

THE FUTURE OF DRY BULK TRANSPORT IN INDIA

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PORTS OF INDIA

- Major Ports 13 (7 east coast, 6 west coast)
- Non Major Ports 187
- Coastline 7500 km(incl A&N)
- Traffic Handled 465 millionMT (03-04)
- DRY BULK 34%
- Key Problem Very Low productivity

Issues with road transport of bulk materials in India

- **Road Conditions and allowable loading**
- **Unorganised transport sector**
- **Ownership vs Hire**
- **Empty returns**
- **Peripheral equipment**
- **Silos and filters requirements**
- **Rising fuel and maintenance costs**

POTENTIAL IN INLAND WATERWAY MOVEMENT

- Total goods moved yearly (incl dry bulk)

1000 billion tonne km

Total moved by inland waterways 1500
million tonne km

Usage: 1.5%

ADVANTAGES OF INLAND WATER TRANSPORT

- **Extensive river system: 14500km navigable waterways/5700km of this navigable by motorized craft**
- **485 km of canals**
- **Cheaper to develop: about 10% of equivalent 4 lane roadway**
- **Cheaper maintenance**

- **Greater fuel efficiency: 1 litre of fuel can move**
 - **24 ton-km of freight by road**
 - **85 ton-km of freight by rail**
 - **105 ton-km by inland water transport**
- **Very cost effective**

HANDLING IMPORTED DRY BULK

- Use inland waterway link
- Bulk vessels can be at anchorage and be lightered
- Lightering barges can use inland terminals to discharge and store or distribute materials
- Major port congestion relieved

Rivers of India



Map not to scale

This is just a guide map and it has no connecton with the correctness of State or International boundaries.

PROJECTS ON ROAD CONNECTIVITY TO MAJOR PORTS



NOTE

1. Based upon Survey of India map with the permission of the Surveyor General of India.
2. The responsibility for the correctness of internal details rests with the publisher.
3. The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.
4. The external boundaries and coastlines of India agree with the Record/Master Copy certified by Survey of India.

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Certified for Publication by Survey of India
With their letter no -CI 407/62-NI of 2001 -XXX
Dated 13/3/2003

Prepared By: Information Technology & Planning Division, NHAI

Typical mechanised loading of barges from rail wagons



Typical River Terminal Jettys





