



GOVERNMENT OF GUJARAT

Development of Fishing Harbours

Agro and Food Processing

Government of Gujarat



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The concept

The project envisages Development of Government fish farms on PPP mode based on the raw material strength of Gujarat such as marine fishing and inland freshwater shrimp farming.

Fisheries sector overview

Fisheries sector is a powerful income and employment generator as it stimulates growth of a number of subsidiary industries, and is a source of cheap and nutritious food as well as a foreign exchange earner. Most importantly, it is the source of livelihood for a large section of economically backward population in India.

Key facts:

- ▶ India is 2nd largest producer of fish in the world, contributing about 5.54% of global production
- ▶ It is a source of livelihood for 14.48 mn people
- ▶ It contributes nearly 0.8% of GDP and 4.93% of the total GDP of agriculture and allied sectors
- ▶ It contributes about 17% of national agriculture exports

| Indicator | India | Gujarat |
|--|--------------|---------------|
| Coastline (in km) | 8,118 | 1,600 |
| Exclusive Economic Zone - EEZ (in mn sq. km) | 20.02 | 2.14 |
| Marine Fish Production during 2014-15 | 3.5 Mn tons | 7 lakh tons |
| Inland Fish Production during 2014-15 | 6.6 Mn tons | 1.1 lakh tons |
| Total Fish Production during 2014-15 | 10.1 Mn tons | 8.1 lakh tons |

Need for Fisheries Harbour

- ▶ India's overall fish production has shown a steady rise in recent years (from 8.1 mn tons in FY11 to 10.1 mn tons in FY15), however, the sector suffers from low-scale, stagnating yields of inland and freshwater aquaculture and poor post-harvest fish handling infrastructure, leading to an estimated 25% post-harvest losses annually.
- ▶ This highlights an urgent need to address the lack of infrastructure and skilled manpower in the fisheries sector as well as non-compliance of Food and Agriculture Organization (FAO) principles for fish management.
- ▶ In Gujarat, with the increasing turnover of fish in the country (7 lakh MT), increasing number of boats (over 31,000) and mechanised boats (18,000), new Fisheries Harbours and fish landing centres will help in increasing the quality of fish as it facilitates better hygienic conditions.

What is a Fisheries Harbour?

- ▶ A fishing harbour is a port for landing and distributing fish. These are designated to provide better landing and berthing facilities to fishing craft and provide basic facilities for deep sea fishing.
- ▶ India has a total of 77 Fisheries Harbours including 7 major and 70 minor (commissioned as well as under construction, while Gujarat has 7 Fisheries Harbours.

Benefits

Development of Fisheries Harbour (as per FAO norms) will ensure that all activities related to fishing including fish catch, its proper landing, preservation, sale with/without value addition are carried out in as per internationally accepted norms and guidelines, to promote the fish production and its export.

Facilities in a Fishery Harbour

Marine facilities

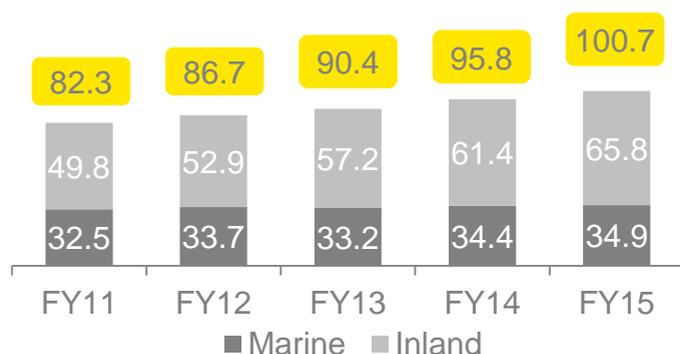
- ▶ Fishing vessels
- ▶ Dredging and Navigational Aspects I
- ▶ Breakwater protection
- ▶ Navigational Aids
- ▶ Landing Quay and its arrangement
- ▶ Outfitting Quay and its arrangement
- ▶ Berthing Quay and its arrangement
- ▶ Repair Quay and its arrangement

Land side facilities

- ▶ Auction Hall
- ▶ Fish storage and ice plants
- ▶ Sanitary and storm water drainage facilities
- ▶ Water distribution system
- ▶ Fishnet mending shed
- ▶ Under Ground Water Tank
- ▶ Infrastructure development for - office, Centre Communication & Radio Station, Electric Room, Gear Shed, Workshop, Toilet Blocks, Fuel Pump Area with fuel storage
- ▶ Facility, Boat Parking, Boat Repair Area, Septic Tank, , Soak Well, U/G water Tank, Canteen, Security Cabin, Fresh Water Supply System, Drainage System, Cable Trench, Road Work, Wharf Wall, Rest Shed, Dormitory
- ▶ Solid waste management
- ▶ Fencing/ compound wall and gate complex
- ▶ Pavement and Parking area
- ▶ Electrical works
- ▶ Lighting

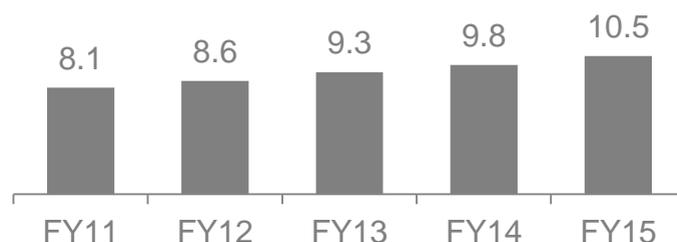
Fish production and exports - India

Fish production in India (lakh tons)



Source: Handbook on Fisheries Statistics 2014

Export of Marine products in India (lakh tons)

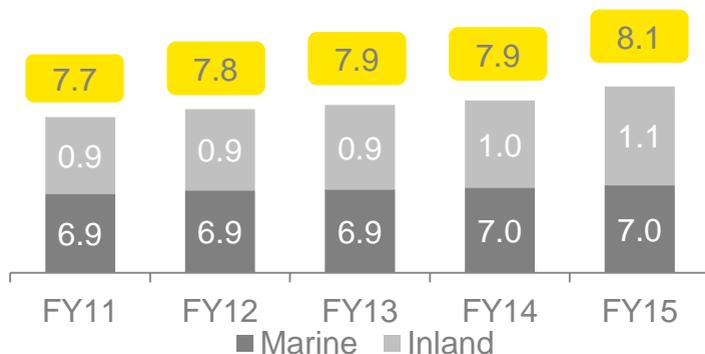


Source: Handbook on Fisheries Statistics 2014

- ▶ Overall fish production in India has shown an increasing trend since 1950s. Although India's marine fisheries production has reached a plateau and only marginal increase is predicted in the near future. Further increase is likely to be achieved from exploitation of deep-sea resources.
- ▶ Depth-wise marine fish production potential shows that about 86.84% of the resources (3.837 mn tons) are available in the 100m depth zone; 5.86% (0.259 mn tons) in 100-200m depth; and 2.59% (0.115 mn tons) in the 200-500m depth zone.
- ▶ In addition, the harvestable potential of marine fishery resources in the EEZ has been revalidated in 2011 at about 4.42 mn tons.
- ▶ The fishery sector is also a major foreign exchange earner in the Indian economy. Export demand of the country is placed at 8 to 10% of the total fish production in India.

Fish production and exports - Gujarat

Fish production in Gujarat (lakh tons)



Source: Handbook on Fisheries Statistics 2014

- ▶ During FY16 the total fish production has been estimated at 2.64 lakh tons (Marine fish production is 2.22 lakh tons and Inland fish production is 0.42 lakh tons) worth of INR 1,955.41 crore.
- ▶ During the same period, export of fish and fish products is estimated at 45, 015 tons, worth of INR 715.89 crore.

Continued investments and favourable government policies are expected to drive further growth of this industry

Initiatives taken by Government of India (GoI)

Increasing investments

- ▶ Several projects for the construction of Fisheries Harbours have been planned under 'The Maritime Agenda 2010–2020'.
- ▶ The GoI also plans to invest INR 330 crore for the development of Fishing Harbours under the 'Sagarmala' initiative.

Centrally sponsored schemes

- ▶ Massive centrally sponsored schemes have been initiated to provide infrastructure at fishery harbours and landing centres to improve fresh fish handling and provide sanitation and other assistance for quality processing of fisheries produce.

Promoting exports

- ▶ Ministry of Commerce has been extending financial support to the State Governments for Infrastructural Projects for Export promotion under ASIDE (Assistance to States for Infrastructure development for Exports) scheme.
- ▶ Fish processing projects with a minimum of 20% value-addition can be set up as 100% Export Oriented Units. All items can be exported freely except for Silver pomfrets of weight less than 300 gm.

Initiatives taken by Government of Gujarat (GoG)

Favourable policies

- ▶ The government has recently launched the Agro Business Policy (2016-21) which contains several incentives for the development of agricultural (including fisheries) infrastructure.

Increasing investments

- ▶ For development of facilities at seven fishing harbours and centers e.g. Mangrol, Navabandar, Madhwad, Porbandar, Veraval, Sutrapada and Choravad, an amount of INR 300 crore is provided as Non-Budgetary Resources for the year 2016-17.

Gujarat - Competitive Advantage



Location advantage of Gujarat



- ▶ Gujarat has strategic location providing access to major international and domestic markets.
- ▶ It acts as a gateway to northern and central India; connecting them via road, rail and air - thereby providing immense trading opportunities.
- ▶ Ports of Gujarat (including Kandla) handled 41% of national maritime trade in FY14.

Long coastline

- ▶ Gujarat has 1,600 km long coastline and about 0.21 mn sq. km wide EEZ.
- ▶ The area available for fishing activities extends from Lakhpat in Kutch district in north to Umargaon in Valsad district in south.

Wide variety of fishes

- ▶ Important commercial varieties of fish namely Pomfret, Jew fish, Bombay duck, Shrimp, Lobster, Squid, Cuttle fish, Silver bar, Hilsa, Shark, Catfish, Mulllets, etc. are caught in large quantities in these areas.
- ▶ In addition, the Gulf of Kutch has congenial conditions for growth and sustenance of different type of Oysters, Shell fish and Sea-Weeds.

Site Location

MAP 1: STATUS OF EXISTING AND PROPOSED HARBOURS IN GUJARAT

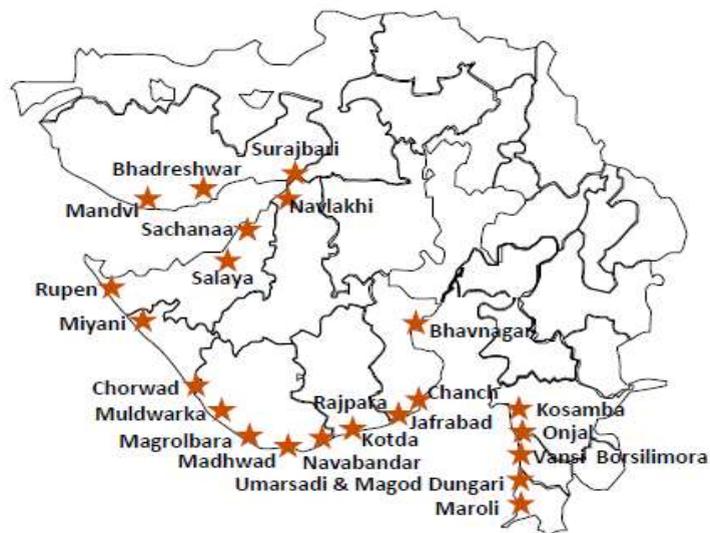


Status of Harbours

X Existing (5)

● Proposed (5)

MAP 2: MAJOR FISH LANDING CENTERS IN GUJARAT



★ Major fish landing centers

Proposed location 1

Porbandar

- ▶ Porbandar is an all-weather port, with direct berthing facilities up to 50,000 DWT ships. It is situated on the West Coast of Saurashtra facing the Arabian Sea.
 - ▶ Longitude: 69 37' E
 - ▶ Latitude: 21 38' N
 - ▶ Port area: 930.52 hectares

Proposed location 2

Bhadeli-Jagalala

- ▶ Bhadeli Jagalala village is located in Valsad Tehsil of Valsad district in Gujarat, India. It is situated 6 km away from Valsad village, which is both district & sub-district headquarter of Bhadeli Jagalala village. The total geographical area of village is 1,057.53 hectares. It has a total population of 9,133 people.
 - ▶ Latitude; 20.6519182
 - ▶ Longitude: 72.9135734

Infrastructure Availability

Logistics & Connectivity



Rail

- ▶ **Porbandar:** Broad gauge rail link is connected with the jetty. The port is about 5 km from the nearest BG rail head.
- ▶ **Bhadeli-Jagalala:** Valsad railway station, Dungri railway station are the very nearby railway stations, however, Vapi is major railway station 32 KM near to Bhadeli Jagalala.



Road

- ▶ **Porbandar:** State Highway (SH-95) is about 3 km away from the port. National Highway (NH-8E) is about 6 km away from the port.
- ▶ **Bhadeli-Jagalala:** Coastal highway is the nearest to Bhadeli-Jagalala.



Air

- ▶ **Porbandar:** Nearest airport Porbandar is about 8 km away.
- ▶ **Bhadeli-Jagalala:** Bhadeli Jagalala's nearest airport is Daman Airport situated at 25.3 KM distance.



Existing infrastructure

- ▶ **Porbandar:** Fishery Harbour Terminal is having five jetties for fishing.

Utility



Water

- ▶ **Porbandar and Bhadeli-Jagalala:** Gujarat Water Supply & Sewerage Board is responsible for ensuring adequate supply of water in the state.



Power

- ▶ **Porbandar:** Paschim Gujarat Vij Company Ltd. is responsible for power supply in Porbandar through its 36 power sub-stations.
- ▶ **Bhadeli-Jagalala:** Bulk power supply would be provided by Dakshin Gujarat Vij Company Ltd.

Estimated Manpower Requirement*

| S. No. | Description | Number |
|--------|-------------------------|-----------|
| 1 | Project Head | 1 |
| 2 | Senior Engineer (Civil) | 2 |
| 3 | Site Engineer (Civil) | 4 |
| 4 | Electrical Engineer | 1 |
| 5 | Mechanical Engineer | 1 |
| 6 | Safety Engineer | 1 |
| 7 | Environment Engineer | 1 |
| 8 | Supervisor | 10 |
| | Total | 21 |

Key Players/ Machinery Suppliers

- ▶ Howe Engineering Projects (India) Pvt. Ltd
- ▶ Coastal Marine Construction
- ▶ Jay Ambe Dredging & Construction Private Limited
- ▶ Dharti Dredging & Infrastructure Limited
- ▶ International Seaport Dredging Private Limited

Potential Collaboration Opportunities

- ▶ Central Institute of Coastal Engineering for Fishery – involved in conducting engineering and economic investigations and preparing the Techno-Economic Feasibility Reports for the fishery harbour projects.

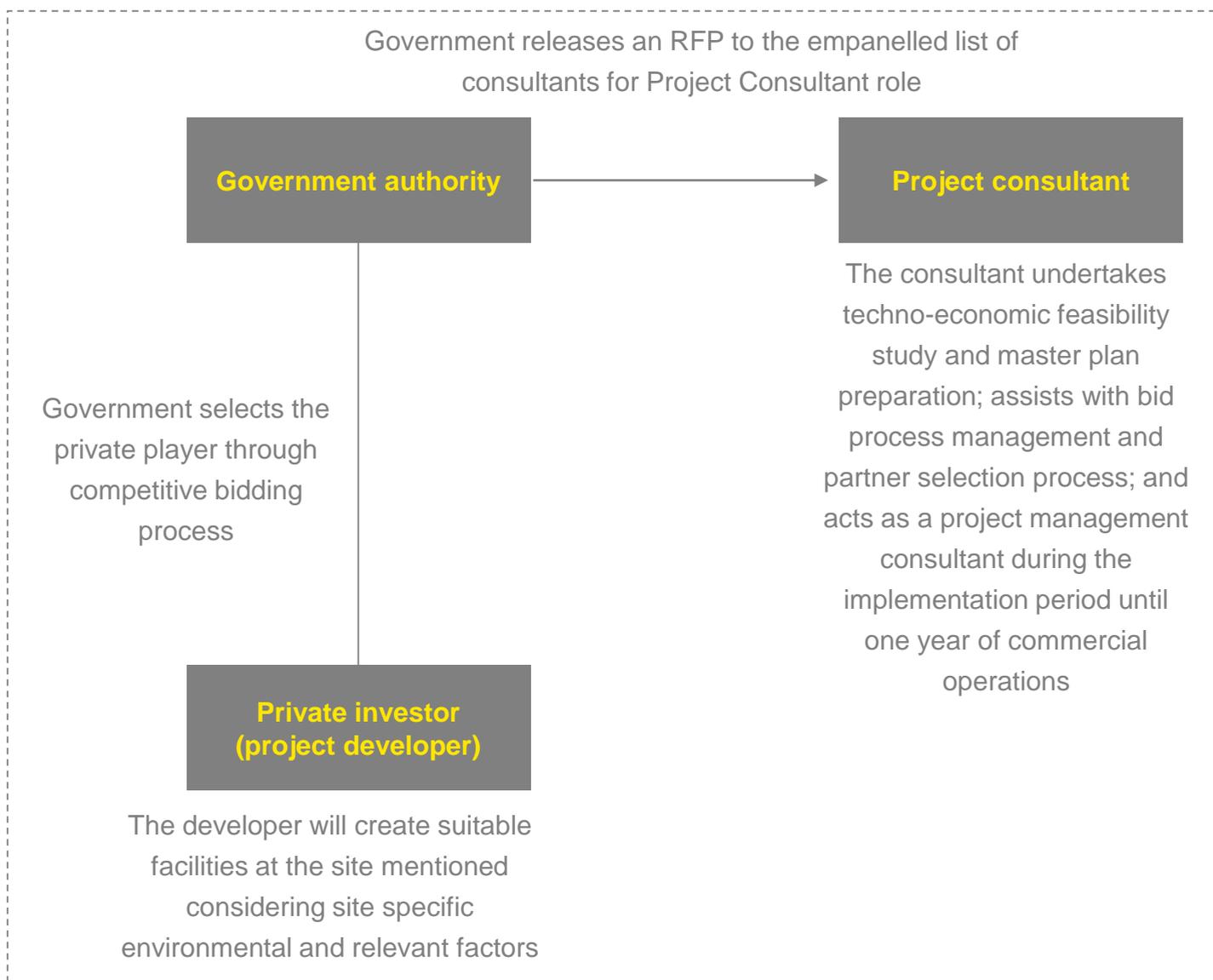
Key considerations

- ▶ Inadequate availability of repair and maintenance facilities for fishing boats.
- ▶ Lack of trained labour for pre-processing and processing of fish/Shrimp.
- ▶ Maintaining international standards for hygienic handling, preservation, processing and transportation of fish catch.

* These estimates are based on other fisheries harbour projects in Gujarat such as Development of Fishery Harbour at Navabandar (Gujarat) and Mangrol-Phase-III (Gujarat).

Project Structure & Implementation Model

The project is to be completed and funded through a PPP model on BOT, BOLT, BOO, BOOT or other similar basis.



Project Financials



Estimated Project Cost*

| S. No. | Name of Work | Estimated Cost (INR lakh) | |
|--------------------------|---|---------------------------|------------------|
| | | Porbandar | Bhadeli-Jagalala |
| Marine facilities | | | |
| 1 | Dredging & Reclamation & Filling of Quarry Spall | 16,72.38 | 1,254.29 |
| 2 | Outfitting + Landing +Berthing quay jetty | 12,20.41 | 915.31 |
| 3 | Break Water | 32,08.49 | 2,406.37 |
| 4 | Slip Way | 62.62 | 46.96 |
| Land facilities | | | |
| 5 | Auction Hall | 334.34 | 250.76 |
| 6 | Fresh water supply | 24.38 | 18.29 |
| 7 | Sea water supply | 7.79 | 5.84 |
| 8 | Drainage | 13.45 | 10.09 |
| 9 | Under Ground Water Tank | 8.94 | 6.71 |
| 10 | Septic tank+ Sock Well | 27.13 | 20.34 |
| 11 | Strom and Waste water disposal | 56.20 | 42.15 |
| 12 | CC Road and paving | 367.92 | 275.94 |
| 14 | Wharf Wall | 17,03.60 | 12,77.70 |
| 15 | Office facilities (Admin office, Canteen, Toilet) | 64.39 | 48.29 |
| 18 | Gear Shed | 47.76 | 35.82 |
| 19 | Center Comm. Radio Station | 3.21 | 2.41 |
| 20 | Net Mending | 35.01 | 26.26 |
| 21 | Cable Trench | 47.57 | 35.68 |
| 22 | Asphalt Paving Parking | 64.35 | 48.26 |
| 23 | Compound wall | 54.99 | 41.24 |
| 24 | Electrical Facilities | 118.09 | 88.57 |
| 25 | Navigation AID | 33.59 | 25.19 |
| | Total | 91,76.61 | 68,82.46 |
| 26 | Add 9% Contingency | 825.89 | 619.42 |
| | TOTAL | 100,02 | 75,01 |

* These estimates are based on other fisheries harbour projects in India such as Development of Fishery Harbour at Mangalore (Karnataka), Nellore (AP), Navabandar (Gujarat), Mangrol-Phase-III (Gujarat), Madhwad (Gujarat) and Navagaon-Thal (Maharashtra). The total cost for Bhadeli-Jagalala has been assumed to be 75% of that of Porbandar, due to the difference in port size.

National level clearances

- ▶ Environmental Impact Assessment Studies/Environmental Management Plan and other Environmental related studies may be required for clearance of fishery harbour and fish landing centre projects from environmental angle by the authorities concerned both in State/UT and Central Governments.
- ▶ Coastal Regulation Zone (CRZ) clearance and Environmental Clearance (EC) from Ministry of Environment and Forest.
- ▶ Approval from the Marine Products Export Development Authority for the infrastructural facilities for storing and handling fish.

State level clearances

- ▶ Approvals from Gujarat Maritime Board (GMB) for the proposed development of fishery harbour.
- ▶ Approval for land from relevant authorities such as GMB, State Revenue Department etc.
- ▶ Permissions from relevant authorities for water and electricity supply such as Paschim Gujarat Vij Company Ltd., Dakshin Gujarat Vij Company Ltd. and Gujarat Water Supply & Sewerage Board.

Incentives from GoI

Assistance under the Centrally Sponsored Scheme on Development of Marine Fisheries, Infrastructure and Post Harvest Operation

- ▶ 50% of project cost to the Coastal States, Port Trusts, Fishermen Cooperative Societies/ Organizations/ Associations and 100% to Union Territories (UTs) for (a) construction of new minor Fisheries Harbours and fish landing centres and (b) up gradation/ expansion/ repair/ renovation of existing minor Fisheries Harbours and fish landing centres.
- ▶ 100% assistance to States, UTs & Port Trusts and Fishermen Cooperative Societies/ Organizations/ Associations for construction of major Fisheries Harbours including expansion/ modernization of existing major Fisheries Harbours.
- ▶ 50% assistance to Pvt. Entrepreneurs for construction of major/minor Fisheries Harbours and fish landing centres on Build, Operate & Transfer basis (BOT).

National Fisheries Development Board Guidelines for Infrastructure for Fisheries Harbours

- ▶ NFDB proposes to provide funding to establish additional facilities at incomplete Fisheries Harbours. It would provide 100% financial assistance to those cases (a) where the schemes already taken up by the State Governments have remained incomplete even after the original project cost has been fully spent and (b) where even after completion of the project, certain critically needed additional facilities have to be created.
- ▶ The existing Fisheries Harbours owned by State/Central Govt. Departments, Maritime board/Port trust, Boat owners' associations and cooperatives will be eligible for the support.

Incentives from GoG

Agro Business Policy 2016-2021

- ▶ Back Ended Interest subsidy @7.5% on the Term Loan with maximum amount of INR 400 lakh for a period of 5 years for setting up Infrastructure Project in Agro & Food Processing Sector such as CA cold storages, Food irradiation Processing Plants, Silos, Pack houses, Food Parks, Reefer Vans etc.
- ▶ Assistance will be provided to Agro and Food Processing units/infrastructure projects at the rate of 50% of fee paid, subject to a maximum INR 10,000 per employee on obtaining industry recognized skill certifications from recognized institutions (both Government and Private Institutions). The assistance under this incentive will be subject to an overall ceiling of INR 0.5 lakh per year per unit maximum for a period of three years.

Ministry of Shipping, Government of India

<http://shipping.gov.in/#>

Ports & Transportation Department, Government of Gujarat

www.pnt.gujarat.gov.in

Gujarat Maritime Board

www.gmbports.org

Department of Animal Husbandry Dairying & Fisheries (DADF)

<http://dahd.nic.in/>

Department of Agriculture & Co-operation Department

<https://agri.gujarat.gov.in/index.htm>

Industrial Extension Bureau

www.indextb.com

Gujarat Agro Industries Corporation

<https://gaic.gujarat.gov.in/index.htm>

This project profile is based on preliminary study to facilitate prospective entrepreneurs to assess a prima facie scope. It is, however, advisable to get a detailed feasibility study prepared before taking a final investment decision.

For further details:

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