

Directorate General of Lighthouses and Lightships (DGLL)

1. Mission:

To help the mariners and local fisherman to navigate safely in the Indian waters.

2. About Directorate:

The Directorate General of Lighthouses and Lightships is a subordinate office under the Ministry of Shipping. It provides General Aids to Marine Navigation along the Indian coast. The Headquarters of the Directorate is at Noida. (U.P.) For administrative control the entire coastline has been divided into Nine Districts having their regional headquarters at Gandhidham, Jamnagar, Mumbai, Goa, Cochin, Chennai Visakhapatnam, Kolkata and Port Blair.

3. Aids to Marine Navigation Provided:

For the safe voyage in Indian waters, the Directorate has provided aids to marine navigation. They can be categorized as visual and radio Aids. The visual aids are lighthouses, light vessels, buoys and beacons. The radio aids are Differential Global Positioning System (DGPS), Radar Beacon (RACON) etc. All these aids are passive in nature and not user interactive. The Directorate has also entered into the interactive field of Aids to Navigation i.e. Vessel Traffic Service. For the control of jurisdiction the aids to marine navigation are categorized as General Aids and Local Aids. The upkeep and maintenance of general aids to navigation is the responsibility of the Directorate as per the Lighthouse Act 1927. The upkeep and maintenance of local aids is the responsibility of various Maritime State Government organizations like Ports, State Maritime Boards etc. However the directorates are extending all technical support for maintenance of the local lights. In case the local lights are not maintained to the international standard due to financial constraints and lack of proper technical personnel, the Directorate on acceptance of the local bodies is taking over the those local lights. 21 Local Lighthouses has been taken so far.

The number of Lighthouses and other Aids to Marine Navigation are as on 30.05.2019 shown below:

(i)	Lighthouse	194
(ii)	Lightship	01
(iii)	Differential Global Positioning System (DGPS) Reference Station	23
(iv)	RACON	64
(v)	Deep Sea Lighted Buoy	21
(vi)	Automated Identification System (AIS) Base Station (Networked)	87
(vii)	Vessel Traffic Service-Gulf of Kachchh (09 Radar + 04 AIS Base Stations & 02 Direction Finder)	01
(viii)	NAVTEX Transmitting Station	07

4. Following system have been augmented in the field of Aids to Marine Navigation in the recent past:

(i) **Automatic Identification System (AIS):**

AIS is a ship to ship and ship to shore based data broadcast system for maritime safety and collision avoidance. International Maritime Organization (IMO) mandates all vessels above 300 Gross Tonnage (GT) to carry Class 'A' AIS transponder (which transmits and receives AIS data). DGLL has established a National Automatic Identification System (NAIS) having 87 Physical Shore Stations to cover the entire coastline of India including Andaman & Nicobar and Lakshadweep group of Islands. It is useful in enhancing situational awareness, thereby contributing to the safety of navigation and efficiency of shipping traffic management. It also play a vital role in surveillance of Indian Coast.

(ii) **Differential Global Positioning System (DGPS):**

DGPS is a system where errors in Global Positioning System (GPS) are accurately computed and then transmitted by Medium Frequency (MF) beacon to fix the position to an accuracy of better than 5 mtr. Marine radio beacons which operate in the 283.5 to 325.0 KHz frequency band broadcasts DGPS corrections. DGLL has established DGPS at 23 locations to seamlessly cover the entire coastline of India including Andaman & Nicobar and Lakshadweep group of Islands. DGLL is in process of upgradation of existing DGPS to Differential Global Navigation Satellite System (DGNSS) to cater the navigational signals of Indian Regional Navigational

Satellite System (IRNSS). In Phase-I, 13 DGPS has already been upgraded to DGNSS and upgradation of 03 DGPS are in progress.

(iii) Vessel Traffic Services in the Gulf of Kachchh, Gujarat (VTS-GoK)

DGLL in partnership with Deendayal Port Trust (Erst. Kandla Port Trust) and Gujarat Maritime Board GMB has established Vessel Traffic Service system in the Gulf of Kachchh, Gujarat, well known as VTS-GOK. The system is operational since Feb 2012. Vessel Traffic Services (VTS) is, internationally recognized a shore based tool to ensure safe, effective & efficient movement of vessels in ports and busy waters. A VTS provides traffic information to the officer on Deck of the vessel and facilitates the wider traffic image. The VTS services assist in:-

- better traffic management within the VTS area;
- protection of marine environment;
- waterside facilities such as port/harbour, offshore platform and critical infrastructure;
- enhancing security & surveillance; and,
- effectively dealing with management of various traffic activities at ports.

(iv) Navigational Telex (Navtex):

Navtex is an international automated medium frequency direct-printing service broadcasting navigational and meteorological warnings and forecasts, as well as urgent maritime safety information to ships. Navtex works on a frequency of 518 kHz in the medium frequency band. It has been developed to provide low cost, simple and automated means of receiving maritime safety information on board ships at sea in coastal waters. NAVTEX system automatically broadcasts localized Maritime Safety Information (MSI) using Radio Telex (also known as Narrow Band Direct Printing, or NBDP). The information transmitted may be relevant to all sizes and types of vessel and the selective message rejection feature ensures that every mariner can receive a safety information broadcast which is tailored to his particular needs. DGLL has established National Navtex Network having 7 transmitting stations along the coast at Veraval (Gujarat), Vengurla Point (Maharashtra), Muttom Point (Tamil Nadu), Portonovo (Tamil Nadu), Vakalpudi (Andhra Pradesh), Balasore (Odisha) and Keating Point (Andaman & Nicobar Island).

5. Establishment of Marine Navigation Training Institute (MNTI) at Kolkata

DGLL, in 1964, set up a Training Centre in Kolkata. Initially the training was limited to the technical staff. However, later, the training was extended to the operational staff, as well. DGLL being a council member of IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities) and also a Regional Point of Contact by the IALA World Wide Academy to develop Capacity Building initiatives in the Northern Indian Ocean Region (NIOR) countries in accordance to the United Nations concept of “Delivering as One” initiative, up-gradated its Training Centre at Kolkata to Marine Navigation Training Institute (MNTI) which conforms to the global standards of Maritime Education. MNTI aims to impart Training to:-

- a) AtoN personnel of NIOR and SAARC Countries.
- b) AtoN Personnel of Major and Minor ports of India, and
- c) Skill development program to meet the need of VTS personnel for Major and Minor Ports and create overseas employment opportunities.

6. Development of Lighthouses for Tourism:

DGLL has taken an endeavor for the development of tourism at lighthouses across coast of India in line with international trend for becoming potential tourist attractions as they provide panoramic views of scenic locations which would revitalize the existing lighthouses. The project envisages benchmarking the project components & facilities to similar lighthouse developments across the world. The prime aim to promote Lighthouse based tourism with the following development objective:

- (a) Inhouse development of the existing lighthouse and its surrounding areas as a Tourism destination, Maritime Landmark & Heritage Precinct and also to develop allied Maritime Infrastructure like National Maritime Museums & National Lighthouse Museums.
- (b) Explore the possibilities of developing projects under Public Private Partnership (PPP) by integrating commercially viable interventions at the feasible locations.

7. Revenue Generation:

For providing these aids, the Directorate collects lightdues once in 30 days, from all foreign going vessels calling at/departing from Indian ports at the rate of Rs. 92/- per TEU from Container Vessels and Rs.8/- per ton on NT basis from the vessels other than Container vessels.

8. Motto:

Our motto is to provide safe and secure navigation in the Indian waters.

9. For further details, one may visit <http://www.dgll.gov.in>

