

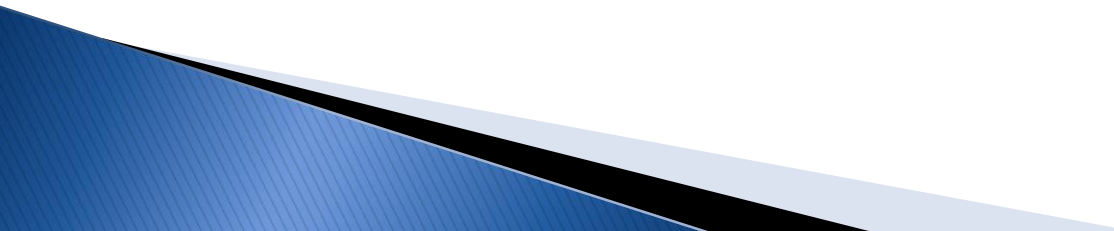


# SCHEME OF PRESENTATION



- **International/National Obligations**
- **Hydrographic Surveys & Dredging**
- **Nautical Charts & Publications**
- **ENC Division**
- **NAVAREA -IX**
- **Oceanographic Activities**

# INTERNATIONAL OBLIGATIONS

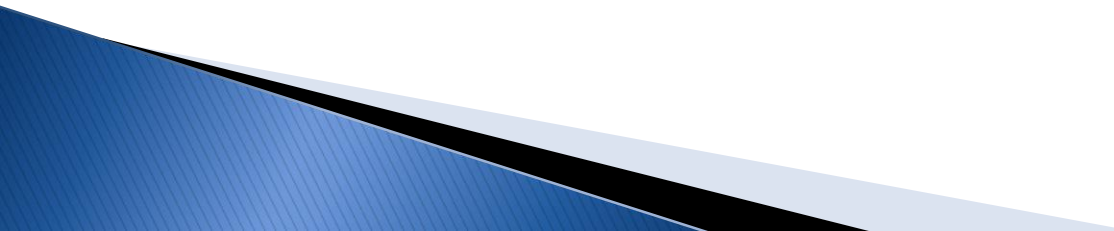
- ▶ **Ensure IHO standards in Hydrographic Services**
  - ▶ **Produce ENCs of major shipping ports & routes which is already complete**
  - ▶ **Timely & accurate promulgation of navigational warnings in Arabian Sea, Persian Gulf & Red Sea**
- 

# NATIONAL OBLIGATIONS

- ▶ **Hydrographic / Oceanographic surveys for potential harbor sites, important creeks & estuaries & production of nav charts, publications, tide tables**
- ▶ **Advise Federal Govt in delimitation of maritime boundaries & zones**
- ▶ **Monitor surveys within EEZ for exploration & exploitation of natural resources & Coastal Zone Management**

Contd...

# NATIONAL OBLIGATIONS

- ▶ **Maintain National Hydrographic Databank for stakeholders**
  - ▶ **Induction of new techniques & equipment in hydrographic surveys**
  - ▶ **Establishment of geodetic network along coast**
  - ▶ **On line tidal & marine met data collection in support of national needs**
- 



# HYDROGRAPHIC SURVEYS

## ▶ COASTLINE OF PAKISTAN





# HYDROGRAPHIC SUREVYS



**Survey Vessel BEHR PAIMA**

# DREDGING



**Dredging Vessel BEHR KUSHA**



# PUBLICATIONS AND UPDATES



- ▶ Weekly Notices to Mariners (NTMs)
- ▶ Annual Summary of NTMs
- ▶ Annual Pakistan Tide Table
- ▶ Annual Sun & Moon Rise / Set Tables
- ▶ [www.paknavy.gov.pk/hydro](http://www.paknavy.gov.pk/hydro)

# ENC DIVISION



- ▶ ENC Division was established in 2005
- ▶ ENCs are produced & validated by IC-ENC (UKHO) & now available on web
- ▶ Future plan is to cover ENCs of coastal band

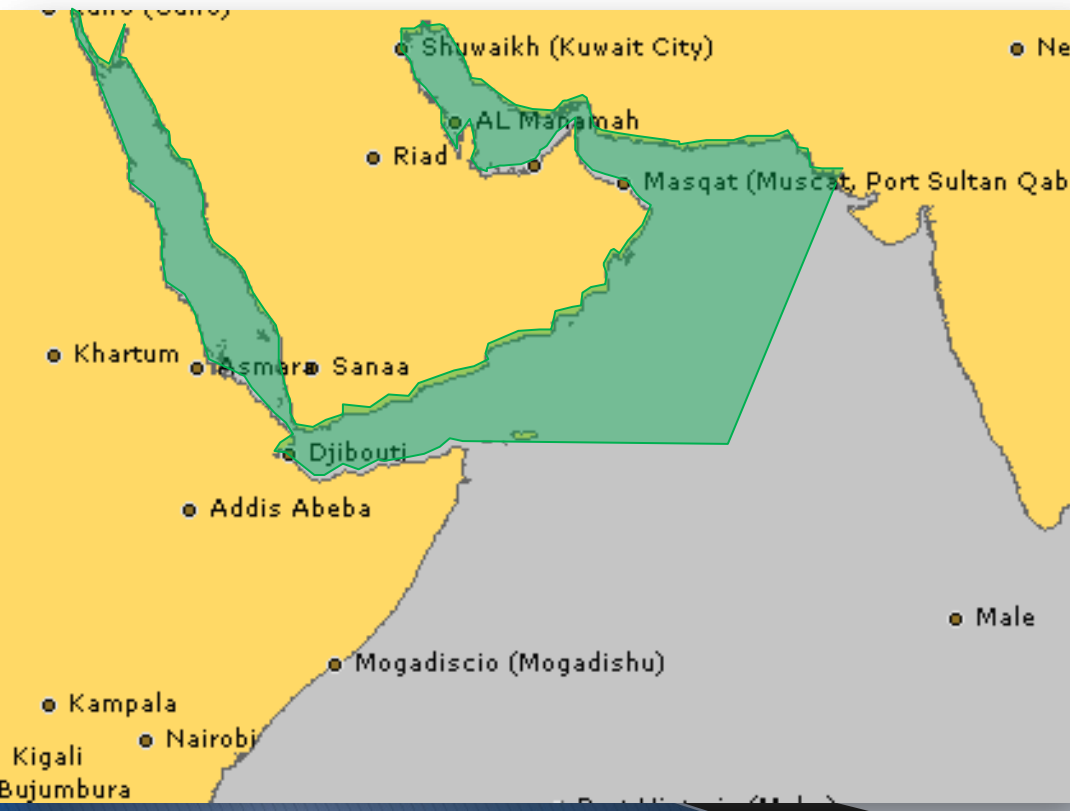
# HQ NAVAREA IX at PNHD



Pakistan is a Coordinator of NAVAREA IX since 1976

- Issues coastal warnings to all ships and concerned National Authorities

**NAVAREA IX** consists of these 16 countries



- Bahrain
- Djibouti
- Egypt
- Ethiopia
- Iran
- Iraq
- Jordan
- Kuwait
- Oman
- Pakistan
- Qatar
- Saudi Arabia
- Somalia
- Sudan
- UAE
- Yemen

# NAVAREA WARNINGS

2009 to 2011

|                              |            |
|------------------------------|------------|
| <b>2009</b>                  | <b>246</b> |
| <b>2010</b>                  | <b>439</b> |
| <b>2011 (UPTO 15 MAR 11)</b> | <b>120</b> |

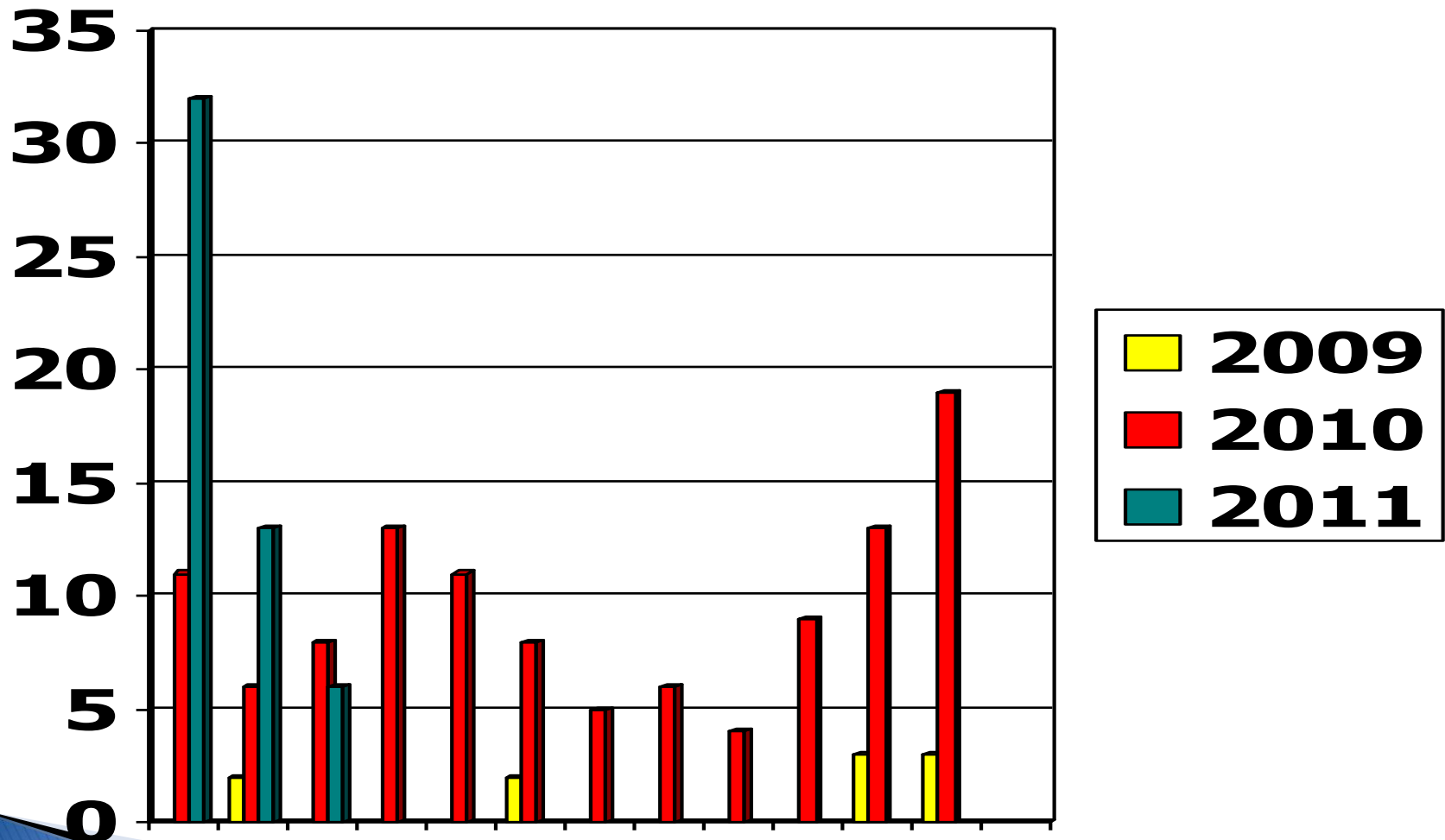
# PIRACY WARNINGS

## 2009 – 2011

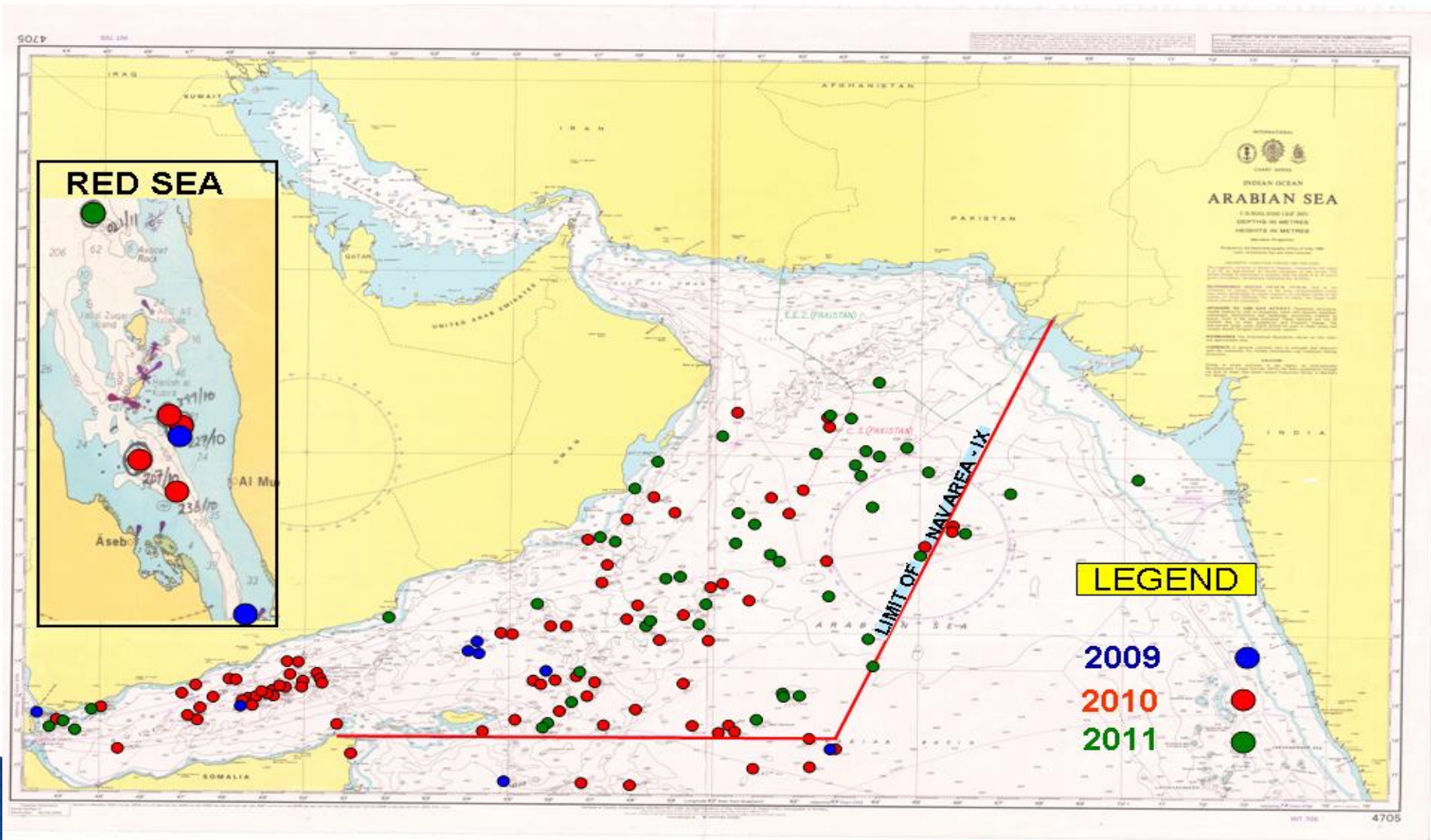
[illegible]



# MONTH WISE PIRACY WARNING 2009 TO 2011



# PIRACY WARNINGS - 2009 TO 2011



# PROBLEM FACED BY NAVAREA – IX

## COUNTRIES & THEIR MEDIUM OF COMMUNICATION

|                     |  |
|---------------------|--|
| <b>BAHRAIN</b>      | E-MAIL, FAX  |
| <b>IRAN</b>         | E-MAIL, FAX  |
| <b>OMAN</b>         | E-MAIL, FAX, POSTAL                                  |
| <b>SAUDI ARABIA</b> | E-MAIL, FAX  |
| <b>EGYPT</b>        | MAIL, FAX (SLOW RESPONSE, INFORMATION LATE RECEIVED) |
| <b>KUWAIT</b>       | FAX, POSTAL  |
| <b>QATAR</b>        | FAX  |
| <b>YEMEN</b>        | FAX  |

## COUNTRIES HAVING NO RESPONSE

|                  |             |
|------------------|-------------|
| <b>IRAQ</b>      | NO RESPONSE |
| <b>UAE</b>       | “           |
| <b>JORDAN</b>    | “           |
| <b>D’JIBOUTI</b> | “           |
| <b>ETHIOPIA</b>  | “           |
| <b>SOMALIA</b>   | “           |
| <b>SUDAN</b>     | “           |

# OCEANOGRAPHIC ACTIVITIES



- ▶ PNHD provides survey ship for oceanographic cruises for:
  - ▶ National institutes & universities

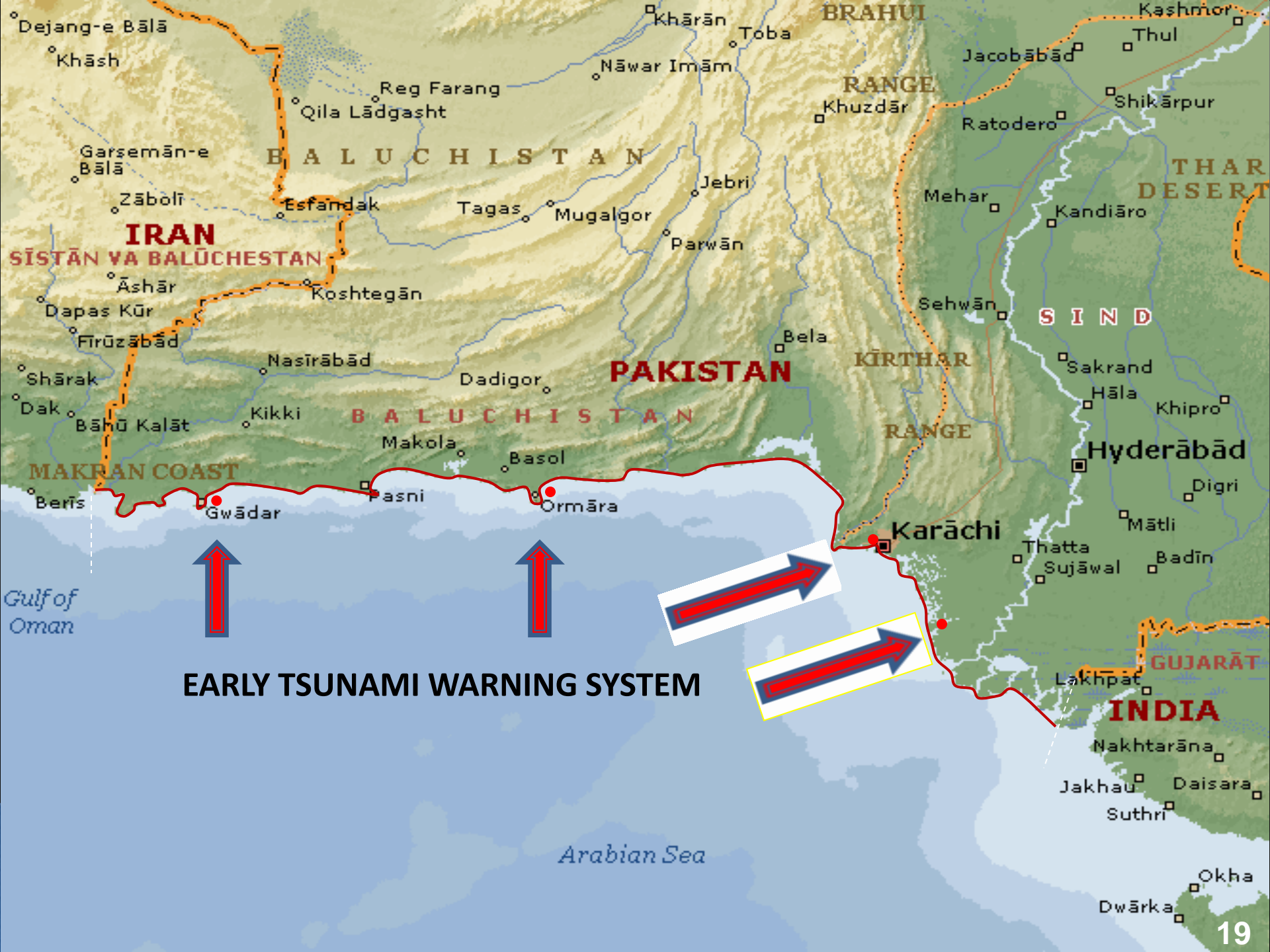
# OCEANOGRAPHIC ACTIVITIES



- ▶ TIDE GAUGE NETWORK
  - ▶ (EARLY TSUNAMI WARNING SYSTEM)
  - ▶ Project of UNESCO









# THANK YOU