
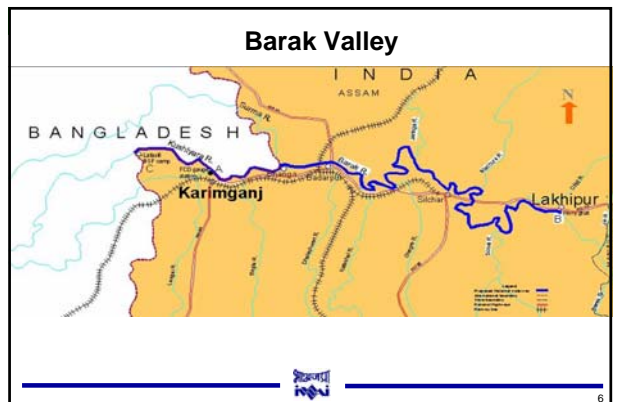
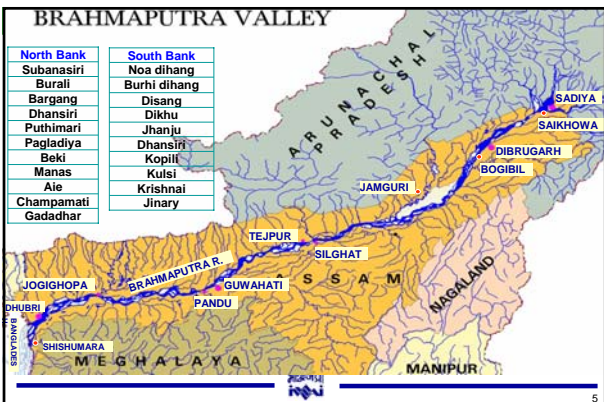
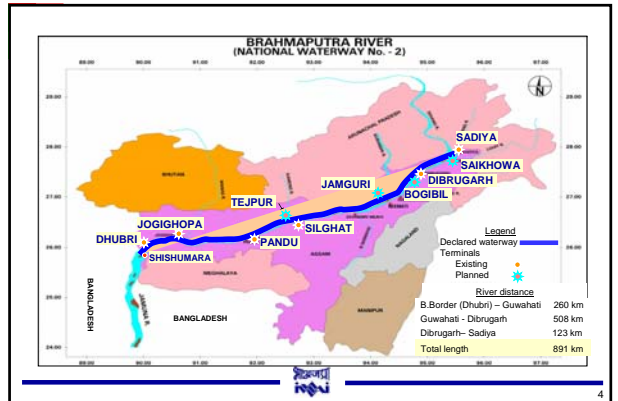
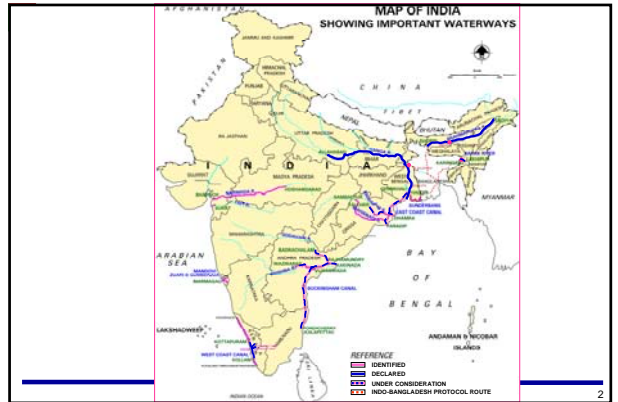


Consultation Workshop
**“Natural Resources, Water and the Environment Nexus
 for Development and Growth in North-East India”**

**Presentation
 on**
Options for Inland Water Transport

by
Susheel Kumar, Vice-Chairman, IWAI
27th June 2006
New Delhi

Structure of Presentation

- Relationship between Growth and Transport efficiency
- IWT in India
- IWT in NER
- IWT Development – Issues in NER



7

Trade and Growth

- "...trade has a quantitatively large, significant, and robust positive effect on income." Frankel and Romer (1999)
- Most countries – outward oriented strategy – acceleration in growth rates



8

Transport cost - a determinant of trade

- With liberalization, relative importance of transport costs as a determinant of trade has increased
- Raising Transport costs by 10% reduces trade volumes by more than 20%

(Source: Policy Research Working Paper, World Bank)



9

Transport efficiency role of IWT

- Transportation is one of the key elements of supply chain
- Transport efficiency impacts nation's/ region's economy
- Efficiency dependent on integration of modes and inter-modalism index
- IWT is energy efficient, also by nature inter-modal
- Prominent maritime/riverine economies have balanced modal share(IWT)
- Modal share in India - insignificant



10

IWT Scenariosnapshot

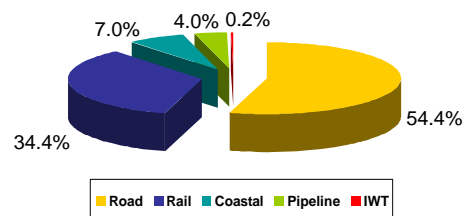
- 14,500 kms of navigable inland waterways in the country.
- IWAI – the infrastructure provider, developer and regulator set up in 1986
- 3 National Waterways, 3 more under process
- 2.4 billion ton-km cargo movement only (Total 1000 billion ton-km)



11

Current Modal Share

• Total Inland cargo transport 1000 btkm



Source: TCS Report 2003



12

Constitutional Provisions for IWT

- Inland Waterways figures in all the 3 lists of Constitution
- Development and regulation of Inland Waterways declared as National Waterways (by an Act of Parliament) vests in Central Government
- IWAI is the statutory body for development and regulation of inland waterways



13

Thrust Area

“Encourage gradual shift of domestic cargo from rail and road modes to inland water transport, increasing its share from the present level of less than 1% to at least 2%.”



14

Modes of Transport in NER

- Roads
82,000 kms, out of which 56,000 kms unpaved (Kachcha)
- Rail
2,500 kms, out of which only 961 kms standard gauge tracks
- Inland Waterways
 - ❖ 891 kms NW 2
 - ❖ Other waterways 3,000 kms, out of which many have potential navigability



15

Importance of IWT for NER

- IWT through Sunderbans – Bangladesh via NW2 or via Barak offers shorter route (Road/rail via Chicken's Neck)
- IWT operational even during flood season
- Best suited for bulk commodities & Project cargo/ODC
- Provides best and low cost connectivity to hinterland
- Employment potential enormous - every km of operation of waterways generates roughly 3000 new jobs (NCAER Study Feb 2006)



16

Importance of IWT for NER

- IWT is the most employment intensive mode of transportation service. Rs. 1 lakh revenue collection in IWT results in 6.5 manyears of employment, while in railways 0.58 manyears & other transport modes 0.87 man years
- So Inland Water revenue collection of Rs. 1 lakh (0.1 million) results in 11 times the employment that is generated in Railways or roughly 8 times employment that is generated in all other modes of transportation (NCAER study based on CSO reports & NSSO surveys)



17

Importance of IWT for NER

Therefore,

- Development of IWT mode in NER a strategic & economic imperative
- Need for an investment & development strategy
- Also need for increasing the “efficiency” of IWT mode.



18

IWT Development paradigm in NER

- Dhubri-Sadiya stretch (891 kms.) of Brahmaputra declared as National Waterway(No. 2) in 1988
- Barak river – declaration as National Waterway under process
- Brahmaputra's 21 tributaries (11 north, 10 south) render it a fishbone structure
- Responsibility shared between Centre and State – Constitutional Provisions



21

IWT Development paradigm in NER

- Centre developing National Waterways and State other Waterways
- Special budgetary dispensation for IWT development
- Additionally 100% grant to the State through Centrally Sponsored Scheme(CSS)
- IWT link between East and NER through Bangladesh
- Hydel projects – IWT possibilities



22

Budgetary support

- 10% GBS of Dept of Shipping is set apart for IWT activities in North East
- Rs 235 crore (51.09 Mn US\$) allocated in 10th plan under NE pool
- Growing expenditure pattern in last five years
- CSS – 100% grant to NE states



21

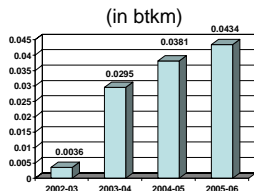
Expenditure Pattern

Year	Expenditure	
	Rs in crore	US\$ in Mn
2000-01	5.3	1.15
2001-02	8.8	1.91
2002-03	15.43	3.35
2003-04	20.70	4.50
2004-05	25.02	5.44
2005-06	35.30	7.67
2006-07 (budgeted)	79.08	17.19



22

Cargo movement on NW-2 (Organised sector)

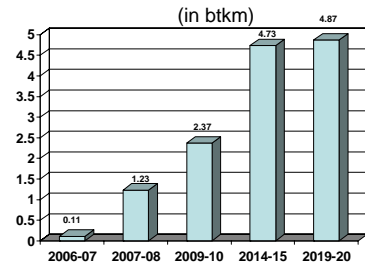


Route	Cargo
Kolkata-Pandu	Coal, bitumen, steel
Pandu-Kolkata	Gypsum, tea, coal
Jogighopa-Kolkata	Coal (Meghalaya)
Tezpur-Kolkata	Tea
Dibrugarh-Kolkata	Tea
Silghat-Budge	POL
Budge	



23

Cargo movement on NW-2 (Projected)



24

Infrastructure available on NW - 2

- Floating terminals at Dhubri, Jogighopa and Pandu
- Least available depth (LAD) of 2m is maintained between Dhubri and Dibrugarh (768 km)
- River Conservancy works namely bandalling and dredging carried out on regular basis
- Day navigation channel marks on the entire waterway
- Pilotage being provided for IWT vessels
- Night navigation aids provided between Dhubri and Pandu(255 km).



25

Hardware support for NW-2

- 1 - Hydraulic Surface dredger
- 1 - Cutter suction dredger
- 4 - Survey Launches
- 7 - Pontoons for floating terminals
- 3 - Cargo vessels
- 5 - Pontoon mounted cranes
- 2 - Shore cranes
- 1 - Container crane



26

On-going projects on NW-2

Permanent Terminal at Pandu

- Low level jetty likely to be completed by March 2007 – Rs 30 Cr (6.52 Mn US\$)
- Rail connectivity being provided
- High level jetty - project sanctioned



27

On-going projects on NW-2

- Construction of:
 - ❖ One Hydraulic surface dredger
 - ❖ Floating dry dock
- Night navigational aids from Pandu to Dibrugarh by March'07
- Development of Jogighopa terminal for Coal handling



28

Projects planned for NE region in 2006-08

PROJECT	COST	
	(Rs in Cr)	(US\$ in Mn)
A. Fairway- NW-2		
• Channel of 45 m width & 2.0/1.5 m depth	12.00	2.61
• River training (pilot projects)	2.50	0.54
B. Navigational aids- NW-2		
• 24 hrs navigational aids (Dhubri- Dibrugarh)	16.00	3.48
C. Terminals- NW-2		
• Low level jetty, Pandu	10.00	2.17
• High level jetty, Pandu	14.00	3.04
• Jogighopa	7.00	1.50
• Floating jetties Dhubri, Tejpur, Silghat, D'garh Jamguri, Bogibil, Saikhowa and Sadiya (8)	2.50	0.54



29

Projects planned for NE region in 2006-08

• Operation of existing terminals	10.00	2.17
D. Vessels		
• 4 CSD units	60.00	13.04
• 4 units of Tug+ two barges	40.00	8.70
• 2 survey launches	7.10	1.54
• 1 floating dry dock	13.50	2.93
• 1 Hydraulic Surface Dredger	2.00	0.43
• 1 POL and & 1 Container vessel	1.50	0.33
E. Office at Guwahati	5.00	1.09
Sub Total NW-2	203.10	44.15
Protocol routes (Sunderbans)	6.00	
Barak river as national waterway	8.00	
Total	217.10	47.20



30

IWT Link between North-East and East

- IWT Protocol between India and Bangladesh for transit and trade
- Ports of call: Haldia, Kolkata, Pandu and Karimganj in India; Narayanganj, Sirajganj, Khulna and Mongla in Bangladesh



31

Protocol routes linking North-East, NW-1 & NW-2



32

River Barak

- Declaration proposal for Karimganj – Lakhimpur (152 km) stretch of Barak river under consideration
- Estimated cost of development – Rs. 46 crore (10 Mn US\$)
- Through Indo-Bangladesh protocol route this river is also connected to Haldia and Kolkata Ports

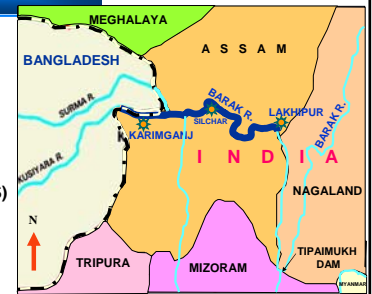


33

Proposed National Waterway

- River Barak
 - ❖ Length -152km
 - ❖ Development cost - Rs. 46cr (10 Mn US\$)

Stretch	Km
Karimganj - Lakhipur	152



Source :TEF Study by RITES

34

Proposed National Waterway

- River Barak
 - ❖ Length -152km
 - ❖ Development cost - Rs. 46cr (10 Mn US\$)

Stretch	Km
Karimganj - Lakhipur	152



35

Hydel projects

- Hydel projects on Subansiri river – tremendous scope for IWT involvement for transportation of construction/project materials
- Reconnaissance survey done by IWAI
- Detailed survey done by MPSO
- IWT possibilities exist – to be exploited



36

Tizu river (Nagaland)

- Request received from Nagaland for survey of **Tizu river** in order to explore possibility of Indo-Myanmar border trade
- State Govt requested to formulate proposal under Centrally Sponsored Scheme



37

Gumti and Haora rivers (Tripura)

- Request received from Brahmaputra Board and Govt. of Tripura for survey of **Gumti and Haora**
- Survey work awarded to MPSO
- Survey work started in Nov' 04 - Got suspended due to Tsunami- likely to restart in Oct 06



38

Alternate route linking East to North East

- MEA has commissioned a study through RITES
- **Finding:** Kolkata - Sitwe(Myanmar) sea route (720 km), Sitwe - Kaletwa(Myanmar) IWT route (226 km) and Kaletwa – Saikah (Mizoram) by road (167 km) is feasible
- Further action on.



39

Centrally Sponsored Scheme (CSS) for IWT

States can avail financial assistance for:

- Survey and studies
- Waterway development
- Terminals
- Navigation aids

100% grant to North-eastern states



40

Implementation of CSS

....progress in NER

- 3 projects in Assam and one in Tripura sanctioned
- Assam
 - ❖ Construction of Pontoons for jetties on the northern bank of river Brahmaputra at Guwahati - Rs 2.60 cr(0.56 Mn US\$)
 - ❖ Construction of Pontoons for jetties on the southern bank of river Brahmaputra at Guwahati- Rs 3.52 cr(0.76 Mn US\$)
 - ❖ Construction of pontoons for jetties on Brahmaputra - Rs 4.20 cr (0.91 Mn US\$)
- Tripura
 - ❖ Development of Dumber lake for ferry services- Rs 0.47 cr (0.10 Mn US\$)



41

IWT Development paradigm

....Issues in NER

- Hydrographic issues-removal of navigational bottlenecks
- Adoption of 'Fish-bone' model - States to have some institutions to interface with IWAI
- Closer involvement of communities for smaller waterways development in unorganised sector
- Infrastructure Investment issues - Public investment, PPP
- Investment in vessels - their efficiency



42

IWT Development paradigmIssues in NER

- Issues related with Transport Policy and Planning
- International cooperation issues- Bangladesh, Myanmar



43

Thank you

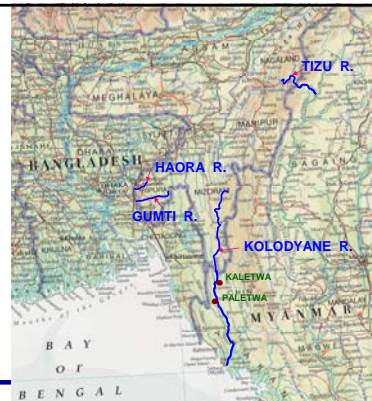


44

Constitutional provisions for Inland Water Transport

LIST 1 (Union List)	LIST - 2 (State List)	LIST 3 (Concurrent List)
24. Shipping and navigation on inland waterways declared by Parliament by law to be national waterways, as regards mechanically propelled vessels; the rule of the road on such waterways.	13. Communications, that is to say, roads, bridges, ferries and other means of communication not specified in List 1; municipal tramways; ropeways; inland waterways and traffic thereon subject to the provision of List 1 and List 3 with regard to such waterways; vehicles other than mechanically propelled	32. Shipping and navigation on inland waterways as regards mechanically propelled vessels, and the rule of the road on such waterways and the carriage of passengers and goods on inland waterways subject to the provisions of List 1 with respect to national waterways.

[back](#) 45



[Back](#)
[Back](#)
[Back](#)

46



[back](#) 47



[back](#) 48



Left hand day channel mark

Right hand day channel mark



Permanent terminal at Pandu-under construction

Similar terminal constructed at Patna

