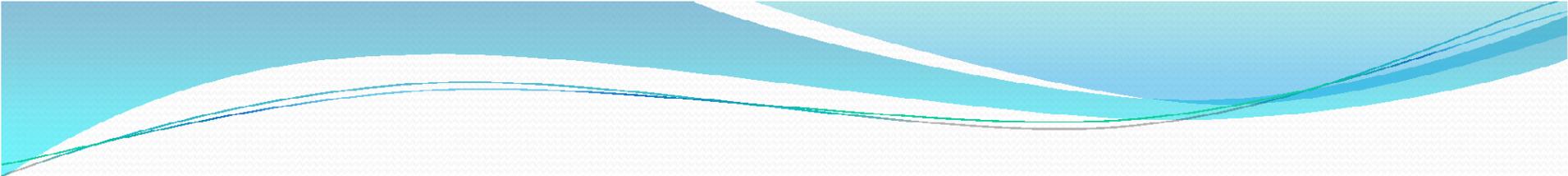


Transport Policy and Planning Framework

Other Modes of Transport: Water Transport

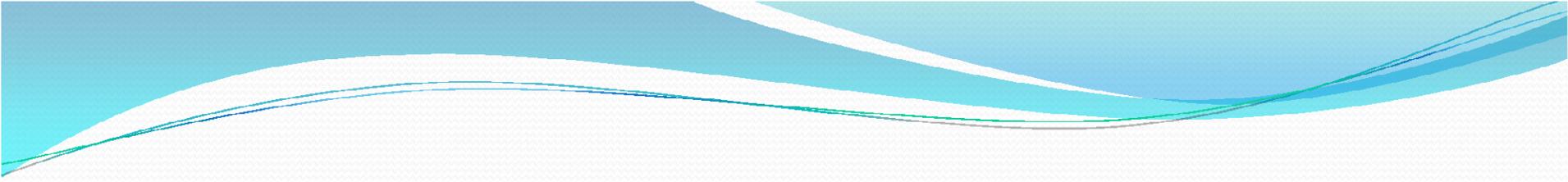
M. Ramachandran
Former Secretary, MoUD

25 November 2016



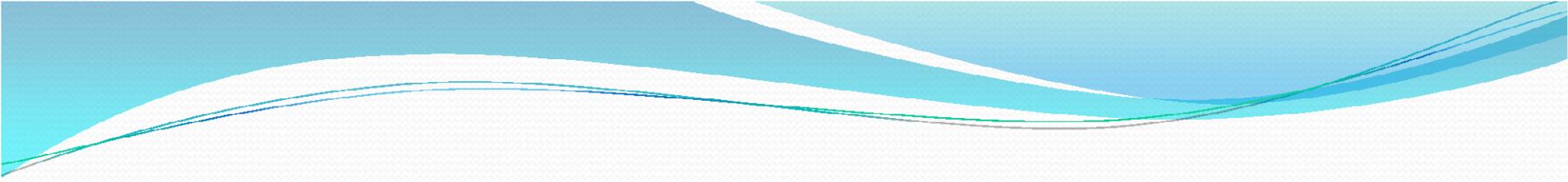
Comparison among different modes

- Goods transportation
- By road. - About 57%
- 22% in China. 37% in USA
- By rail. - 36%
- 47% in China. 48% in USA
- Share of shipping thru Waterways
- Nearly 6%
- 30% in China. 14% in USA



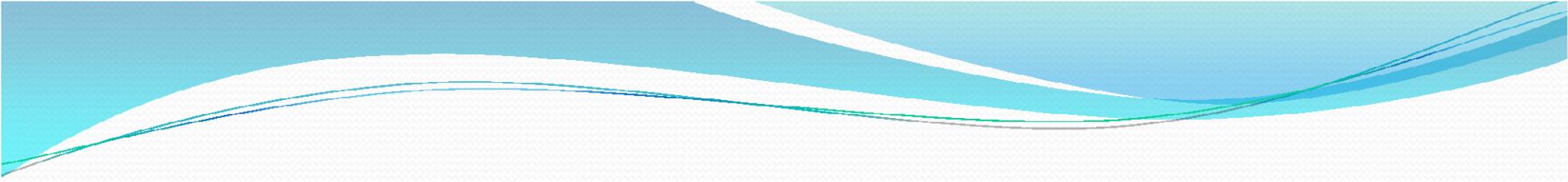
What does this mean

- High cost on the economy
- Higher dependence on fossil fuels
- High level of green house gas emission



What role for IWT

- Potential of 14,500 km of navigable waterways
- Only about 3000 km developed for commercial transportation
- Share of IWT in total cargo handled meager 0.4%



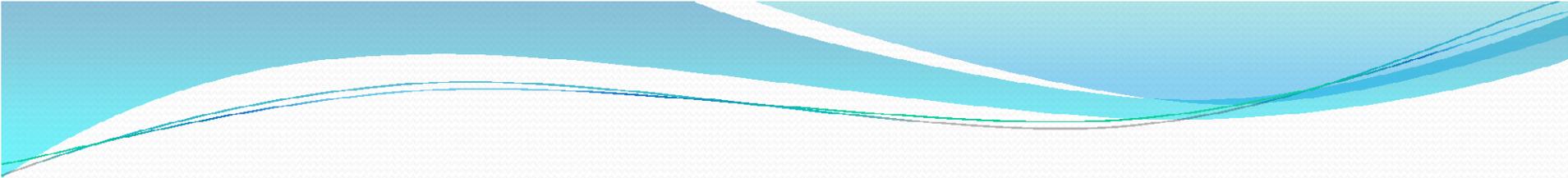
Why IWT

- Best suited for movement of bulk cargo Over dimensional cargo
Hazardous cargo
- Environment friendly mode of transport
- Fuel efficient
- Total external costs of inland navigation- 7 times lower than that of road transport
- Provides better hinterland connectivity to less developed and rural regions
- Better capacity to shift large volumes of cargo from congested roads



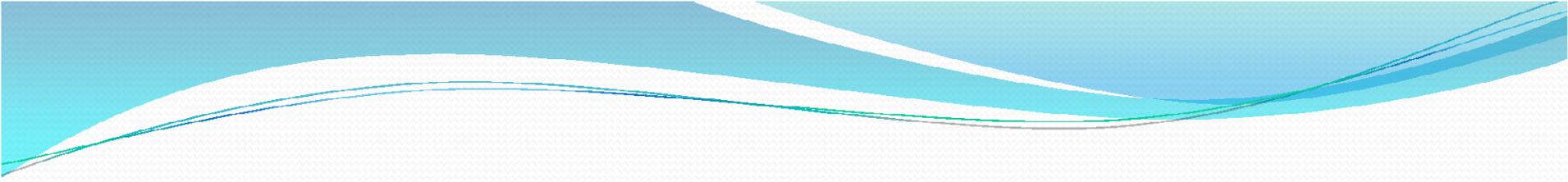
Steps to promote

- Water, largely a state subject
- Declaration of National Waterways
- 5 NWs - about 4400 kms
- Additional 106 new recently



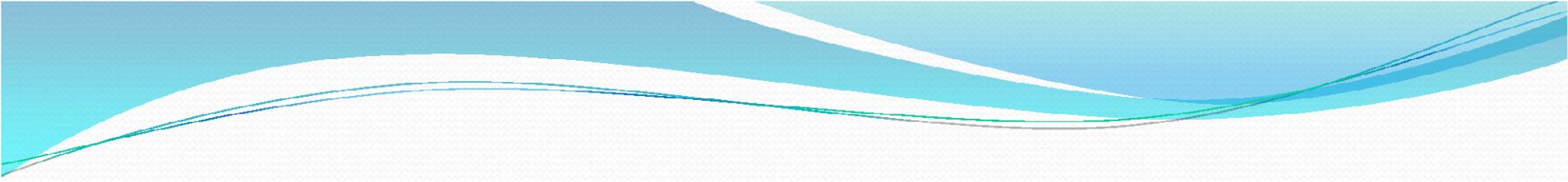
National Waterways

- NW 1. River Ganga - in 1986
- Allahabad to haldia. 1620 km
- NW 2. River Brahmaputra - in 1988
- Sadiya to dhubri. 891 km
- NW 3. West coast canal- in 1993
- Kottappuram to kollam + udyogamandal canal + champakkara canal
- 205 km
- NW 4. Kakinada to puducherry canal- in 2008
- Along with river Godavari and river Krishna. 1078 km
- NW 5. Brahmani and Mahanadi delta in 2008
- along with East coast canal. 588 km



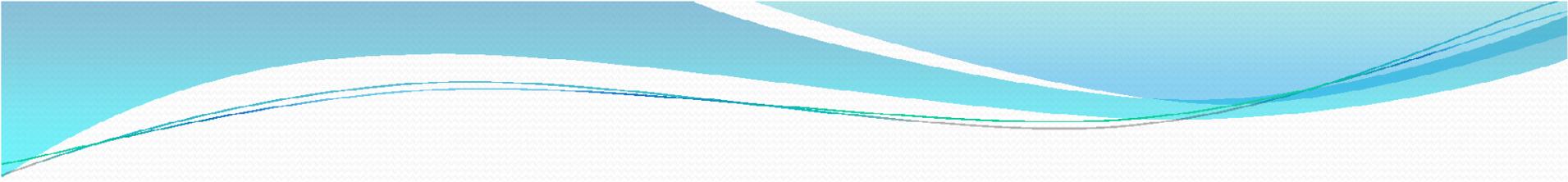
NW- What does it mean

- Within the purview of central govt
- IWAI mandated to develop
- Maintain infra for fairway/ navigational aids/ terminals/ bring in private inv
- Dev of adequate depth (LAD) 2.5 Mtrs
- Adequate air draft -5 KTR above Hfl
- Augmentation of cargo terminals
- Better linkage with road/rail
- Developing night navigation
- MRO facilities
- Augmenting vessel strength



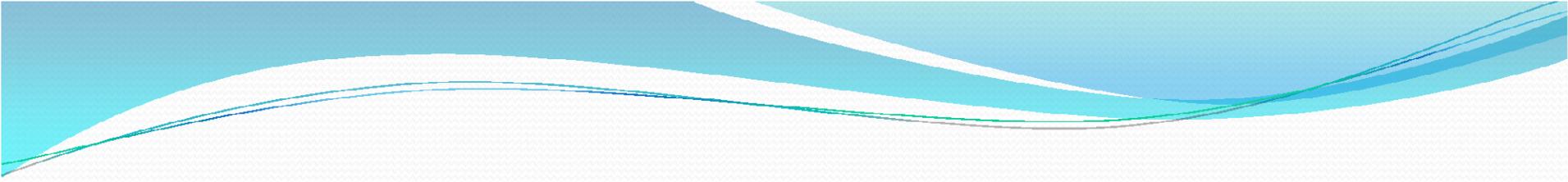
Plans for NW 1

- Passes thru UP, Bihar, Jhar, W Bengal
- Serves major cities like Haldia, Howrah, Bhagalpur, Patna, Gazipur, Varanasi, Allahabad
- Dev under Jal Marg Vikas Project
- Estimated cost Rs 5369 cr
- WB assistance also



Involves

- Dev of fairway
- Multi modal terminals at Varanasi, haldia,sahibganj
- 3 inter modal terminals at kalughat, gazipur, triveni
- Strengthening of river navigation system
- Conservancy works
- Moder River Info System
- DGPS
- Night navigation facilities
- Modern methods of channel marking
- Constrn of new navigational lock at Farraka

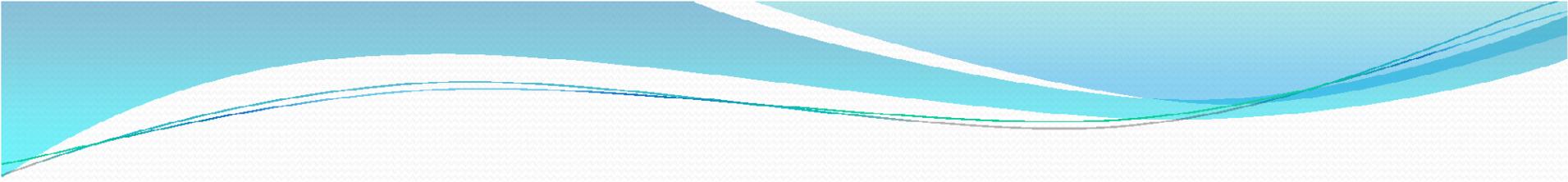


Other promotional measures

- MoU between IWAI and
- *Dedicated Freight corridor Corp of India
- To create logistic hubs with rail connectivity at Varanasi
- *Petronet LNG
- Petro Lng will provide Lng based mode of transp
- *Dredging Corp of India
- Purchase/ lease dredgers and operate

NW 2

- Operational
- Vessels moving
- Permanent Ro Ro terminal at dhubri in progress
- Slipway constrn at Pandu

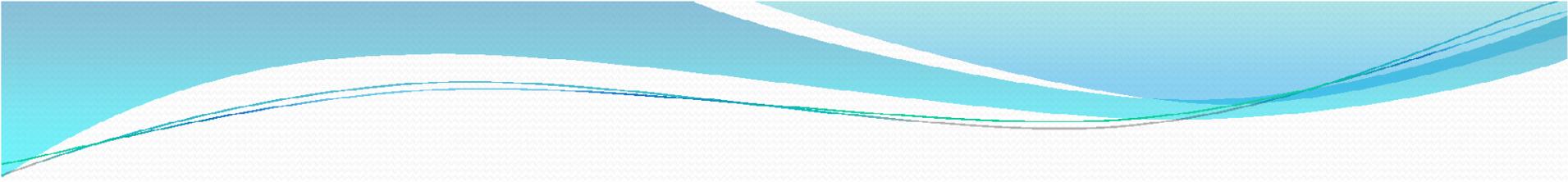


NW 3

- Constructed 8 permanent terminals
- GoK announced subsidy of Re 1 per tonne km for goods transported

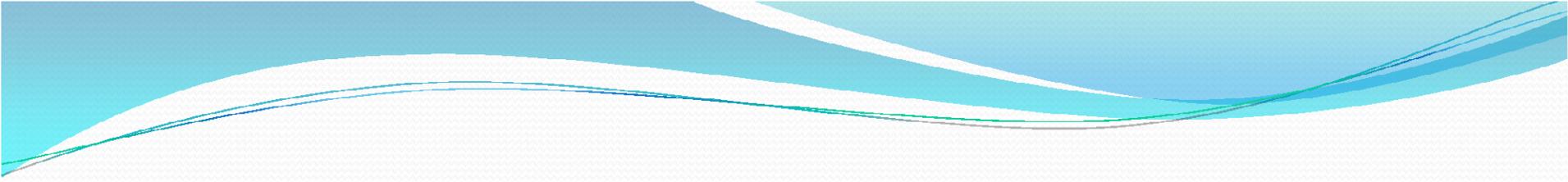
NW 4

- Muktyala to vijayawada stretch planned for immediate operation



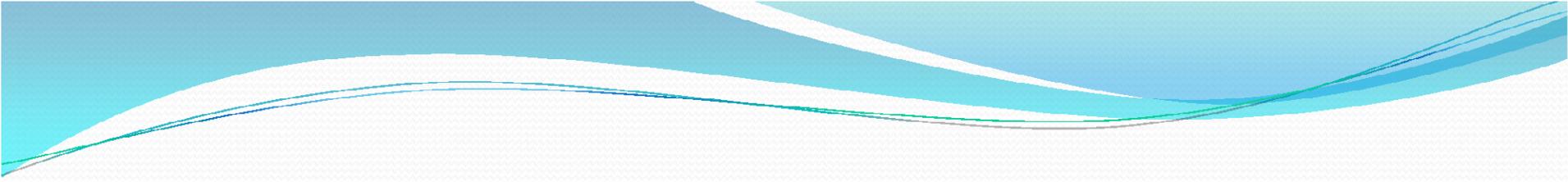
NW 5

- MoU between IWAI and Paradip port trust to develop waterway



Other important waterways

- Goa Waterways - 50 km +. 20 km
- Connectivity to ports
- Carries 50 MMT of iron ore for exports
- Mumbai waterways
- 11.2 MMT in 2005-06 to 20 MMT in 2011-12
- I do Bangladesh Protocol on IWT
- Vessels of one country can transit thru another country
- Kaladi not Multi modal transport Project
- Haldia to Mizoram connectivity involving Myanmar also

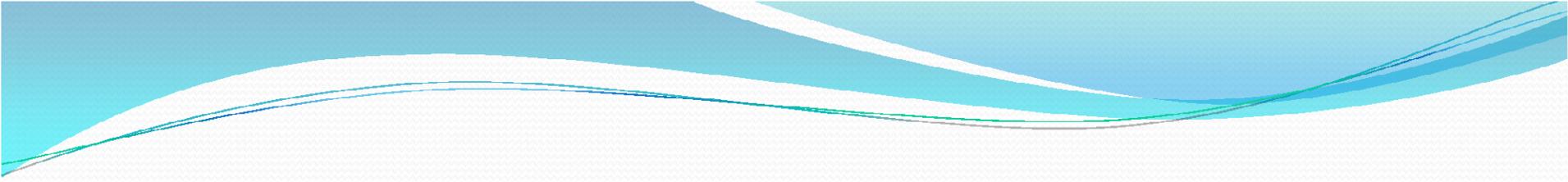


Cargo potential for 5 NWs

- 47 MMT by 2019-20
- 92 MMT by 2031-32
- Trends
- Movement on NW 1,2,3 increased
- From 3 MMT in 2005-06 to 7.1 MMT in 2011-12
- A recent Study says
- Food grains, automobiles, cement among 9 commodities targeted under Sagarmala
- Coastal shipping +. IWT share to go up to 10% by 2020 from current level of 7%

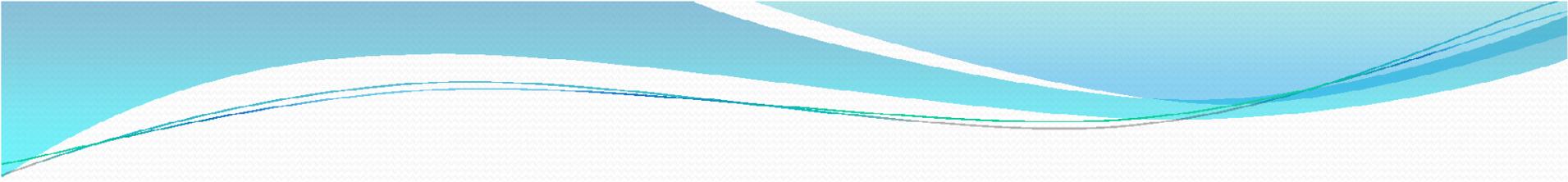
106 new NWs

- Declared in April 2016
- J& K and HP (4). 205 km
- Assam, WB, Mizoram (9). 398 km
- HP, Haryana, Punjab, Rajasthan, Gujarat (4). 223 km
- Raj, Guj. (2). 93 km
- Up, Raj, MP, Delhi, Har. (3). 153 km
- Maha, Telan. (6). 334 km
- Ker, TN, Kar, Telan, AP, Maha. (9). 446 km
- UP, Bihar, MP. (7). 494 km
- WB, Jhar. (6). 279 km
- Assam, Megha. (5). 349 km
- Survey & Pre feasibility study work awarded



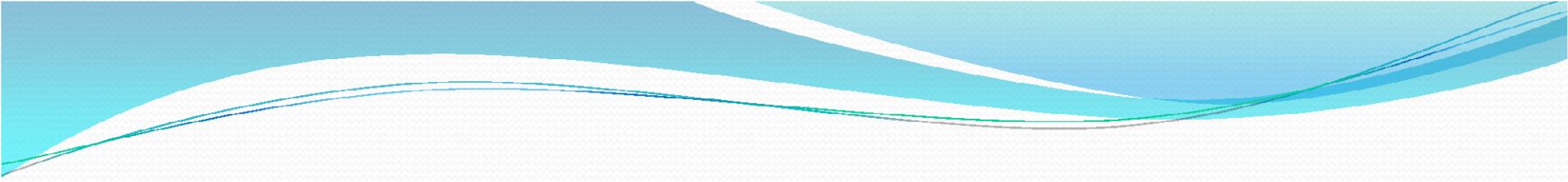
What role for states

- Land acquisition
- Maintenance of law & order
- Removal of obstruction on fairways



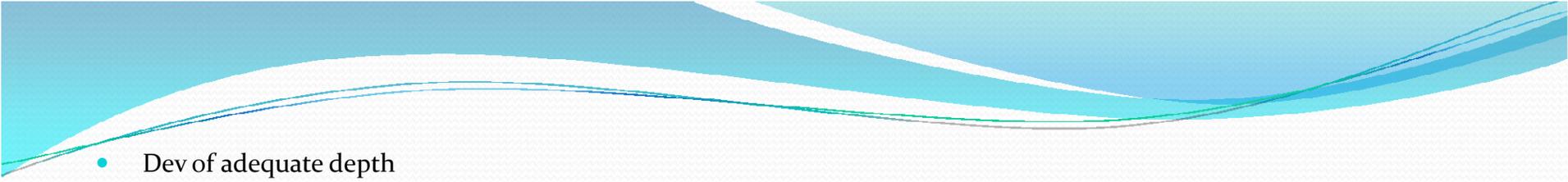
Inland Vessels Act amendment

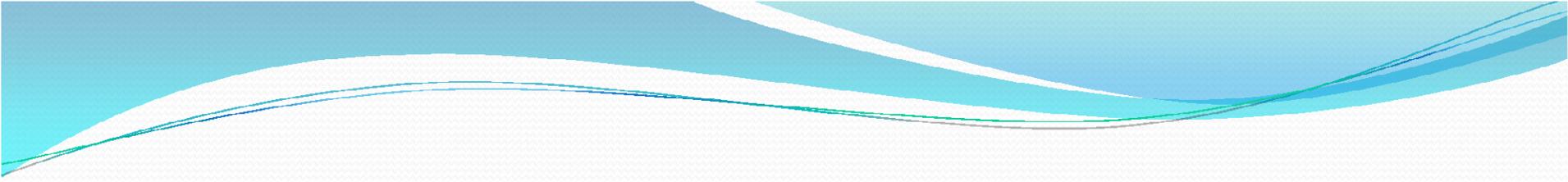
- To provide for
- Survey of such vessels
- Registration
- Credentials for staff
- Investigation into casualties
- Protection of passengers
- Insurance for vessels



Recommendations of NTDPC

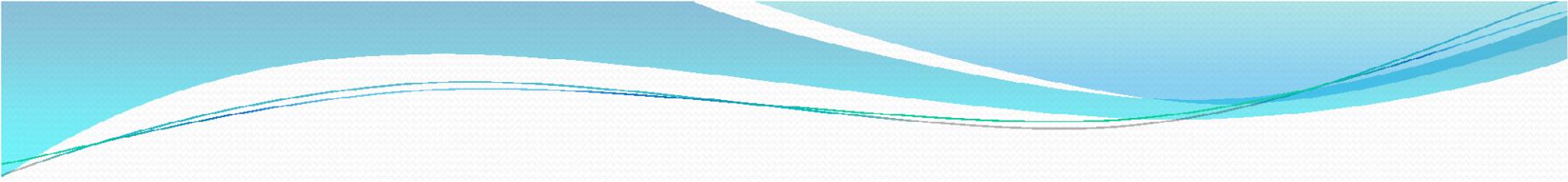
- Each river basin be developed with total integration of multiple uses like
- Irrigation
- Flood control
- Navigation
- Hydro power
- Ind/ domestic water use
- Fishing
- Tourism
- Ecology

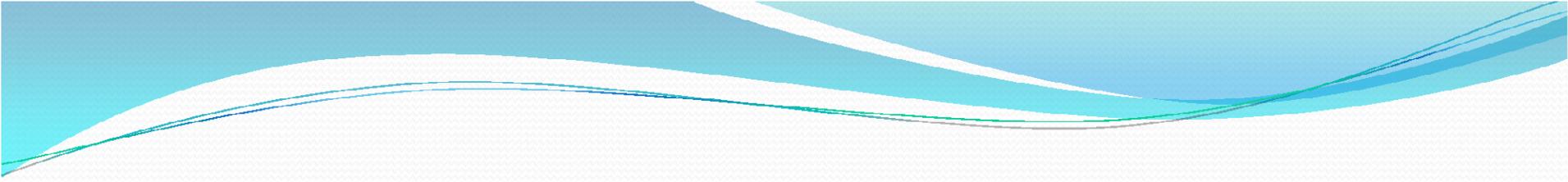
- 
- Dev of adequate depth
 - Meandering rivers- reduce route length
 - Consider central legislation of River Basin authorities
 - Adequate air draft
 - Augmentation of cargo terminals & IWT vessels
 - Focus on NE
 - Dev of night navigation
 - Dev of MRO facilities
 - Inland vessels also under Tonnage tax regime
 - Modal integration at terminals
 - Identification of potential multi modal corridors
 - Develop IWT feeder routes
 - Integrate IWT with coastal shipping
 - Encourage private participation
 - Improve quality of water transport statistics



Why poor Dev of IWT

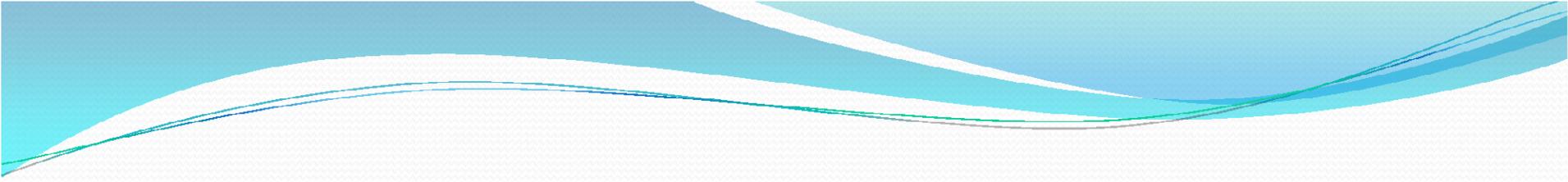
- Lack of enough public inv
- Amount spent to develop fairway of 2716 km in last 24 years= Rs 8 billion
- For NH. =. Rs 3000 billion
- For Rail = Rs 593 billion

- 
- Shortage of vessels
 - 12 th Plan said,
 - Fleet requirement for 15 bkm of IWT traffic= 2500 vessels each of 1000 tonne capacity
 - Only 600 vessels in entire country
 - 80 % of these in goa only
 - Investment needed. =. Rs 13,000 cr



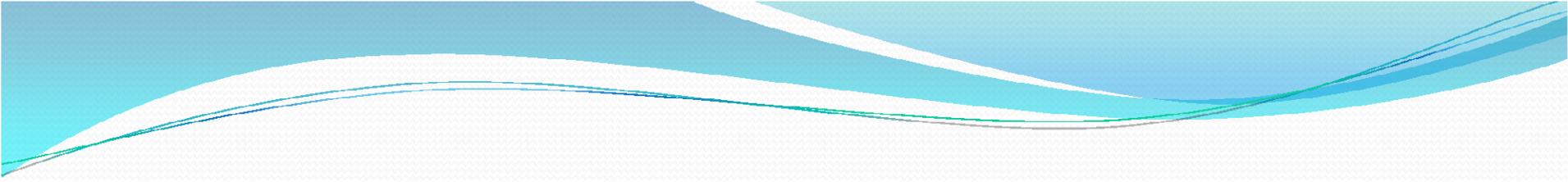
What about PPP

- IWAI has identified Kolkata and Patna terminals for Dev & operation under PPP
- Operator to undertake o&m services
- Invest in equip handling
- Operator to provide personnel for o&m
- Operator will have right to demand and collect user fees



NTDPC projections for inv

- Inv of Rs 640 billion with Rs 300 b from govt and rest from private sector



Thank You