Persian Gulf & Gulf of Oman Oceanographic Study (PG-GOOS)

Dr. Said Mazaheri
Iranian National Institute for Oceanography (INIO)

IOGOOS 9th Annual Meeting IOP9, SIBER3, IRF3
International Marine Cruise in Persian Gulf & Gulf of Oman
Regional Marine Cruise by Iran & Persian Gulf Rim Countries in Persian Gulf Since 1992
INIO previous surveying in the Persian Gulf & Gulf of Oman
PG GOOS
Research Vessel
# International Marine Cruise in Persian Gulf & Gulf of Oman

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<tr>
<th>Country</th>
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# International Marine Cruise in Persian Gulf & Gulf of Oman Since 1993

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Regional Marine Cruise by Iran & Persian Gulf Rim Countries in Persian Gulf Since 1992

- Marine Research Cruise in the ROPME Region 1992
- Marine Research Cruise in the ROPME Region, Summer 2000
- Marine Research Cruise in the ROPME Region, Summer 2001
- Joint cruise by the Iranian Marine organizations 2001
- Ferdows Marine Environmental Research Cruise (Iran), 2003
- Joint cruise by the Iranian Marine organizations 2005
- Ghods Marine Environmental Research Cruise (Iran), Winter 2006
- Regular Physical Oceanography Field Measurements and Deployment from 2000-2012
INIO previous surveying in the Persian Gulf & Gulf of Oman

- First INIO Research Marine Cruise in Oman Sea, autumn 2007
- Persian Gulf Oceanographic Cruise, Summer 2009
- Persian Gulf Oceanographic Training Cruise, Winter 2012 (already planned)
First INIO Research Marine Cruise in Oman Sea (OSC), autumn 2007

RCM9 & CTD

Grab Sampler

Piston Corer
Persian Gulf Oceanographic Cruise, Summer 2009
Persian Gulf Oceanographic Cruise, Summer 2009
Persian Gulf Oceanographic Training
Cruise, Winter 2012
Persian Gulf Oceanographic Training Cruise, Winter 2012
Persian Gulf & Gulf of Oman
Oceanographic Study
(PG-GOOS)
Aims

- Monitoring
- Collecting Marine Physical, Chemical, Geological, Biological & Environmental Data
- Modeling of water circulation and physical parameters with GETM, COHERENS, FVCOM software‘s
- Compiling a comprehensive oceanographic report
Maximum depth of sampling and measurement is up to 1000m in the Gulf of Oman
Work plan

Work plan is based on standard forms which is provided by IOC/IODE program

MEMORANDUM FOR: [Name]

FROM: [Name]

SUBJECT:

In preparation for your upcoming cruise aboard [Vessel Name], please provide the requested information outlined in the attachments and return them to us via email or by post by associated due date. Note attachments 1, 2, & 3 are due no later than 20 days prior to sailing. Attachment 4’s Drug & Alcohol Policy Acknowledgment Forms are due upon boarding. Attachment 5 (Equipment List) is due no later than 30 days prior to sailing. Attachment 6 (Liability Release Form) is due upon boarding.

1. Vessel Pre-Cruise Plan ..... Due
2. Scientific Personnel Information... Due
3. Berthing Plan Due ..... 
4. Drug/Alcohol Policy - Submit signed acknowledgement forms for each scientist when boarding the ship.
5. Equipment List Due ..... 
6. Liability Release Form Submit signed form when board the ship.

We show that your cruise does not plan for operations in foreign waters. If this is not the case, let me know immediately.

If you have any questions, feel free to call me at [Contact Number], or email [Email Address].
### Sampling and Measurement Instruments

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<th>Instruments</th>
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<td>CTD</td>
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<td>ADCP</td>
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<tr>
<td>RCM9</td>
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<tr>
<td>Multi water sampler (Rosette)</td>
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<td>Sub Bottom Profiler</td>
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<tr>
<td>Limnos Multi-Water Sampler</td>
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<td>Multi Sediment Trap</td>
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<td>Gravity Corer</td>
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<td>Box Corer</td>
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<td>Niskin</td>
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<td>Eco sounder</td>
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<td>Plankton nets</td>
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<tr>
<td>Surface sediment sampler</td>
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</tbody>
</table>
Project Manager: Dr. V. Chegini

Project Assistant: Dr. H. Lahijani

Ship Coordinator: Mr. Begham

Cruise Manager

Cordinator

Logistic

Chief Scientist

Head of Marine Physic Group

Head of Marine Chemistry Group

Head of Marine Biology Group

Head of Marine Geology Group
Cruise Plan & Cruise Personnel

- **Cruise Plan**
  - The cruise will be held periodically in 5 phases

- **Cruise Personnel**
  - **INIO Scientific Members & Experts:** 40 People
  - **University and Marine Organization Experts:** 20 People
  - **INIO Laboratory Members:** 30 People
  - **Data management and data preparation groups**
  - **Modeling Group**
Due to the need for general data collection and information system in the I. R. of Iran, the establishment of a NODC (National Oceanographic Data Center) in Iran was facilitated through the resolution of the 27th Session of UNESCO General Conference. In 1993, the draft resolution 153 was adopted and finally in 1995 the Iranian Oceanographic Data Centre (IRODC) was established in the Iranian National Center for Oceanography (INCO) and introduced as a node for the International Oceanographic Data and Information Exchange (IODE) in Iran. IRODC is the only national oceanographic data center in the Persian Gulf and the Gulf of Oman region, tasked with the collection, archiving, and quality control of oceanographic data, as well as its exchange with various international bodies and institutions. In line with this objectives, the center has embarked on a program of collecting oceanographic data, metadata, and CSR (Cruise Summary Reports) from national and international organizations, which are posted on the INCO website on a regular basis. The physical, chemical, and biological data cover the Caspian Sea, the Persian Gulf, and the Gulf of Oman. The hydrological data relate to the water bodies watershed. The data also include meteorological readings from the entire Iranian territory.
Iranian National Center for Ocean Data (INCOD)
**Phase 1:**
Data Center began its works with support of UNESCO and IOC in the Iranian National Center for Oceanography (INCO)

**Phase 2:**
INCO was promoted to the Iranian National Institute for Oceanography (INIO) and received the license of INCOD from the Ministry of Science, Research and Technology
HISTORY

Due to the need for data & information management in I.R. Iran, the establishment of a National Oceanographic Data Center (NODC) was adopted through the resolution 153 in the 27th session of UNESCO General Conference.

In response to this resolution, a feasibility study mission was conducted in Iran in 1994 by IOC group of experts. In 1995, NOODC was established in Iranian National Center for Oceanography (INCO) and introduced as the node of International Oceanographic Data and Information Exchange (IODE) in I.R. Iran.

In 2010 INCO was promoted to the Iranian National Institute for Oceanography (INIO) and received the license of INCOD from the Ministry of Science, Research and Technology.
Marine Data are “valuable” so “Data Management” is necessary.

Data Sets

Collected and maintained Datasets by INCOD:

**MEASUREMENT DATA**
- Marine Cruises
- Synoptic Stations
- Tide Gauge Stations
- Buoy Data
- NODC’s and International Programmes...

**SATELLITE DATA**
- Landsat
- MODIS
- QuikScat
- Jason 1
- TOPEX/Poseidon

SOFTWARES
Software and App tools developed for data management:
- IRW Wave Atlas
- Satellite Oceanography Database Portal
- Satellite Altimetry Toolkit for ArcGIS
- MODIS-L2 Data Analysis Package for Satellite Oceanography Database
- ArcSeaNet Marine Cruise Data Management Toolkit for ArcGIS
- Iranian Marine Database (A System for Metadata Management)
- Persian Gulf Historical Document Database
- **bluePersia** (an integrated ocean data portal)

KEY PROJECTS
- GIS Application in ICAM
- Database Management System for Marine Cruises
- Development a System for Generating Calibrated Sea Surface Temperature (SST) maps in Caspian Sea and Persian Gulf using NOAA-AVHRR and MODIS images
- Development of Satellite Oceanography Database
- Development the National System for Marine Data Management

**OUR MISSION IS THE FACILITATING OF OCEANOGRAPHIC DATA EXCHANGE.**
Iranian National Center for Ocean Hazards (INCOH)
Established stations:
- Gulf of Oman and Indian Ocean (Chabahar) Research Station
- Caspian Sea research Station
- Persian Gulf (Boshehr) Research Station
- Bandarabass Oceanography Center

Planned stations:
Establishment of 2 station in north and 3 station in south of Iranian coastal
Future Plans

- First National Oceanographic Research Vessel
- Argo Floats
- International Collaborations in the framework of IOGOOS
- Establishment of a permanent research Station in the Antarctic
- National Research Fleet
Iranian Research Vessels

Organizations that organize research cruises in the Iranian water territories:

• Iranian Fisheries Research Organization
• Geological Survey of Iran
• National Cartography Center (NCC)
• National Geographic Organization (Ministry of Defense)
• Iranian Fisheries Research Organization

**Research Vessels:**

- **Ferdows:**
  - Length: 45.5 m
  - Width: 10.25 m
  - Speed: 12 Kont

- **Guilan:**
  - Length: 50.29 m
  - Width: 9.8 m
  - Speed: 9 Kont

- **Lavar 2, 3:**
  - Length: 32.6 m
  - Width: 10 m
  - Speed: 12 Kont
First National Oceanographic Research Vessel

Persian Gulf Research Vessel

- Cruise Speed
  - 12 knots
- Crew and technician numbers
  - 11
- Researchers
  - 16
- Maximum Patrol endurance
  - 45 days

50% Progress so far

Scheduled delivery time: June 2013
Thank You For Your Attention