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**Government of West Bengal** 

# A New Frontier For Maritime Development



# West Bengal Emerging growth engine of India

State capital Kolkata (One of the 4 major metropolitan cities of the country)

Spoken languages Bengali, Hindi, English and Nepali

Literacy rate 77.1%

# Economic Powerhouse

- 4th largest economy in India, with a population of 91.3 million
- GSDP at current prices US\$137 billion (2015-16)
- Growth Rate GVA 12.02% for 2015-16 (AE)

# Strategic Location

- Gateway to Southeast Asia and North-East India
- Shares international frontiers with Bangladesh, Nepal and Bhutan
- Well connected with the booming hubs of Asia such as Singapore, Thailand and Malaysia
- Hinterland comprises mineral-rich states such as Chhattisgarh, Jharkhand, Orissa

# Robust Physical Industrial

- Connectivity: 2 Int'l airports; 2 major ports and 3 upcoming ports
- 100% villages electrified

Infrastructure

- 3<sup>rd</sup> largest road network
- Plug-n-play Industrial Infrastructure: Numerous growth centers and industrial parks (existing and proposed) both industry specific and multiproduct
- Upcoming 6 Theme townships
- Upcoming Amritsar-Kolkata Industrial Corridor (AKIC) covering about ~2,000 KM

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# **Rich Culture**

- Birthplace of modern Indian literary and artistic thought
- Kolkata is referred to as the "culture/literary capital of India"
- Pioneer of cosmopolitan culture in the country
- Land of Mother Teresa, Rabindranath Tagore Satyajit Ray and many more

## West Bengal Has It All

Pg 3

- One of the 13 maritime states in India with a waterfront of 950 km
- Richly endowed with natural maritime advantages and availability of navigable and potentially navigable waterways including Bay of Bengal and NW-1, NW-15
- Strategic location on important international trade routes
- Huge Hinterland: Gateway to East and North-East, port of entry to land locked states of Central India and land locked countries Nepal and Bhutan
- Availability of large work force
- Single window clearance facility
- Initiatives of Government of West Bengal for systematic development of port based industrial parks, promoting captive industries and ancillary facilities
- Facility of incentive schemes and export promotion schemes
- Largest in India's Power distribution, quality and availability
- Country's highest bank credit flow to MSME sector of approx. US\$ 15 billion in the last 5 years
- Kolkata is the first metro city with Wi-Fi connectivity on 4G
- Highest producer of vegetables in the country
- Second in Tea production after Assam. State is the land of famous Darjeeling Tea
- Second largest in terms of number of MSME enterprises (~3.7 million enterprises)
- Third largest in India in mineral production accounting for about 1/5th of total mineral production
- Third largest in terms of road coverage across the country

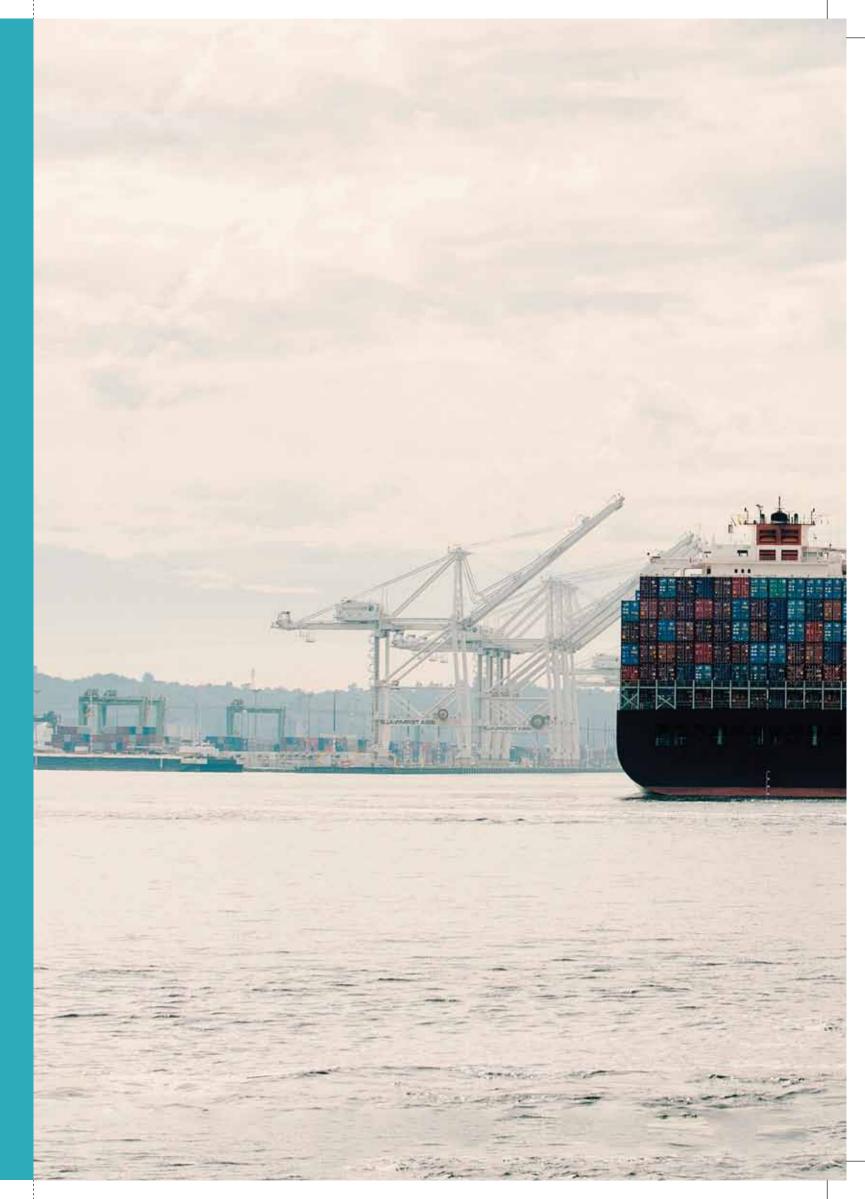
# **Ports of West Bengal**

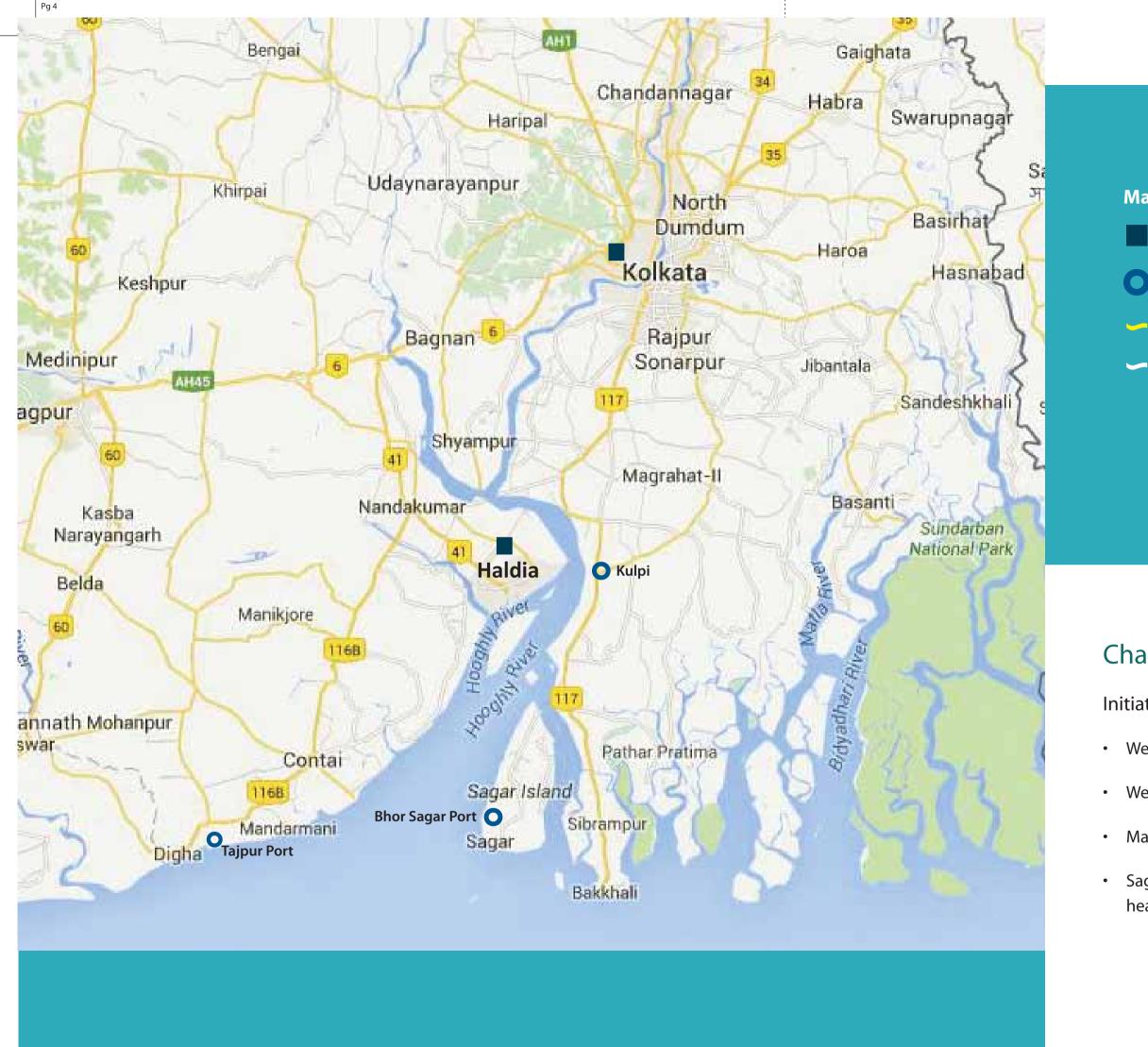
## **EXISTING**

- Kolkata Port
- Haldia Port

## **UPCOMING**

- Deep sea port at Tajpur
- Major deep sea port at Sagar Island
- New port with shipbuilding facility at Kulpi





# Мар Кеу

- **Existing Ports**
- **Proposed Ports**
- Major Roads
- Minor/Other Roads

# **Charting New Waters**

- Initiatives taken by the West Bengal Government
- West Bengal Maritime Act
- West Bengal Maritime Board
- Maritime Policy for the state
- Sagarmala Steering Committee for the State headed by the Hon'ble Chief Minister

- Concessionaire for Bhor Sagar port- investment opportunities ₹ 16000 CR. (~US\$ 2.3 billion) [PPP mode]
- Concessionaire for deep sea port at Tajpur ₹ 5000 CR. (~US\$ 745 million)
- Development plan for other ports under progress

## Port-led industrialization

- Clusters Thermal Power Plant, Steel Plant, Edible Oil, Petrochemical, Cement, Leather, Food Processing, Fertilizer, Rubber
- New Refinery in Purba Medinipur
- New IOC bottling plant in North Bengal, capacity expansion in Durgapur
- LNG Network
- Solar park and offshore renewable energy projects at Sagar Island, Navachar
- Chemical park/ plastic park at Haldia/ Rasulpur
- Allied industries Shipbuilding, Barge manufacturing, Jetty manufacturing, Ship repair, Ship breaking, Ship recycling, Jetty repair, Offshore storage, Bunkering facilities, Drilling Platforms, Warehousing services, Container freight stations, Manufacturing of vessels and cruises for coastal/inland waterways

- Theme Cities/ Green Cities
- Preservation of biosphere of Sunderbans- Island development and removal of salinity of agricultural lands of Sunderbans
- Coastal tourism, lighthouse tourism and recreational activities
- Maritime University
- Skill Development
- Training and Self Employment of fishermen and project affected people

# **Opportunities**

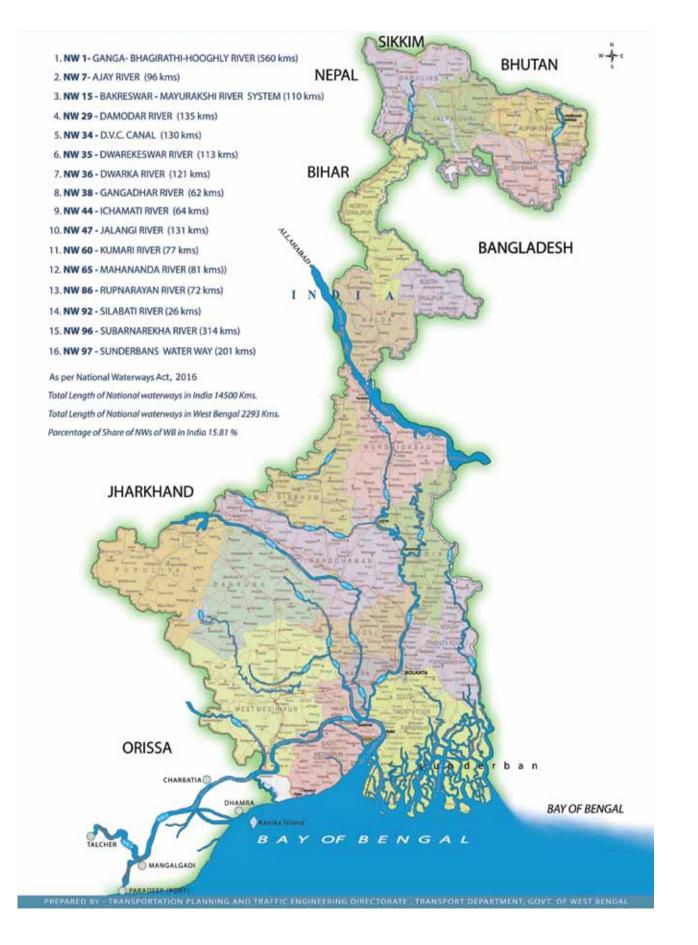
## Port-led infrastructure development

- Scope of integration with Bharat Mala, AKIC, Eastern Dedicated Freight Corridor (Ludhiana – Dankuni), Last Mile Connectivity Programme of the Indian Railways
- Extensive expansion of Rail connectivity Shalimar, Mecheda, Dankuni and Dankuni to Kashinagar
- 8 Lane highway connectivity from Durgapur to Haldia
- 2 additional Inland Container Depots at Durgapur and Siliguri
- North South Road corridor project
- Metropolitan Transport Logistic Hub proposed at Baidyabati
- Multi-modal Transport Hub at Haldia
- Doubling of Panskura-Haldia & Rajgoda-Tamluk Completed

- Multimodal Terminal at Haldia
- Assured Draft Depth along the waterways
- Navigation lock gate at Farakka
- Loaded Carriage Transport (LCT) Jetties with RO RO vessels between Varanasi and Kolkata
- RO RO Terminals to be built at Hazarduari, Kolkata, Budge Budge and Raichak
- Gangway Pontoon Type Jetties and renovation of existing jetties Vessel repair and manufacturing facility
- Cross ferry services for passengers between either sides of NW-1 at various locations from Farrakka to Haldia
- Tourism Circuit along NW-1 (Sunderban Kolkata Varanasi)
- IWAI Planning for building 80 Cargo Vessels for carring goods along NW-1

- Exploration of Deocha-Pachami Coal mine [₹ 20,000 CR. (~US\$ 3 billion) investment] in PPP mode
- Iron-ore exploration in Purulia [₹ 800 CR. (~US\$ 119 million) investment]
- New refinery at Haldia [₹ 20,000 CR. (~US\$ 3 billion) investment]
- LNG project [₹ 3100 CR. (~US\$ 461 million) investment]
  - Cement industries [₹ 3350 CR. (~US\$ 498 million) investment]
- Development of cities, road, tourism [₹ 4000 CR. (~US\$ 595 million) investment]
- Steel, plastic, rail, logistics, transport, etc. [₹ 11445 CR. (~US\$ 1.7 billion) approx. investment]

# National Waterways in the State of West Bengal



# Inland Waterways in West Bengal

Existing facilities of inland water transportation along NW-1:

- All weather passenger jetties on the ea
- All weather passenger jetties on the w
- Wooden body Passenger Vessels Gove
- Wooden body Passenger Vessels Priva
- Steel body Passenger Vessels Governm
- Steel body Passenger Vessels Private o
- FRP body vessels, Government owned
- Cargo carrying Barges of capacity 3000
- Cargo carrying Barges of capacity 3000
- Yachts/ Water Crafts / Luxury Cruises, I
- Other type of Vessels like Tug, Pusher Dredger etc, Government owned
- Other type of Vessels like Tug, Pusher Dredger etc, Private owned
- RO RO Vessels, Government owned
- RO RO Vessels, Private owned
- Passengers crossing NW-1 per year
- Cargo moving along NW-1 per year

tation along NW-1:	
east bank of NW-1 west bank of NW-1	: 36 : 35
ernment owned ate owned	: 10 : 100
ment owned owned	: 45 : 3
d	: 9
00 MT., Government owned 00 MT., Private owned	: 6 : 40
Private owned	: 16
Tug, Survey Vessels, Work Boats,	:28
<sup>-</sup> Tug, Survey Vessels, Work Boats,	:124
	4

- :4 :2
- :~220 million
- :~4 million tonnes

# Improvements undertaken in the last 5 years along NW-1 for passenger transportation:

10

8

14

- Gangway Pontoon/R.C.C. Jetties newly built 10 places •
- Existing Gangway Pontoon jetties renovated 21 locations •
- Wooden Vessels newly launched •
- Steel Vessels newly launched •
- Wooden & Steel Vessels under construction •

## **Future Plan:**

### Projects

Total number of proposed gangway transport stations for development

Proposed New Jetties:
a. Upstream of the Kolkata
b. Within the Kolkata Metr
c. Downstream of the Kolk
Renovation of Existing Jetti
Infrastructure Developmer
(Necessary Infrastructure, Dry
Loaded Carriage Transport
Construction of vessels incl
a. Steel Body Vessel
b. Wooden Body Vessel
c. Water Taxi
d. River Cruises

### **Opportunities for investment**

- and from Hinterland: Investors may procure and operate, purchase etc.
- other Thermal Power Plants along NW-1.

- Leveraging Training Expertise of Maritime Institutes for vessel crew.  $\geq$
- Operation and maintenance of River Information system.

	Number
y pontoon type jetties with suitable pa t of passenger ferry services along NW-	
a Metropolitan Area	20
opolitan Area	36
kata Metropolitan Area	20
ies	24
nt at Shalimar Waterworks : v Dock, Floating Dock, Tug, Work Boats & T	Tug Boats etc.)
(LCT) Jetties with RO RO Vessels	6 locations
luding cruises :	
THE SHE SHE	76
	60
	50
	4
	50

More scope to carry cargo along National Waterways : From ports in Bay of Bengal to North India: NW-1 can now become the main cargo route for movement of coal, fly ash etc. leading to efficient evacuation to

Movement of imported coal: From Bay of Bengal to NTPC Barh, Bihar, NTPC Katwa, West Bengal and to

Enhancement of tourism potential: Luxury liner Cruises etc. from Ganga Sagar to Varanasi etc. as well as in the Indo-Bangladesh corridor through Sundarban routes eminently feasible now.

East West movement of goods by RO-RO vessels : Between two sides of NW-1 as well as similar movement along other Waterways becoming increasingly viable connectivity option.

Construction and development of IW Jetties through PPP mode in Kolkata on NW-1.

Vessel and Barge Building and repairing facility for Envisaged Cargo Projection.

Upgrading of Indo-Bangladesh Inland Water Transit and Trade Protocol for longer time frame.



## A. PROJECTS FOR DEVELOPMENT OF PORTS AND INFRASTRUCTURE LINKED DIRECTLY TO PORTS

SI. No.	Parameters	
1	Project Proponent	Bhor Sagar Port Limited, a JV between Kolkata Port Trust (KoPT) & Government of West Bengal (GoWB)
2	Project Objectives	Development of new deep sea major port
3	Project Type	Joint Venture
4	Tentative Cost Estimates (in INR & USD)	₹16,000 CR. (US\$ 2400 million)
5	Project Details	The JV has been formed in the name of Bhor Sagar Port Limited. The project is under process by way of equity participation by KoPT and GoWB
6	Project Status	• Work for Rail connectivity in Sagar Island, Bridge between Lot-8 & Kachuberia and other infrastructure under progress.
		<ul> <li>Need rail-road connectivity from Dedicated Freight Corridor to Kashinagar</li> </ul>
		<ul> <li>Need Concessionaire for Bhor Sagar Port development through PPP mode</li> </ul>
7	Total Land Requirement (in acres)	251 acres of rayati land and 96 hectare of reclaimed land

SI. No.	Parameters
	Project Proponent
2	Project Objectives
3	Project Type
4	Tentative Cost Estimates (in INR & USD)
5	Project Details
	Dural and Chattan
6	Project Status

Private Concessionaire			
Development of deep sea port			
Revenue Share Model			
₹5,000 CR. (US\$ 750 million)			
The port will be developed by a single concessionaire with facilities to handle multi commodities such as dry bulk, liquid bulk, containers and LNG/LPG			
Phase - I			
<ul> <li>Number of berths</li> </ul>	:6		
<ul> <li>Capacity</li> </ul>	:~44 million tonnes		
• Phase - II			
Number of berths	:9		
<ul> <li>Capacity</li> </ul>	:~58 million tonnes		
Need Concessionaire for Port development			
1 500			

SI. No.	Name	Details	Project Cost	Status
1	Construction of Bridge from Rajarchak to Nandigram over Haldi River in Purba Medinipur	A bridge of approx 870 metre with approach road	₹500 CR. (US\$70 million)	In- Progress
2	Investment in National Highways	New Highways of 600 KMS ₹6000 CR.; Ongoing ₹12,063 CR.; In the tender stage ₹3,728 CR.; New highways for F.Y. 2015-16, 2016-17 ₹15,691 CR.	₹ 37,482 CR. (~US\$5.6 billion)	In- Progress
3	Repairing and re-surfacing of roads surrounding Haldia & other coastal areas	Linkage between industries and Haldia Port. Serve as a connection between Kukrahati and Geonkhali	₹100 CR. (US\$16 million)	In- Progress
4	Metropolitan Transport Logistic Hub at Baidyabati	Transport hub, transport terminal & transport warehousing	₹5,000 CR. (US\$ 750 million)	Under Planning
5	Six New Townships	Each of the six thematic townships implements new age technology and eco-friendly, smart architecture in their planning. They will be set up on compact lands, allotted by the Bengal Government. Interest has been recorded from investors for setting up various hubs in these Smart Cities.	₹11,000 CR. (US\$ 1,650 million)	Under Planning
		<ul> <li>Education &amp; Health City at Dabgram (Teesta City)</li> <li>Wellness City at Baruipur (Uttam City)</li> <li>Analytics City at Kalyani (Samriddhi)</li> <li>Culture City at Bolpur (Gitabitan)</li> <li>Industrial City at Asansol (Agnibina)</li> <li>Sports City at Dumurjala (Sports City)</li> </ul>		
6	Water Transportation Facility from Kolkata to Digha including construction of a jetty at Digha	Creation of water transport facility from Kolkata to Digha and construction of a jetty at Digha	₹20 CR. (US\$ 3 million)	Under Planning
7	Renovation and upgradation of 103 jetties over the rivers of Haldi, Bhagirathi and Hooghly	Promotion of inland waterways transport through the rivers of Haldi, Bhagirathi and Hooghly for improvement of evacuation facility of the Haldia Port and simultaneously reducing the pressure on the road transport.	₹992 CR. (US\$ 150 million)	Under Planning
8	Investment in Deocha Pachami	Approx. 221 million tonne of coal will be raised from the mine and will be distributed to seven JV partner/states like Tamil Nadu/ Karnataka and is proposed to be transferred through Ports. Huge deposit of good quality basaltic rock over the coal deposit is another area for investment and utilization of ports in the region.	₹20,000 CR. (US\$ 3,000 million)	In- Progress
9	Investment in mine explorations, undertaking mining operations, infrastructure in West Bengal	Extraction and benificiation of Iron ore. Movement of Ore through port.	₹800 CR. (US\$ 120 million)	In- Progres:

Infrastructure Projects in West Bengal		
SI. No.	Name	Det
10	West Bengal North-South Road Corridor Project (SASEC Port connectivity)	Imp by s exis byp loca con
11	Construction of Marine Aquarium/ Museum at Digha	Mar arra
12	Investment in Refinery	Ensı to H
13	GEECL investment in West Bengal	The busi aug
14	Investment in LNG Pipeline	A Hi natu LNG Proj Halc
15	Essel Group Investment in Urban Development, Highway, Tourism and IT	Vari Urba Tou
16	Investment at Salbani	Inve in- C ₹80
17	Mahindra & Mahindra investment in Kharagpur	The Vidy Khai at H
18	Investment at Plastic Park	Easy pote of a
19	Zhongtong Bus Holding Co. Ltd. investment in Aerotropolis project	Join Bus Gov mar
20	Titagarh Towers setting of modern passenger train facility	Sett trair

Project Cost	Status
₹4,700 CR. (US\$700 million)	In- Progress. Financial closure completed
₹20 CR.	In-
(US\$3 million)	Progress
₹20,000 CR.	Land
(US\$3,000 million)	acquisition
₹1,700 CR.	In-
(US\$260 million)	Progress
₹3,100 CR.	ln-
(US\$470 million)	Progress
₹4,000 CR.	In-
(US\$600 million)	Progress
₹10,500 CR.	In-
(US\$1,580 million)	Progress
₹143.5 CR.	In-
(US\$22 million)	Progress
₹27.4 CR.	ln-
(US\$4 million)	Progress
₹1,500 CR.	In-
(US\$230 million)	Progress
₹250 CR.	ln-
(US\$30 million)	Progress
	₹4,700 CR.         (US\$700 million)         ₹20 CR.         (US\$3 million)         ₹20,000 CR.         (US\$3,000 million)         ₹1,700 CR.         (US\$260 million)         ₹3,100 CR.         (US\$470 million)         ₹10,500 CR.         (US\$1,580 million)         ₹143.5 CR.         (US\$22 million)         ₹1,500 CR.         (US\$230 million)

# Reasons for proposing new investments in ports

Enhanced volume of cargo for key commodity clusters in Eastern region (ER) in [MTPA]:

115.6 [2014-15] → 439.5 [2025] → 719 [2035] including:

- Thermal coal cargo volume to rise to 187 MTPA [2025] partly by import from SE Asia and partly by shipping from other states from Eastern Coalfields Ltd. /Bharat Coking Coal Ltd
- Coke & Coal import to rise by 16.1 MTPA from New Zealand/Australia Scope for development of steel/thermal plant cluster in ER
- Iron ore import/export to increase by 2.1 MTPA now diverting from surface transport
- West Bengal is a front runner state in agriculture /horticulture /fish production but there is a huge deficit in fertilizer and country's 42% fertilizer is imported from China.
- Huge raw skin export, movement of forest products

Scope for development of specialized cluster of ports/ dry docks for fertilizer, iron ore, coal, coke, food grains, fish, processed food, rubber, edible oil & container

# EXPANDING HORIZONS Projects / Activities Identified

# Tourism

- Scope of water tourism in Kolkata Sagar Haldia – Mandarmani – Digha route
- Scope of coastal cruise tourism in Kolkata Mandarmani – Digha – Chandipur – Puri – Sonepur – Srikakulam – Visakhapatnam – Kakinada – Chennai – Puducherry – Rameshwaram – Kanyakumari route
- Scope of water tourism park at Sagar and Mandarmani
- Further development of Sunderbans as a tourist destination





**Skill** Technical Training Centre in South 24 Parganas for ship/ barge repairing

# Transport

Multi-modal transport hub, inland waterway services in Ganges, Damodar, Ichamati and Sunderbans in the first phase for cargo, passenger movement and tourism purpose



## Power

Scope for development of thermal power plant in Purba Medinipur and solar parks in Sagar Island







# Logistics hubs and Warehousing Facilities

Howrah, South 24 Parganas, Purba and Paschim Medinipur districts



## Fisheries

Scope for development of fishing port/ harbour in South 24 Parganas / at Shankarpur in Purba Medinipur