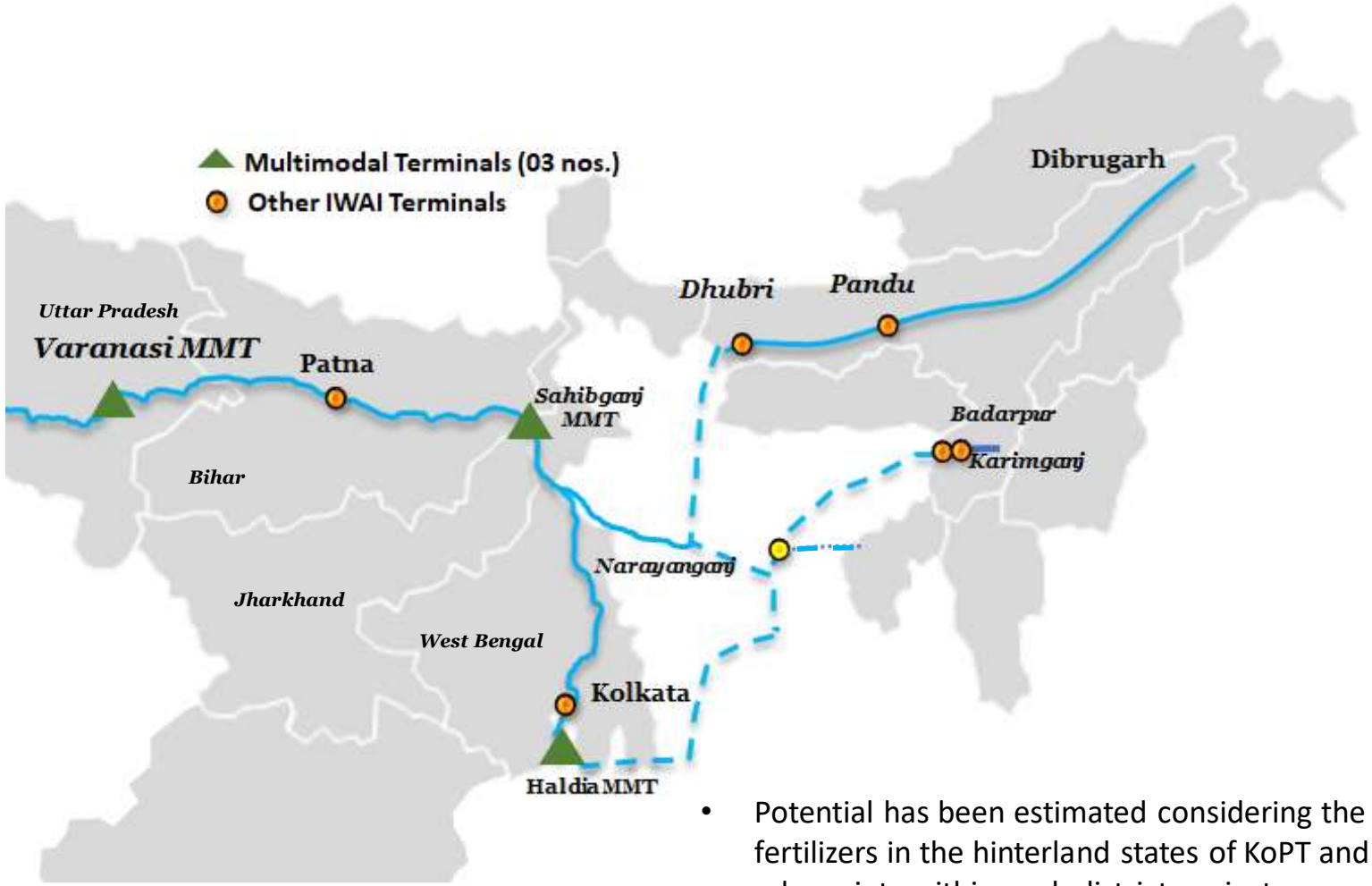
S. No.	Terminals in West Bengal	Potential MOP quantity	Potential Total quantity
1	Haldia	11,737	25,266
2	Farakka	25,221	54,292
3	Hazardwari	18,061	38,879
4	Katwa	4,365	9,396
5	Shantipur	6,268	13,493
6	Tribeni	57,010	122,722
	TOTAL	**1,22,662**	**264,047**

- Potential in W. Bengal has been identified considering the district-wise consumption of imported fertilizers and based on the mapping done between rake points within each district with the nearest IWT (permanent/ temporary) terminal (within 100 km of the rake point in each district)

** From cross bank location Manihari*

Imported fertilizer movement (through KoPT)

- **IWT movement of imported fertilizers to the hinterland states of NW-1 is dependent on imports at HDC/ KDS (KoPT). Currently imports for these states are not taking place through KoPT.**



S. No.	Destination State	Potential imported fertilizer quantity (Million tonne p.a.)
1	Assam	0.11
2	Bihar	1.04
3	West Bengal	0.27
	TOTAL	**1.42**

- Potential has been estimated considering the district-wise consumption of imported fertilizers in the hinterland states of KoPT and based on the mapping done between rake points within each district against nearest (permanent/ temporary) terminal (within 100 km of the rake point in each district)

Recommendations for transportation of fertilizers using IWT mode

- Following measures would help in shifting of some fertilizers to the IWT mode

S. No.	Measure	Description
1	**Fertilizer imports for regions along NW-1 and North East through Haldia Dock Complex (KoPT)**	• HDC and Kolkata port be used for imports of fertilizer going to the states of West Bengal, Bihar, Eastern UP and the entire North Eastern region • Imported fertilizers may be unloaded directly into barges through lighterage operations at HDC
2	**Development of HDC (KoPT) as a hub for movement of domestic fertilizers to Eastern and North Eastern regions**	• Domestic fertilizers may be shipped to HDC using Coastal route for transshipment and further transportation using the IWT mode to demand centers in Eastern and North Eastern regions • HDC and IWAI's upcoming Multimodal Terminal at Haldia may be used for IWT movement to NW-1, NW-2 and NW-16.

Recommendations for transportation of fertilizers using IWT mode

- Following measures would help in shifting of some fertilizers to the IWT mode

S. No.	Measure	Description

3	**Development of IWAI's terminals as distribution hub**	• IWAI's following permanent terminals are equipped with handling equipment and storage facilities and may be used for storage and distribution of fertilizers
		  • Sahibganj (4,000 sq. m.) and Gaighat (Patna) (675 sq. m.) on NW-1
		  • Dhubri (750 sq. m.) and Pandu (3,150 sq. m.) on NW-2:
		  • Badarpur (480 sq. m.) and Karimganj (1,900 sq. m.) on NW-16
		• IWAI may consider proposal for development of facilities by industry on IWAI land near fertilizer demand centers.

4	**Priority/ Dedicated berthing arrangement for Inland vessels**	• Availability of dedicated berths for inland vessels or priority berthing arrangements in the HDC area will enhance attractiveness of IWT mode for evacuation of fertilizers from port area vis-à-vis other modes.

Recommendations for transportation of fertilizers using IWT mode

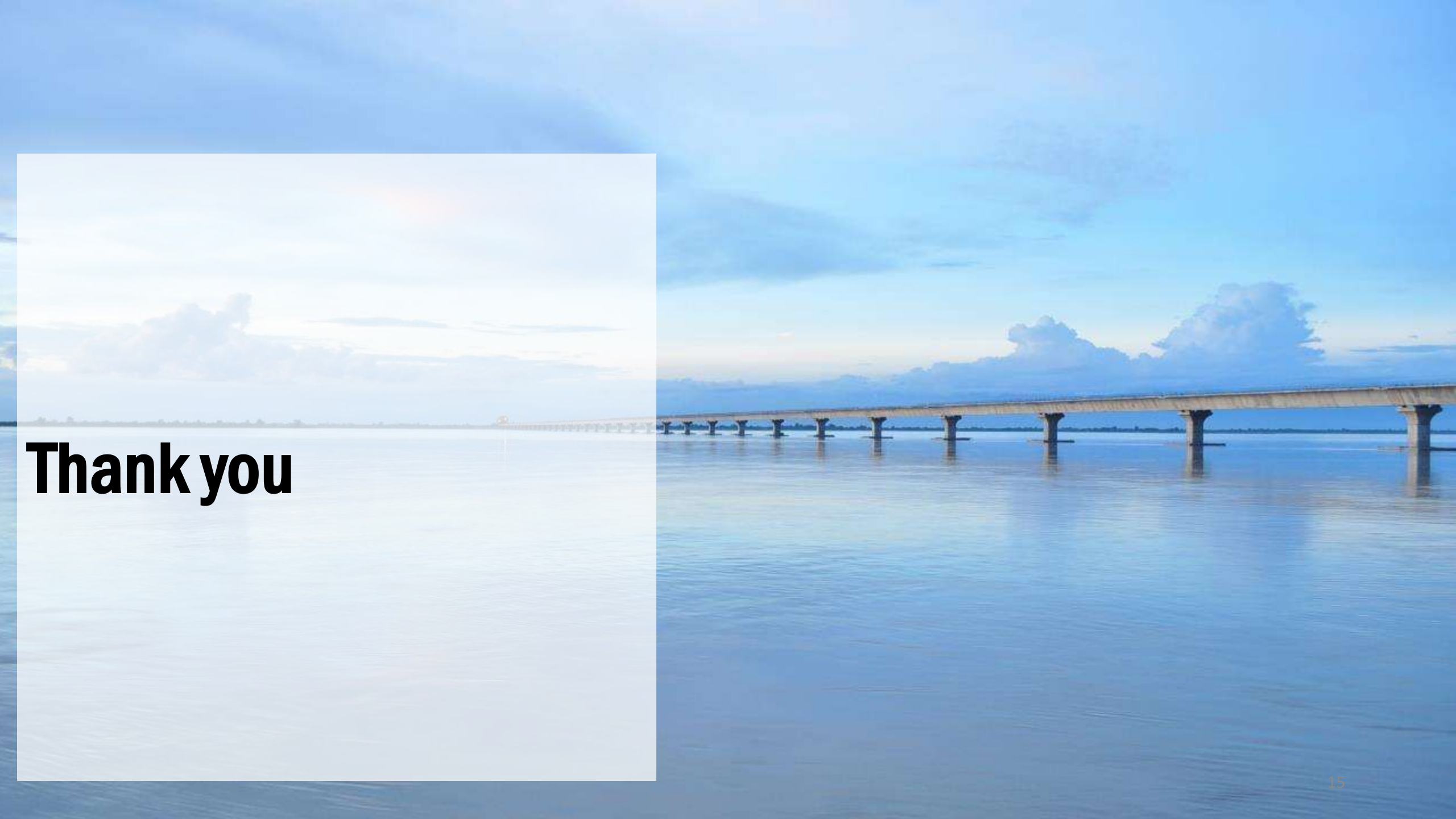
- Following measures would help in shifting of some fertilizers to the IWT mode

S. No.	Measure	Description
5	**Reduction in GST rate on multimodal transportation**	• As IWT mode will essentially be part of a multimodal solution, the applicable GST rate is 12% (for multimodal transportation) and benefit of NIL GST on IWT mode (standalone) can't be availed • To enable the trade to leverage the benefit of NIL/ lower GST on IWT/ Coastal mode, it is proposed to reduce the GST rate on multimodal transportation.
6	**Incentives to make IWT commercially attractive**	To attract cargo movement on the IWT mode, following incentives are proposed: • **Moratorium on Waterway usage charges for IWT movement:** IWAI has proposed a moratorium on currently applicable Waterway usage charges (INR 0.02/ GRT/ Km). • **Waiver of wharfage charges at KoPT (HDC and KDC)**: Waiver of wharfage levied by KoPT (approx. Rs. 14/ MT for fly ash and Rs. 28.1/MT for other goods) on non KoPT jetties will make IWT operations further economical and incentivize shift of cargo. 50% waiver is proposed

Foreseeable Challenges

The foreseeable challenges in the movement of fertilizers on National Waterways are listed below:

- Limited availability of barges
- Handling of fertilizer using IWT mode will require multiple handling causing impact on logistics cost
- Transit time using IWT mode will be higher compared to road and rail



Thank you