

DREDGING, NON MAJOR PORTS



By Capt Suresh N Amirapu, FICS
Managing Director, Portman India Pvt Ltd

Dredging refers to the excavation of sea and river bottom sediment and depositing it elsewhere for the purpose of deepening waterways and keeping them navigable. Additionally dredging also takes place for replacing sand on beaches who have suffered coastal erosion (beach nourishment) and for creation of new land areas (reclamation).

Since over 80% of international merchandise trade takes place by the sea route, the ships carrying all the cargoes worldwide need access to the ports and harbours, most of which in turn need to be dredged, is clear that but for dredging industry , international commerce would be severely impacted.

Types of dredgers: the most popular types of dredgers are the

- a) GRAB or CLAMSHELL , a variation being dredging with backhoe used in shallow waters
- b) Trailer Suction Hopper Dredger (TSHD)- This one of the most commonly used dredgers The dredge heads are lowered into the sea floor and act like giant vacuum cleaners. A mixture of seawater and dredge material is pumped up, and transferred to the dredgers hoppers.
- c) CSD _ cutter suction dredger(CSD)
- d) Water Injection dredger

Several other types less used are also available .

(Photos of different types of dredgers and their characteristics)

Uses of dredging (All different uses to be elaborated)

Capital dredging

Maintenance dredging

Beach Nourishment

Land reclamation

Preparatory works - dredging to lay foundation piles for marine structures

Luxury resorts

Dredge material disposal methods

Use of Hoppers, barges, shore pumping, rainbowing , (all methods to be elaborated), spoil grounds

(Photographs of each type)

Designated spoil ground

Dredging and the Environment

Environmental clearances required prior dredging

EIA

Coastal regulatory zone

CVCA

Govt of India"s environmental policy

(All aspects will be elaborated)

Dredging Industry Worldwide

Trade bodies connected to dredging

Dredging Industry in India

Issues and challenges before the dredging industry

Regulatory concerns

Manpower and training

Shipbuilding in dredgers

The future of dredging industry

Technological innovations

NON MAJOR PORTS

Ports form part of the concurrent list in the constitution of India.

Major Ports and Non Major ports

Indian Ports Act and Major Ports Act

Map of India showing Major Ports and key Non Major Ports

Key differences between Major Ports and Non major Ports

In terms of constitutional makeup, licencing, privatisation, connectivity, dredging , tariff policy and other aspects (each aspect will be elaborated)

Captive Ports and Multi User Ports

Maritime Boards

Role of Ports in A nations trade

Role of Ports in India's economy

Maritime vision document

Current port capacity and future projections

Role of Non Major ports in India's Port landscape

Hinterlands served

Statutory regulations impacting Non major Ports (elaboration)

Trace the development of a typical port through design, construction and operational phases (elaboration)

Statutory clearances required for a NoN Major port

Ports and the environment

CRZ

Environmental regulations impacting ports

Restrictions

NGCT

Environmental concerns during the development of a Port

Environmental concerns during the operations of a port

Non Major Ports – a few case studies

Share of Non Major ports Vs Major Ports

Future trends

Issues and Concerns facing the Port Industry particularly Non Major ports

Cargo Handling equipment

Different types of terminals in port (elaboration)

Presence of Major GTOs In India

Impact of Privitisation

Training and recruitment

Green Ports

International trade Bodies representing Ports

Indian trade bodies representing ports.

Tariff structures _ Major and Non major Ports

How do Indian ports fare against the world ?

All the above aspects will be elaborated ..