Presentation on Indian Inland Waterways

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by

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**Inland Waterways Authority of India**

- Inland Waterways Authority of India (IWAI) was set up in October 1986 vide IWAI Act 1985
- National Waterways (NW) declared through Acts of Parliament come under the purview of Central Govt/IWAI; other waterways under the respective State Govts
- IWAI is mandated to take up
  - Infrastructure development & regulation on NWs
  - Techno- economic feasibility studies
  - Advise the Central Govt on IWT matters
  - Assistance to States in IWT development
IWT Scenario...snapshot

- There are about 14,500 km of navigable waterways in India (NTPC Report- 1980)
- Out of this only 4,332 km have been declared as National Waterways
- There are five National Waterways
  - NW 1 - declared in 1986
  - NW 2 - declared in 1988
  - NW 3 - declared in 1993
  - NW 4 & 5 - declared in 2008
- Cargo movement by IWT increased from 32 MMT (1.6 btkm) in 2003-4 to 74 MMT (4.8 btkm) in 2010-11
- IWT in India has only 0.5 % share; China has 8.7 %, USA 8.3 %, Europe 7% (Netherlands 35%)
National Waterway-1
Ganga – Bhagirathi – Hooghly river system
Haldia (Sagar island) – Allahabad – 1620 km
National Waterway-3

West Coast Canal (Kottapuram – Kollam)
Champakkara & Udyogamandal canals

River distance
- Kottapuram - Kollam: 168 km
- Udyogamandal canal: 23 km
- Champakkara canal: 14 km
- Total length: 205 km

Legend
- Waterway alignment
- Road
- Rail
- Important places
National Waterway-4
(Kakinada- Puducherry canal along with rivers Godavari & Krishna)

River distance
- Kakinada - Puducherry: 767 km
- Godavari river
- Bhadrachalam – Rajahmundry: 171 km
- Krishna river
- Wazirabad – Vijayawada: 157 km
- Total length: 1095 km

Legend
- Declared waterway
- Road
- Rail
- Important places
National Waterway-5
(East Coast Canal integrated with Brahmani and Mahanadi delta river system)
**Infrastructure provided on NW 1, 2 & 3**

A. **Fairway**

**NW 1**
- 2.5 m depth in Haldia - Farakka (560 km)
- 2.5 m in Farakka - Barh (430 km)
- 2.0 m in Barh - Ghazipur (260 km)
- 1.5 m in Ghazipur- Allahabad (370 km)

**NW 2**
- 2.5 m in Dhubri- Neamati (630 km),
- 2.0 m in Neamati- Dibrugarh (138 km)
- 1.5 m in Dibrugarh- Sadiya (123 km)

**NW 3**
- 2.0 m in 121 km stretch
- 1.5 m in 84 km stretch (dredging in 22 km is in progress)
Infrastructure provided on NW 1, 2 & 3

B. Navigational aids

- Fortnightly surveys and issue of River Notices
- Navigation charts and river atlas
- 24 hrs navigation aids in Kolkata- Ballia (1000 km) in NW-1, Dhubri- Silghat (440 km) in NW-2 and entire NW-3
- DGPS stations at Swarupganj, Bhagalpur and Patna on NW-1; Jogighopa on NW-2 and coming up at Varanasi on NW-1 and at Silghat & Dibrugarh in NW-2
- Pilotage assistance also available on NW-1 & 2
• 24 hrs navigation aids in Brahmaputra
Infrastructure provided on NW 1, 2 & 3

C. Terminals

NW-1

- Fixed RCC terminals at Patna, Farakka & Pakur
- Fixed terminals coming up at Kolkata & Varanasi
- Floating terminals at 16 places

NW-2

- Fixed RCC terminal at Pandu
- Floating terminals at 8 places

NW-3

- Fixed RCC terminals at 10 places
Permanent IWT terminal at Gaighat, Patna

05/11/200

Mobile Crane with Hook and Grab in NW-1
Loading of IWT Vessel at Kolkata (NW-1)
Fly ash terminal at Budge-budge, Kolkata
Low level jetty at Pandu
Low level jetty at Pandu
Loading of HSD at IWT Terminal, Silghat (NW-2)
Terminal at Aluva, Kochi (NW-3)
## Infrastructure provided on NW 1, 2 & 3

**D. Dredgers, Survey launches & cargo vessels**

<table>
<thead>
<tr>
<th></th>
<th>NW-1</th>
<th>NW-2</th>
<th>NW-3</th>
</tr>
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<tbody>
<tr>
<td>Dredgers</td>
<td>9</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Survey launches</td>
<td>12</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Cargo vessels</td>
<td>4</td>
<td>3</td>
<td>-</td>
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<tr>
<td>(for demonstration)</td>
<td>4</td>
<td></td>
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</table>
• Dredging in river Ganga
• Hydraulic surface dredger in Brahmaputra
Cargo vessel MV Rajagopalachari
Cargo vessel in Brahmaputra
National Waterways 4 & 5

- Declared in November 2008
- As per the Detailed Project Report (March 2010)
  - NW 4 (1078 km); Estt Cost: Rs 1515 cr
  - NW 5 (588 km); Estt Cost: Rs 4210 cr
- Govt has decided to develop commercially viable stretches under PPP mode
- Department of Economic Affairs (DEA) along with Asian Development Bank (ADB) has selected a Transaction Advisor (TA)
- TA will identify a Concessionaire (developer) to develop these stretches.
Proposed National Waterway – 6: River Barak

- Length: 121 km
- Development cost: Rs 123 cr (at 2012 prices)
- Status: Declaration in process
Cargo movement by IWT steadily increasing and reached 74 million tonne (4.8 btkm)
Movement of ODC on NWs

- ODC movement on NW 1, 2 & 3 being done for power plants, power grid, refineries etc (In tonnes)

<table>
<thead>
<tr>
<th></th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12 (June 11)</th>
</tr>
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<tbody>
<tr>
<td>NW-1</td>
<td>672</td>
<td>3308</td>
<td>9407</td>
<td>4809</td>
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<tr>
<td>NW-2</td>
<td>960</td>
<td>1092</td>
<td>679</td>
<td>-</td>
</tr>
<tr>
<td>NW-3</td>
<td>-</td>
<td>800</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>1632</td>
<td>5200</td>
<td>10086</td>
<td>4809</td>
</tr>
</tbody>
</table>

- User charges for ODC levied from Jan ’10
  - Revenue collection:
    - 2009-10 – Rs 0.16 cr
    - 2010-11 – Rs 1.48 cr
    - 2011-12 - Rs 2.04 cr (July 11)
• ODC movement in Brahmaputra
Container movement on NW 3
Cruise vessel on NW-1 (Ganga)
Cruise vessel on NW-2 (Brahmaputra)
**Cargo potential**

- **Thermal Coal**
  - On NW 1 there are 10 thermal power plants (TPS);
  - 11 more TPS expected
  - Total coal requirement – 70 Mn T per yr of which 14 Mn T to be imported for which IWT could be best solution
  - National Thermal Power Corporation (NTPC) committed 3 Mn T per Yr imported coal by IWT for Farakka for 7 years
  - TPA signed among IWAI, NTPC & Jindal ITF on 11.8.11
  - This may lead to more such projects

- **Fly Ash**
  - Fly ash movement by IWT increased from 2 lakh tonne in 2003-04 to 15 lakh tonne in 2010-11
  - With more power plants coming up, further increase expected
Cargo potential

- **Foodgrains**
  - Food Corporation of India (FCI) proposed to transport 30,000 T per month from Kolkata to Agartala via Ashuganj
  - FCI also proposed internal movement in Assam by IWT

- **Fertilisers**
  - There are 7 fertilizer plants near NW 1 with possibility of transportation of 7.65 lakh T per year by IWT

- **Containers**
  - Daily 200 containers are moved between Bolghatty & Willingdon islands on NW 3
  - There is prospects of movement of containers on NW-1 & 2
National Inland Navigation Institute

- The NINI was set up at Patna in 2004
- It has lecture halls, auditorium, hostel, library, dining facility etc
- Since then IWT training is being provided
- From 2009-10 its management has been outsourced to a professional firm
- Simulator based training introduced in 2010
- So far, training imparted to 1300 personnel
Doors open for the private sector

NINI building at Patna
Doors open for the private sector simulator at NINI
IWT & T Protocol

- An Inland Water Transit and Trade Protocol exists between India and Bangladesh
- It has four routes: (i) Kolkata-Silghat (ii) Kolkata-Karimganj (iii) Silghat-Karimganj (iv) Dhulian-Rajshahi
- There are five ports of Call in each country
  - **India**: Kolkata, Haldia, Pandu, Karimganj & Silghat
  - **Bangladesh**: Narayanganj, Khulna, Sirajganj, Mongla & Ashuganj
- The Protocol is presently valid up to 31.03.2012
**Kaladan multi modal transport project**

- The project is funded by MEA
- Provides alternative connectivity of North-East with mainland India through Kaladan river & Sittwe port in Myanmar
- Multi modal project: Road- IWT- Sea
- IWAI as PDC did the bid process management
- M/s Essar Projects appointed by MEA as main contractor for port & IWT components
- Cost of work (IWT & Port): Rs 342 crore
- Completion period is 3 years (June, 2013)
- Construction of Sittwe port is in progress
Critical Issues for revival of IWT sector

- Shortage of Inland Vessels
  - Inland Vessels Building Subsidy Scheme to be revived
  - Vessel Leasing Company to be set up
  - Level playing field for IWT: subsidy at par with rail & road
- Long term cargo assurance by shippers
THANK YOU