



Workshop On Marine Cage Culture in Iran

Site Selection Studies for  
Finfish Cage Culture  
in  
The Persian Gulf

September 26<sup>th</sup> 2016

# Outline

- The Study Area
- An Introduction to the project approach
- Site Selection Studies
- Environmental issues and sustainability

# The Study Area – The Study Team



# Key Persons



# Cage Culture

- Iranian Fisheries Organization is promoting Cage Culture for
  - Public Health and food security
  - Decrease the stress on fresh water resources and marine fish resources
- and do care about
  - The environment
  - and sustainability



- Socio-economic Studies
- Site Selection
  - Data Gathering
  - Hydrodynamic and sediment studies
  - Water quality
  - Supporting Ports
- Operation Studies
  - Fish species
  - Cage Type
  - Baby fish
  - Feeding
  - Fish disease
  - Harvesting
- Monitoring Program
  - Monitoring Plan
  - EIA
  - Licensing
  - Tech. Transfer



# Site Selection

# Site Selection

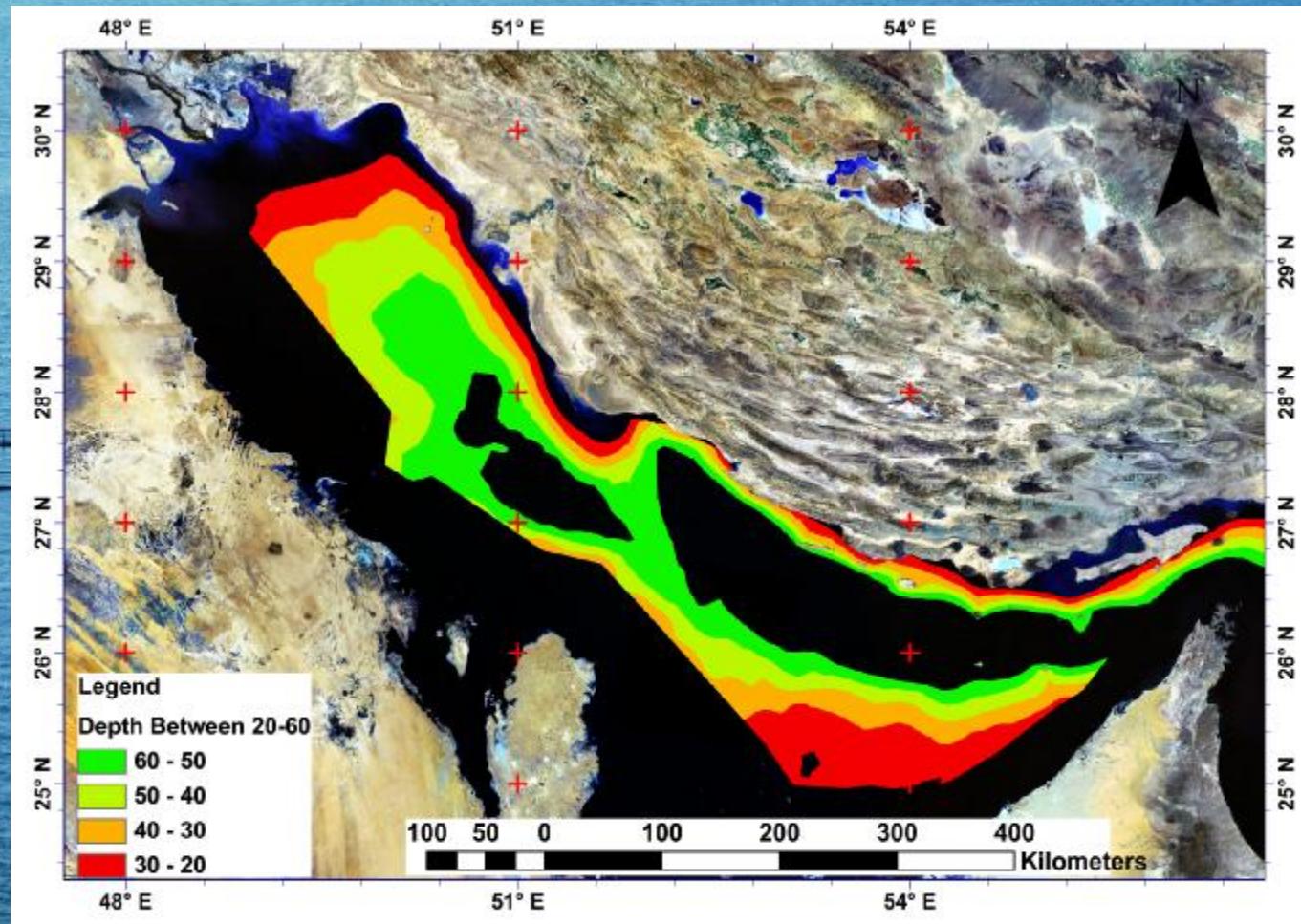
## Criteria:

- Capacity
  - Appropriate Depth
- Environment and WQ
  - Current Speed
  - Distance from the shoreline
  - Distance from river mouth and estuaries
  - Distance from protected areas
  - Distance from sources of pollution

- Operation and maintenance
  - Distance from supporting ports
  - Winds
  - Waves
  - Distance from shipping paths
  - Distance from oil pipes
  - Distance from military areas

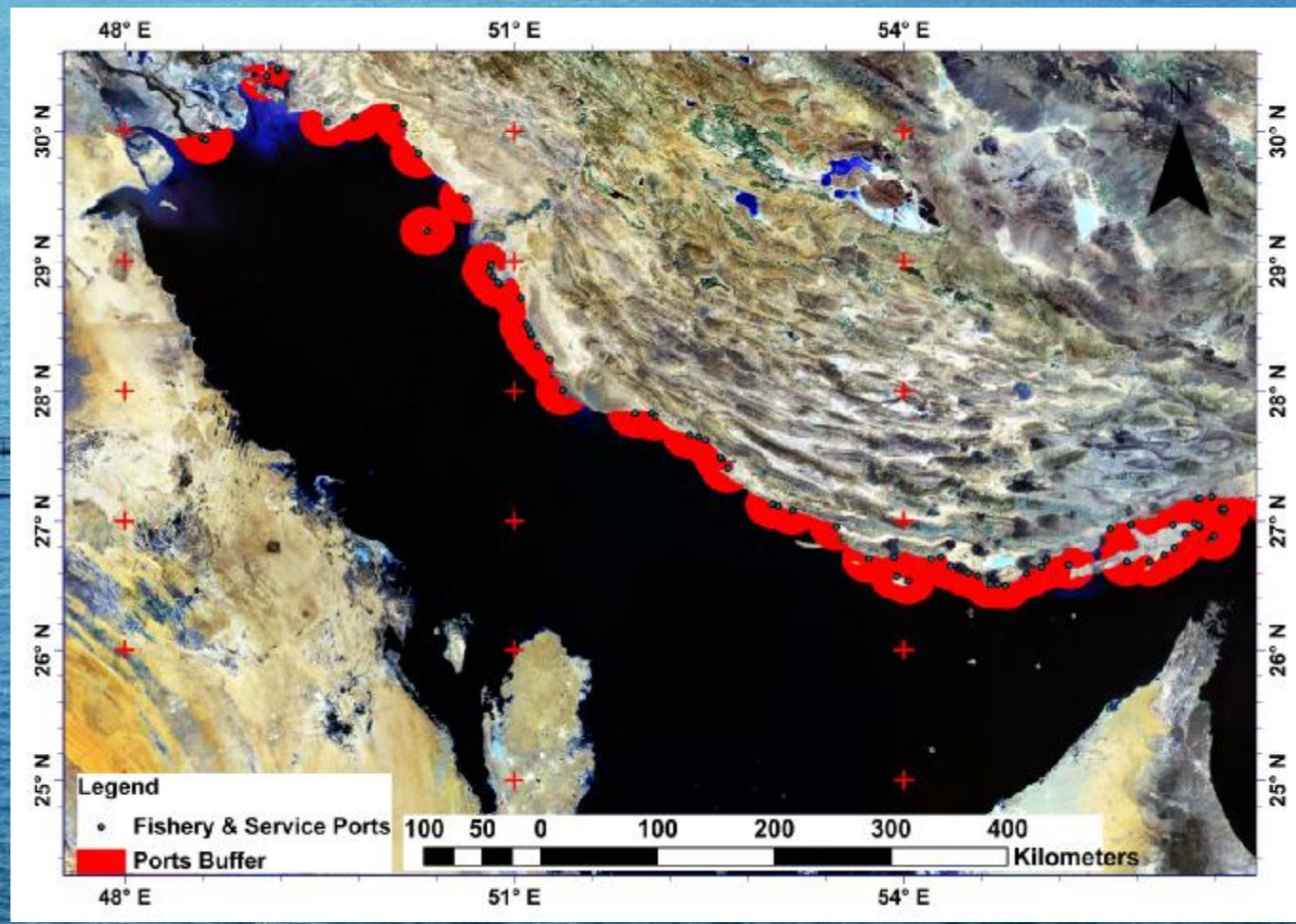
# Site Selection

Appropriate depth: 20 – 60 m



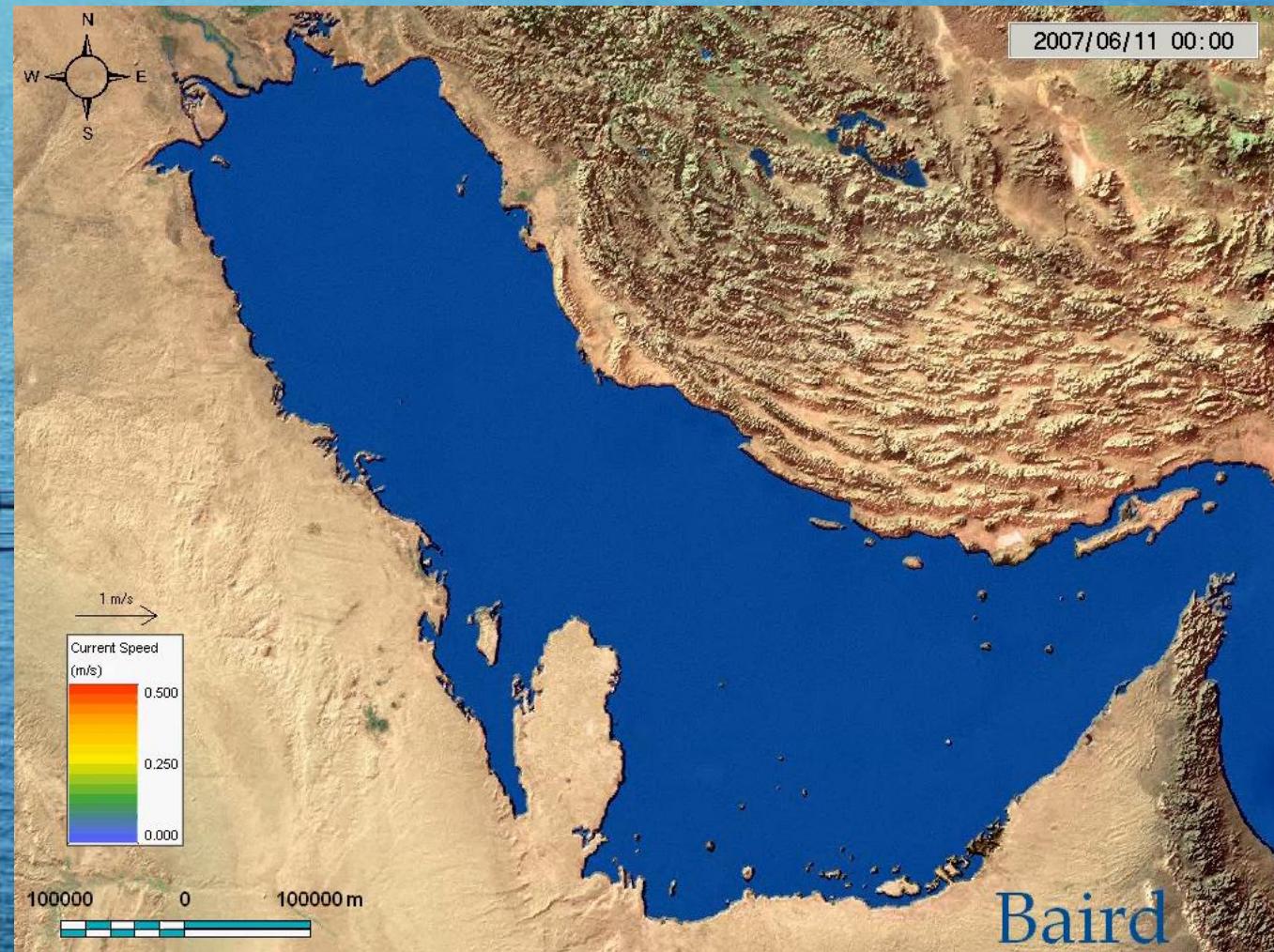
# Site Selection

Distance from Supporting Ports: 1– 20 km



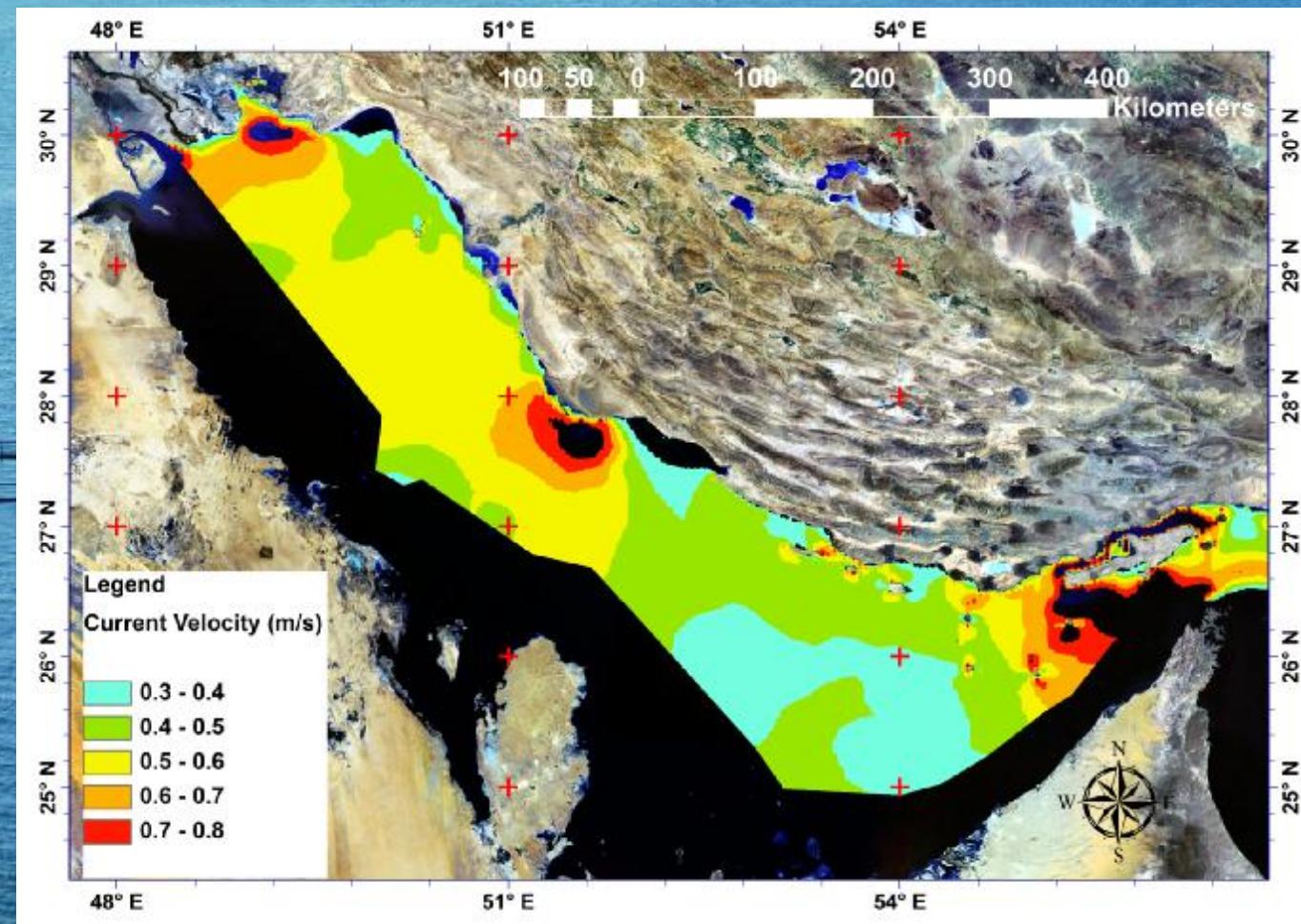
# Site Selection

## Current Velocity



# Site Selection

Current velocity limits: 0.3 – 0.8 m/s



# Site Selection

## Winds



# Site Selection

Waves

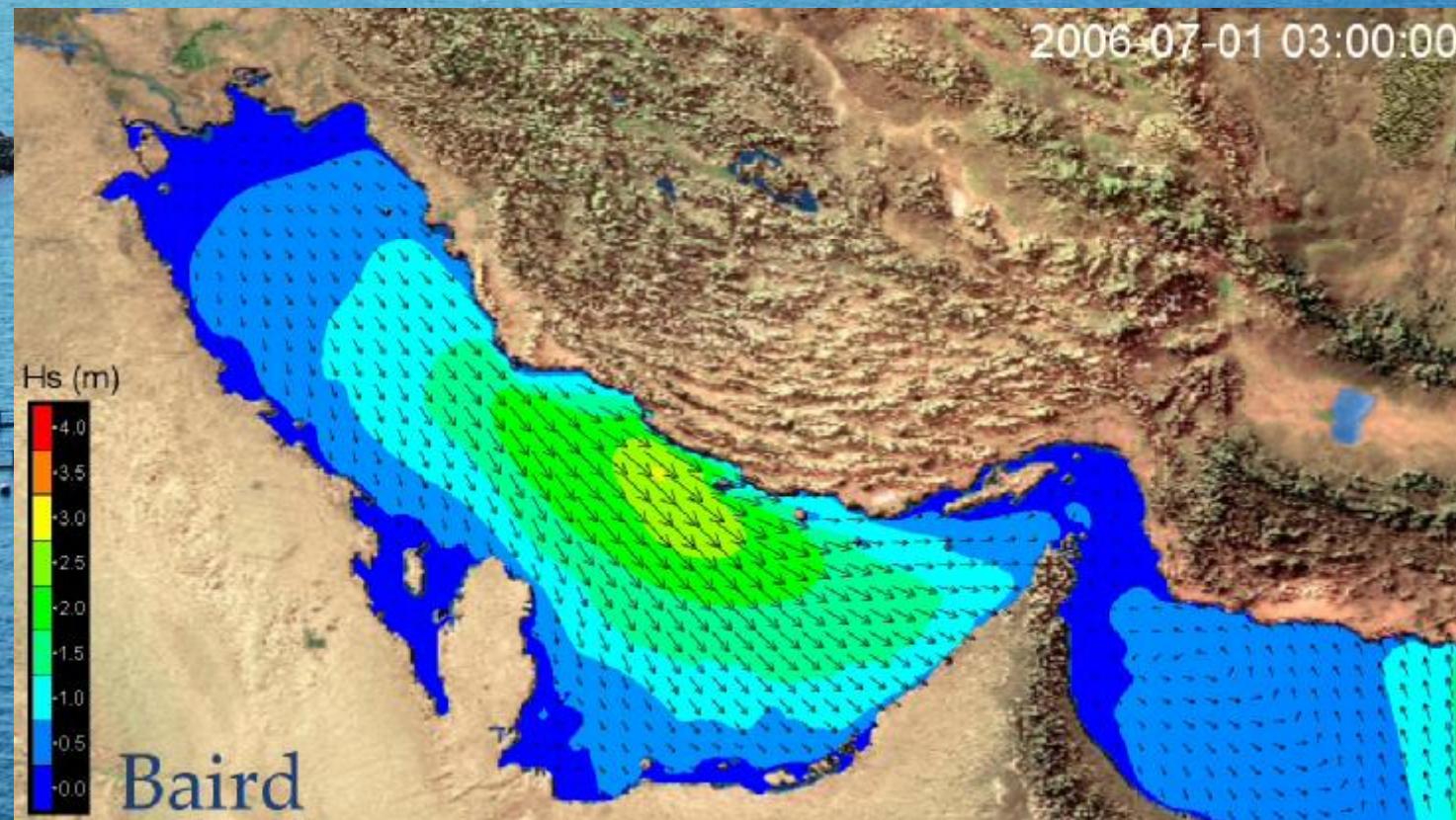


1- Cage Stability and Design

2- Access to the farms

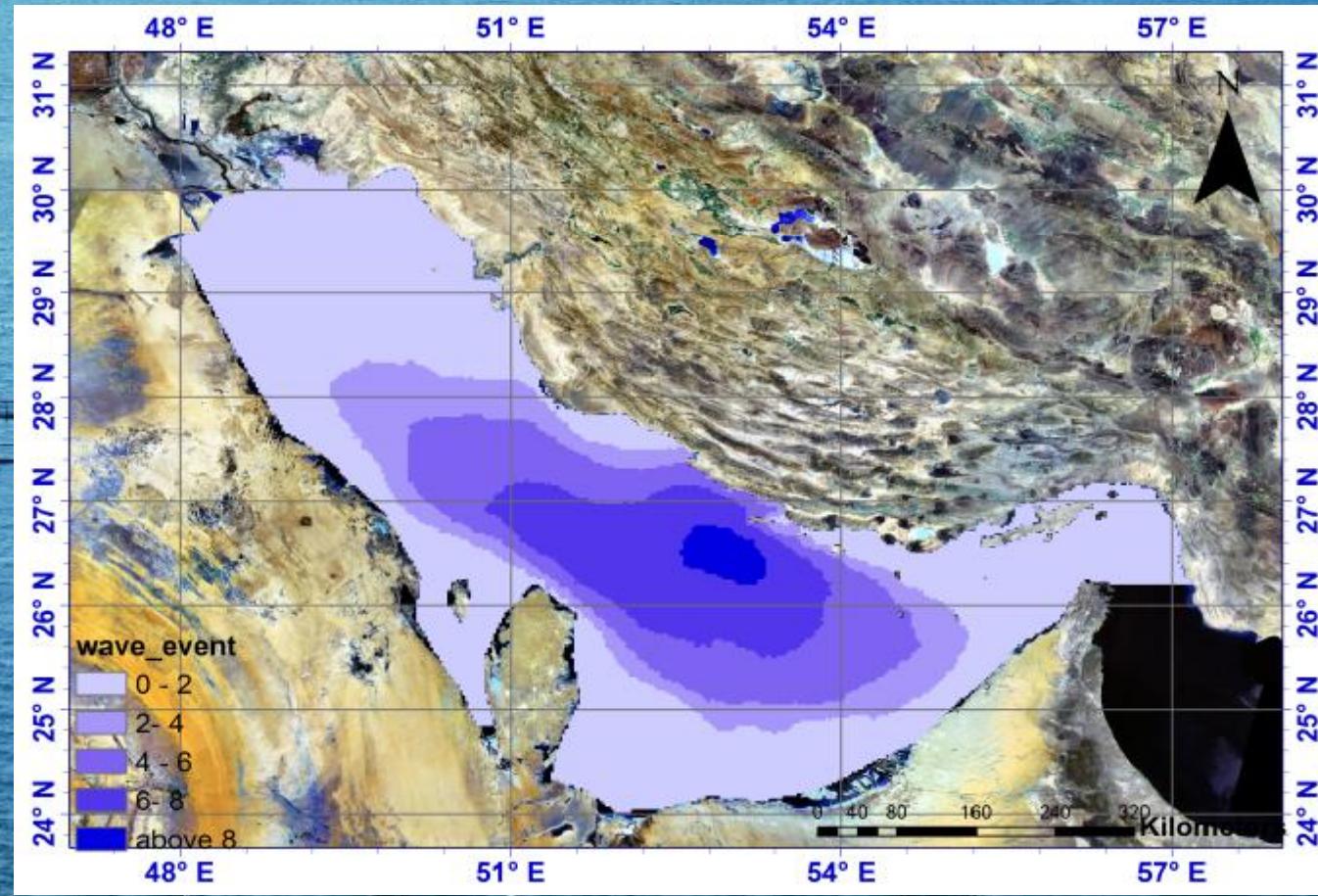
# Site Selection

Waves

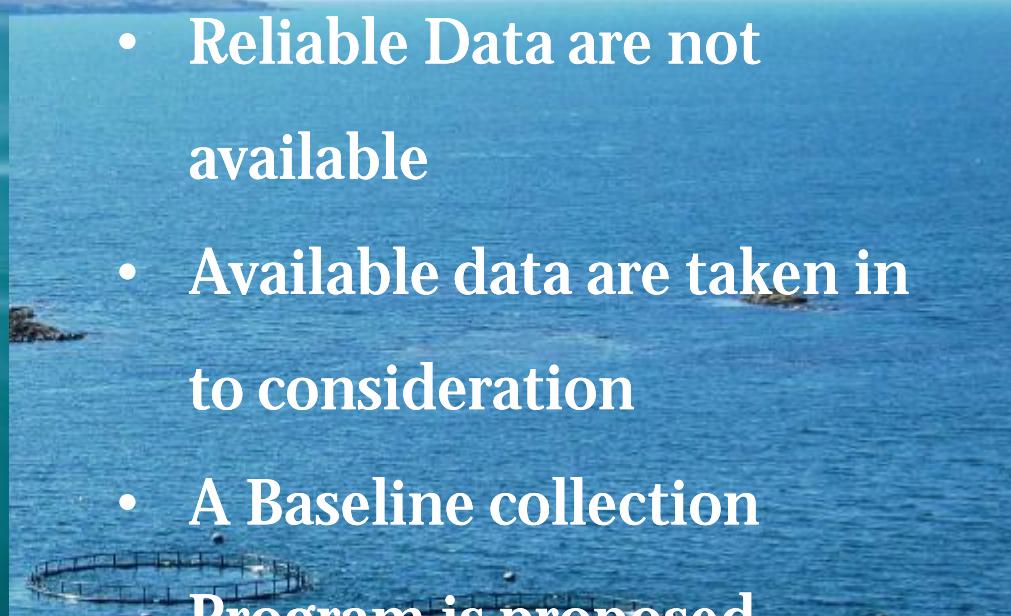


# Site Selection

Storm frequency



# Site Selection



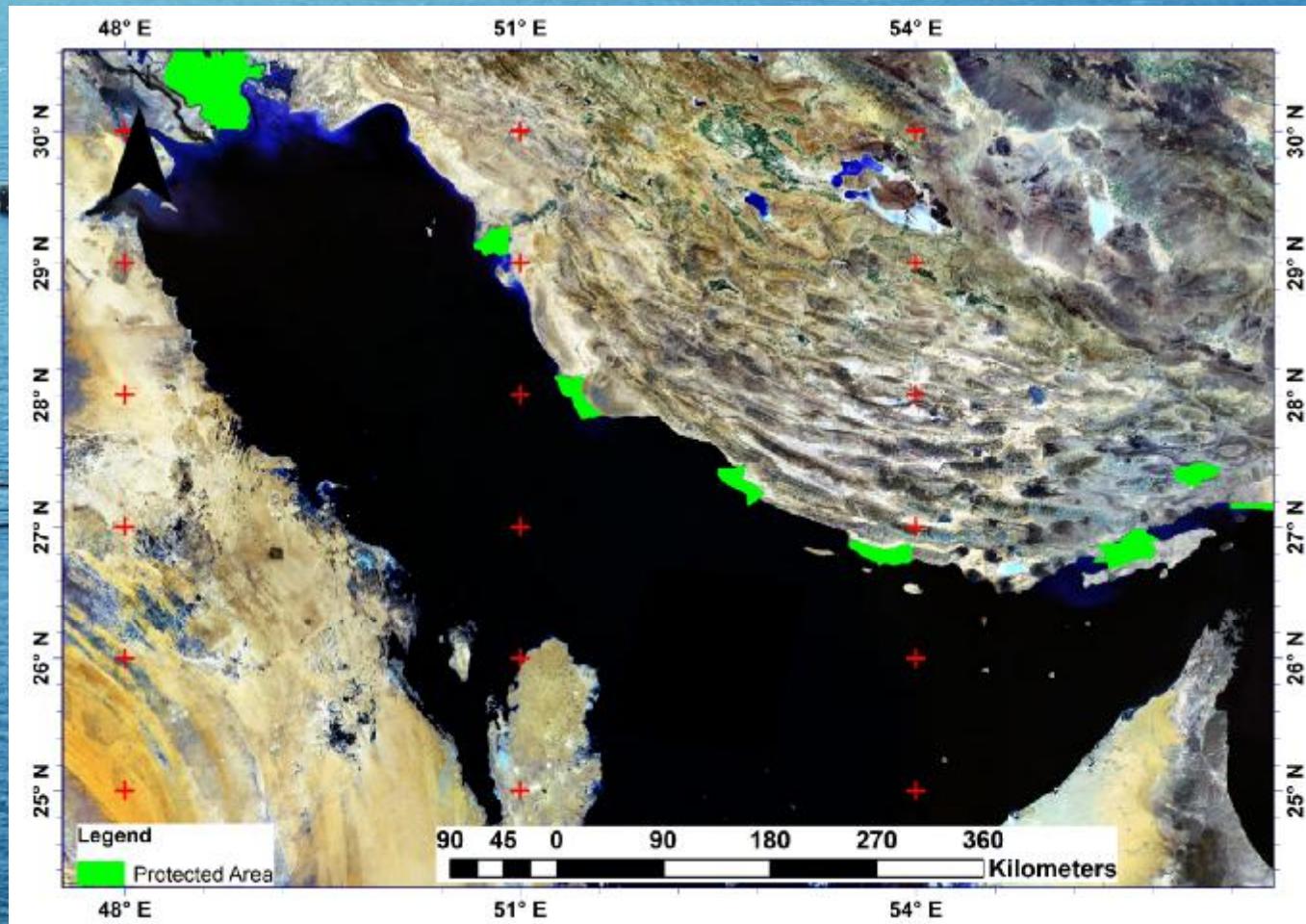
- Reliable Data are not available
- Available data are taken into consideration
- A Baseline collection Program is proposed

*Pre-establishment survey is needed!*

*A Regular Monitoring Plan is highly recommended!*

# Site Selection

## Protected Areas



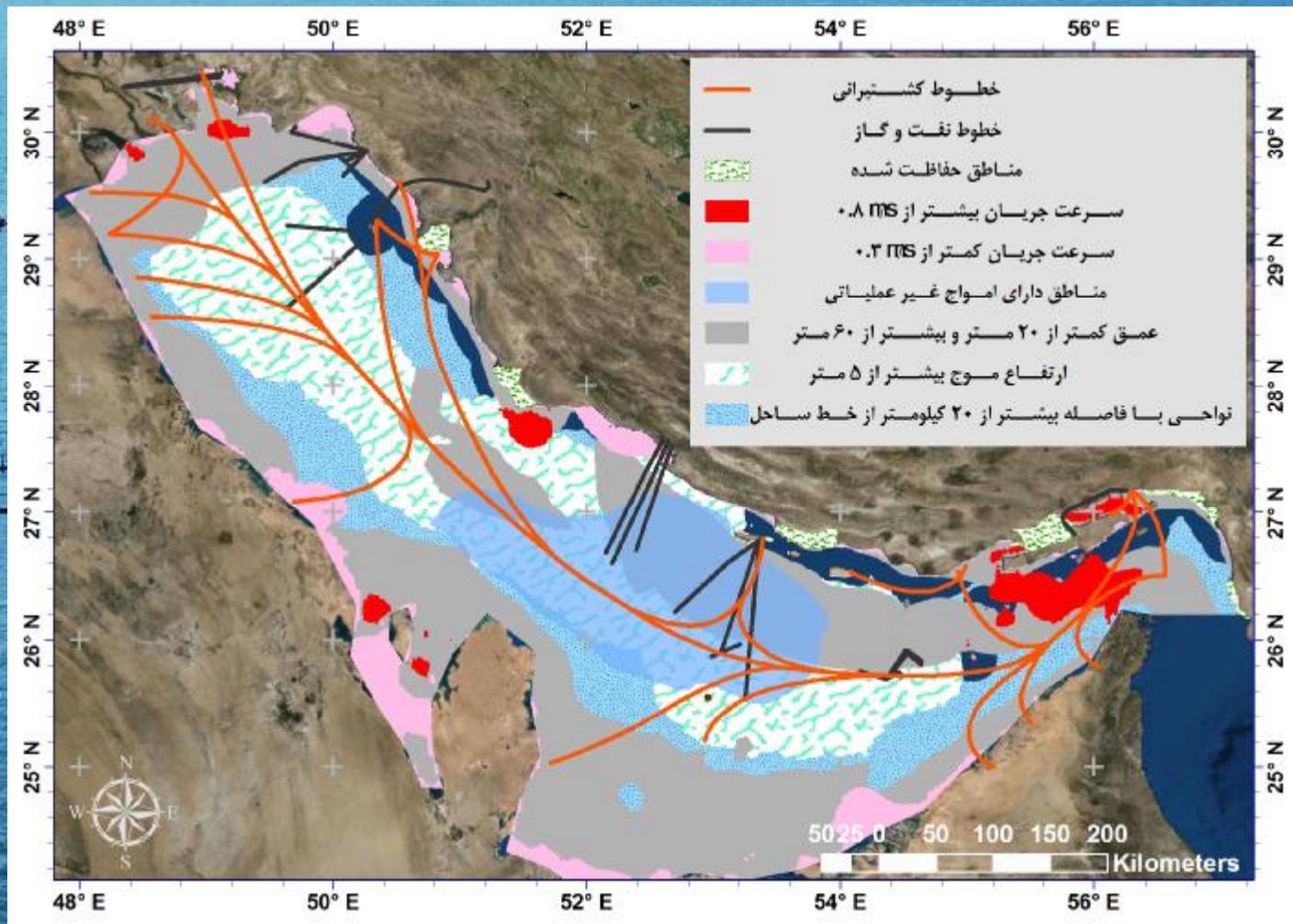
# Site Selection

Almost 16,000 km<sup>2</sup>



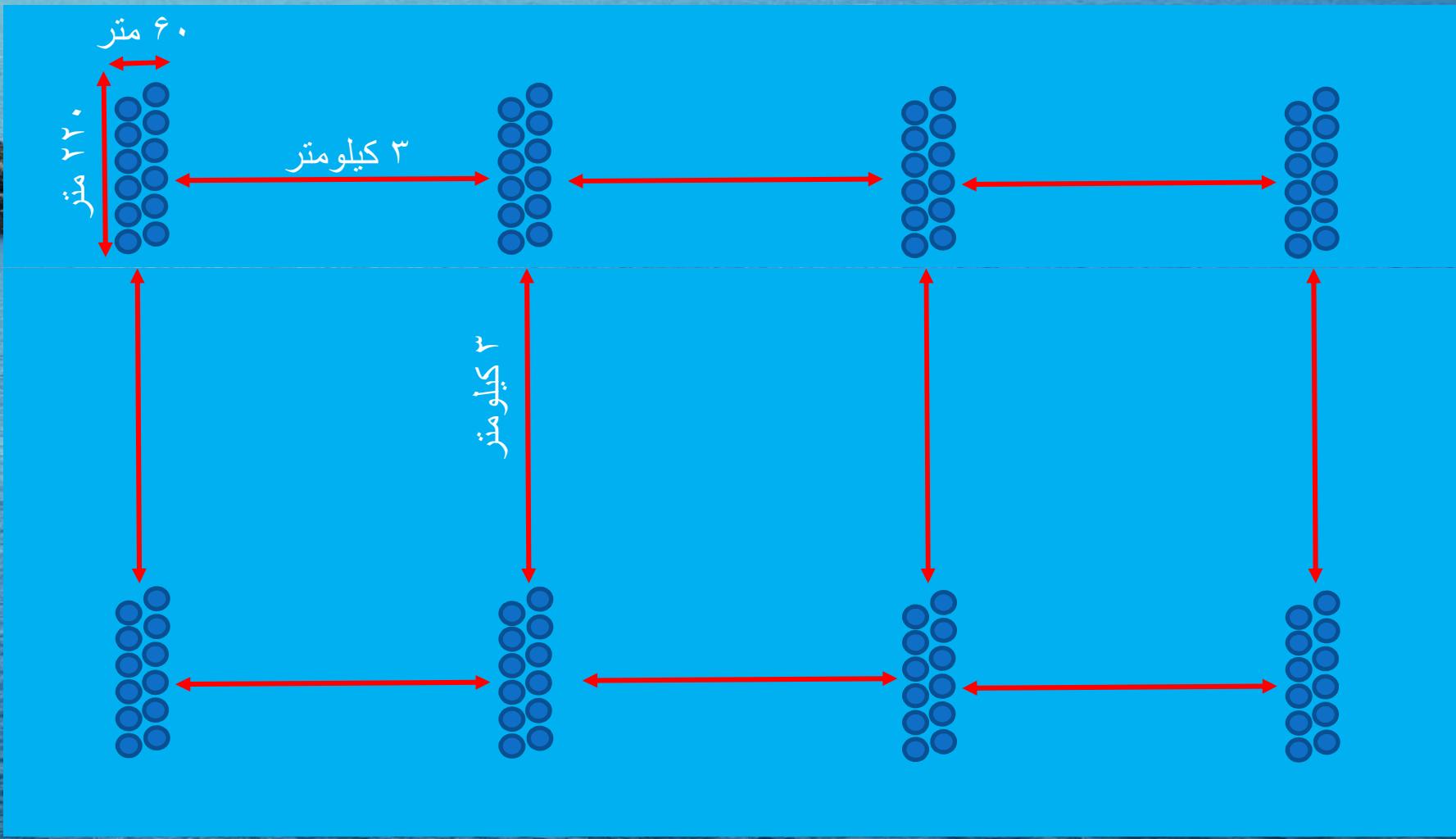
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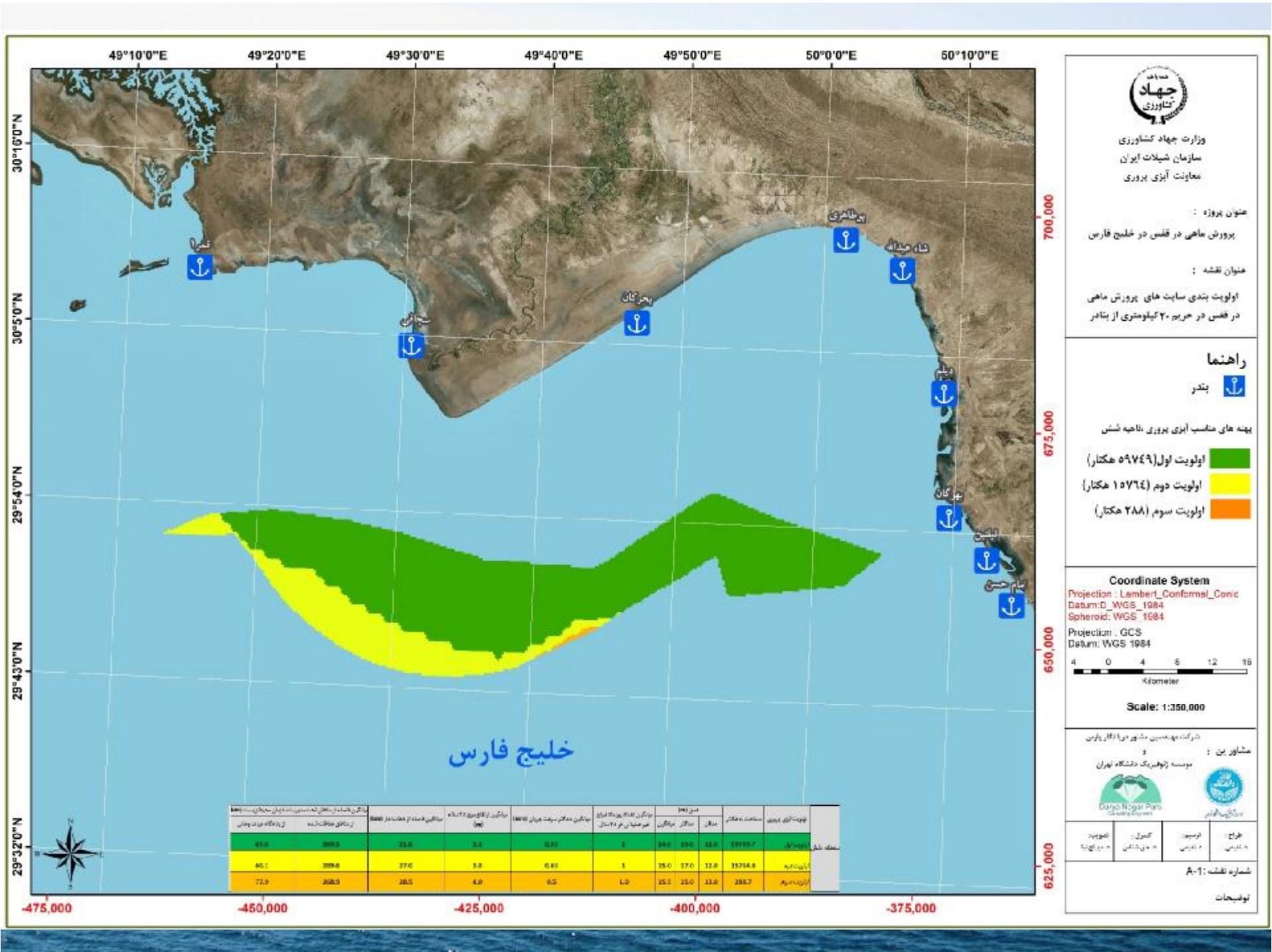
## Limitations

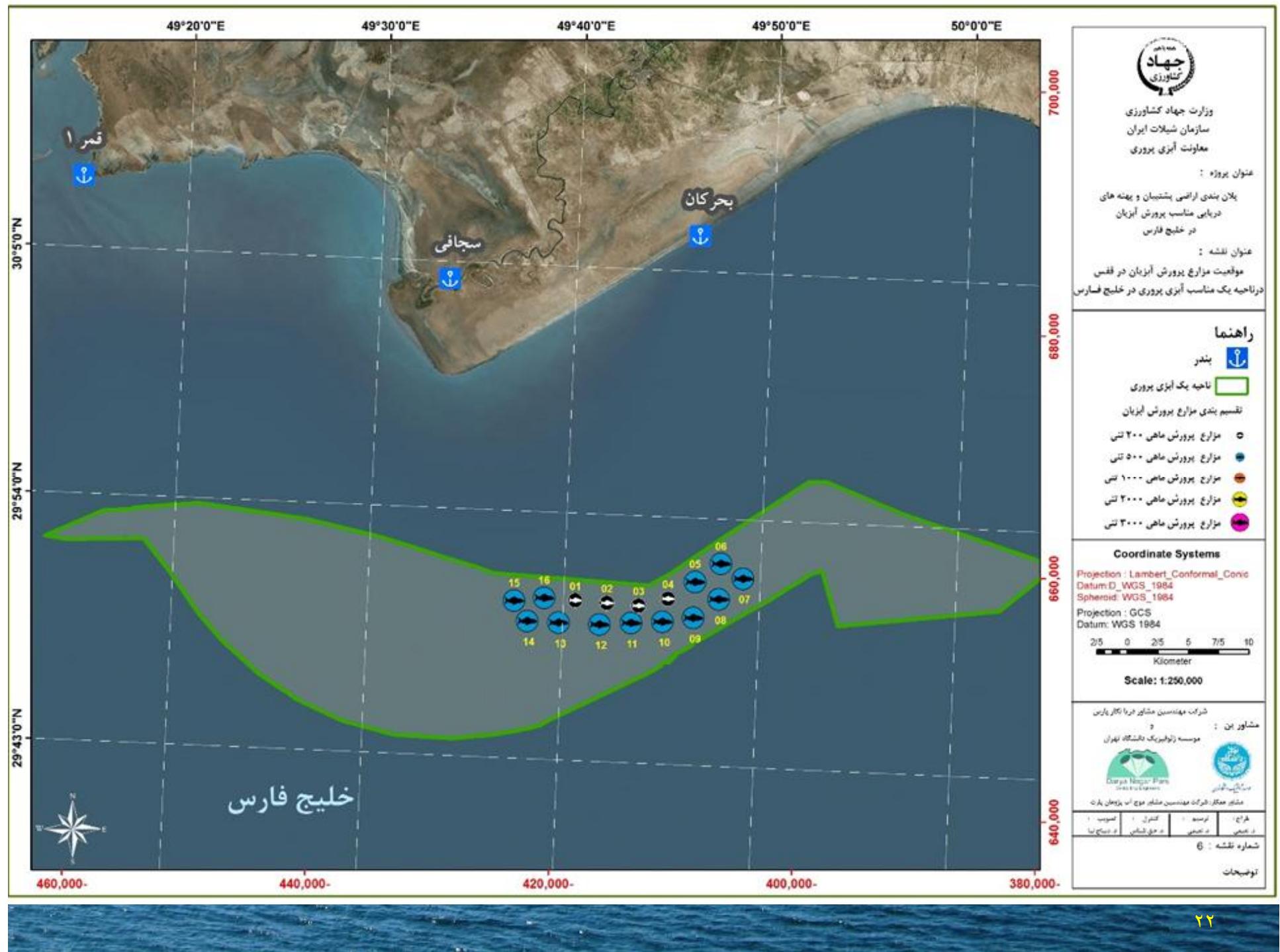


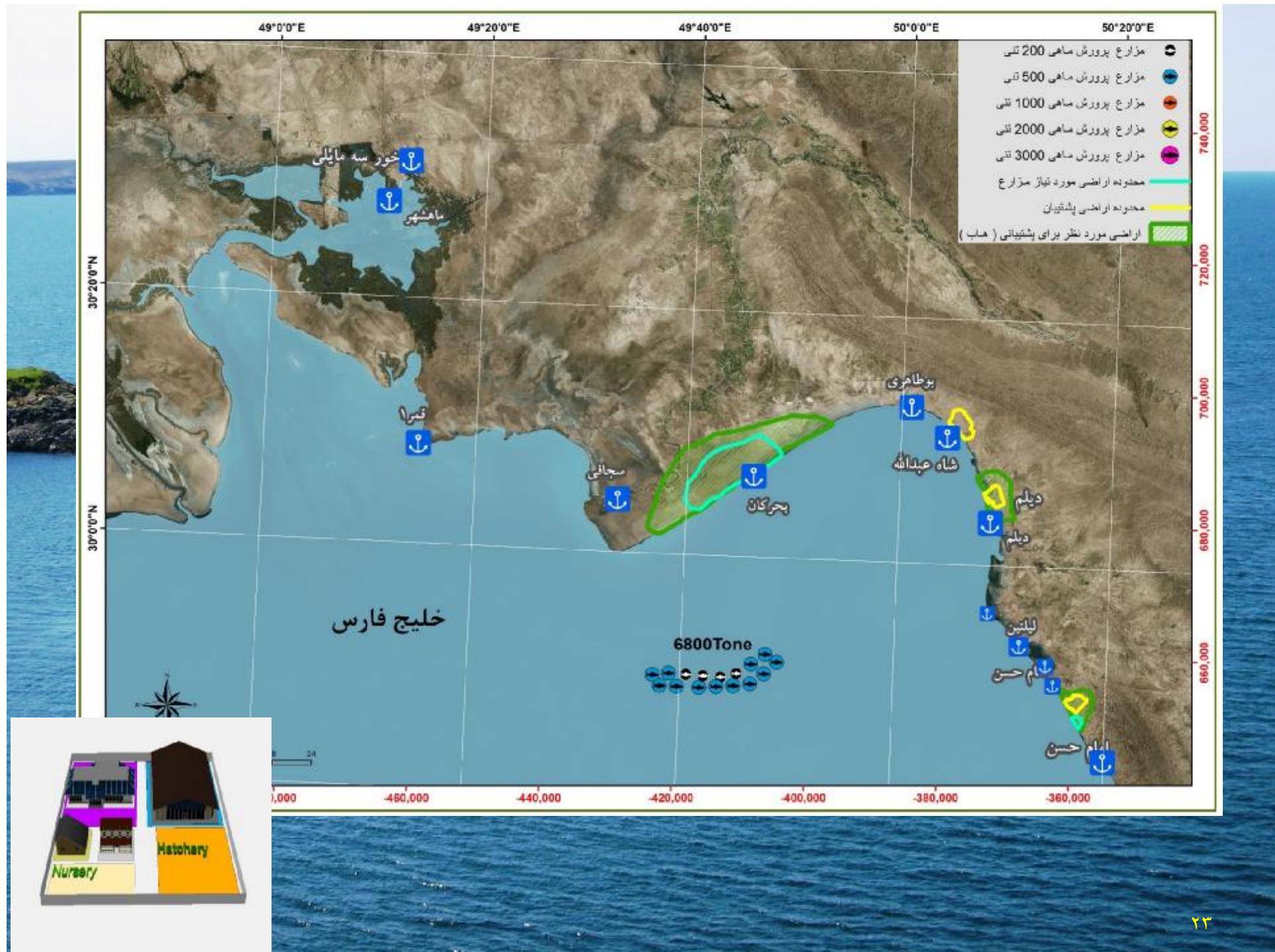
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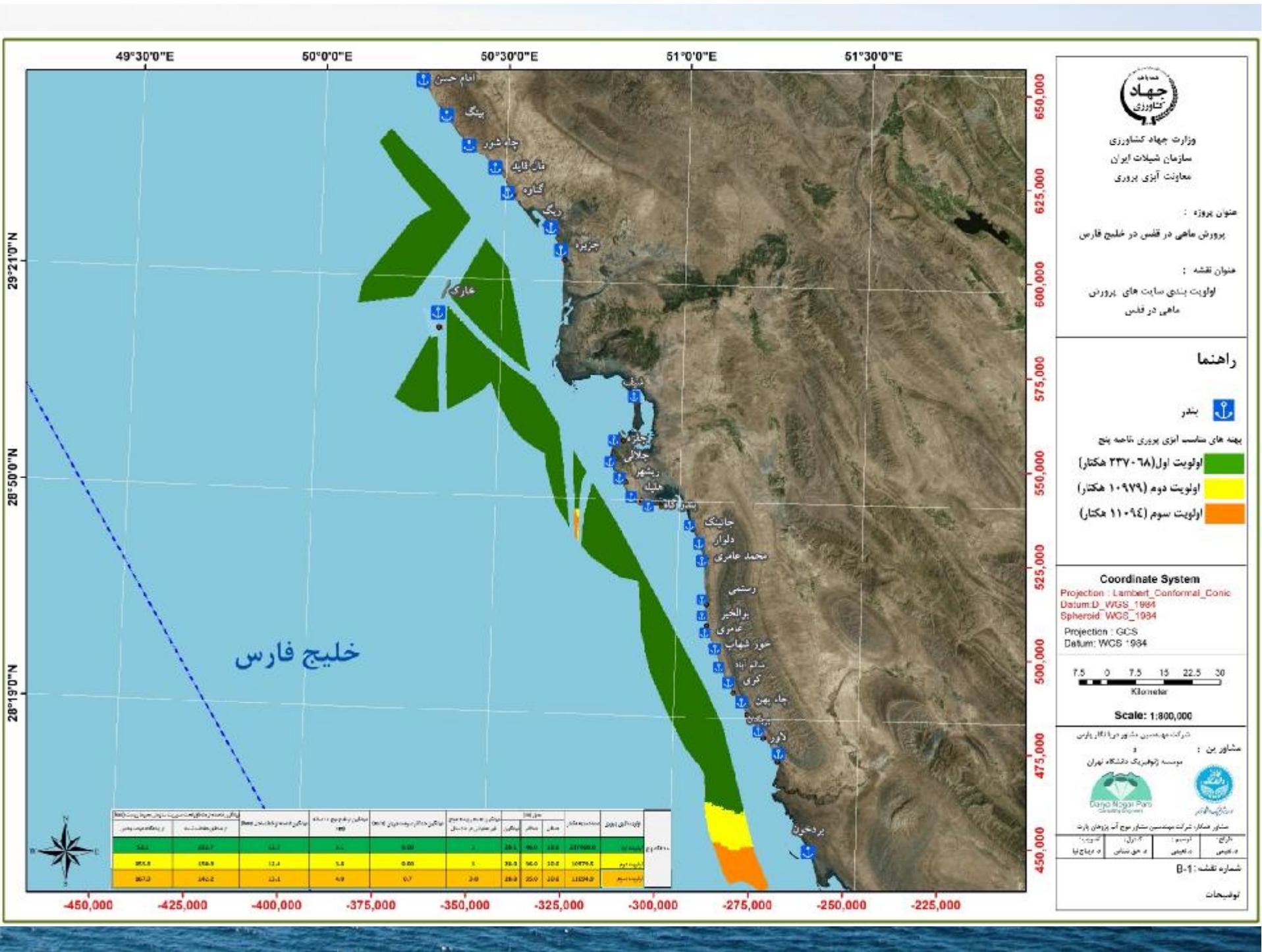
## Farm Layouts

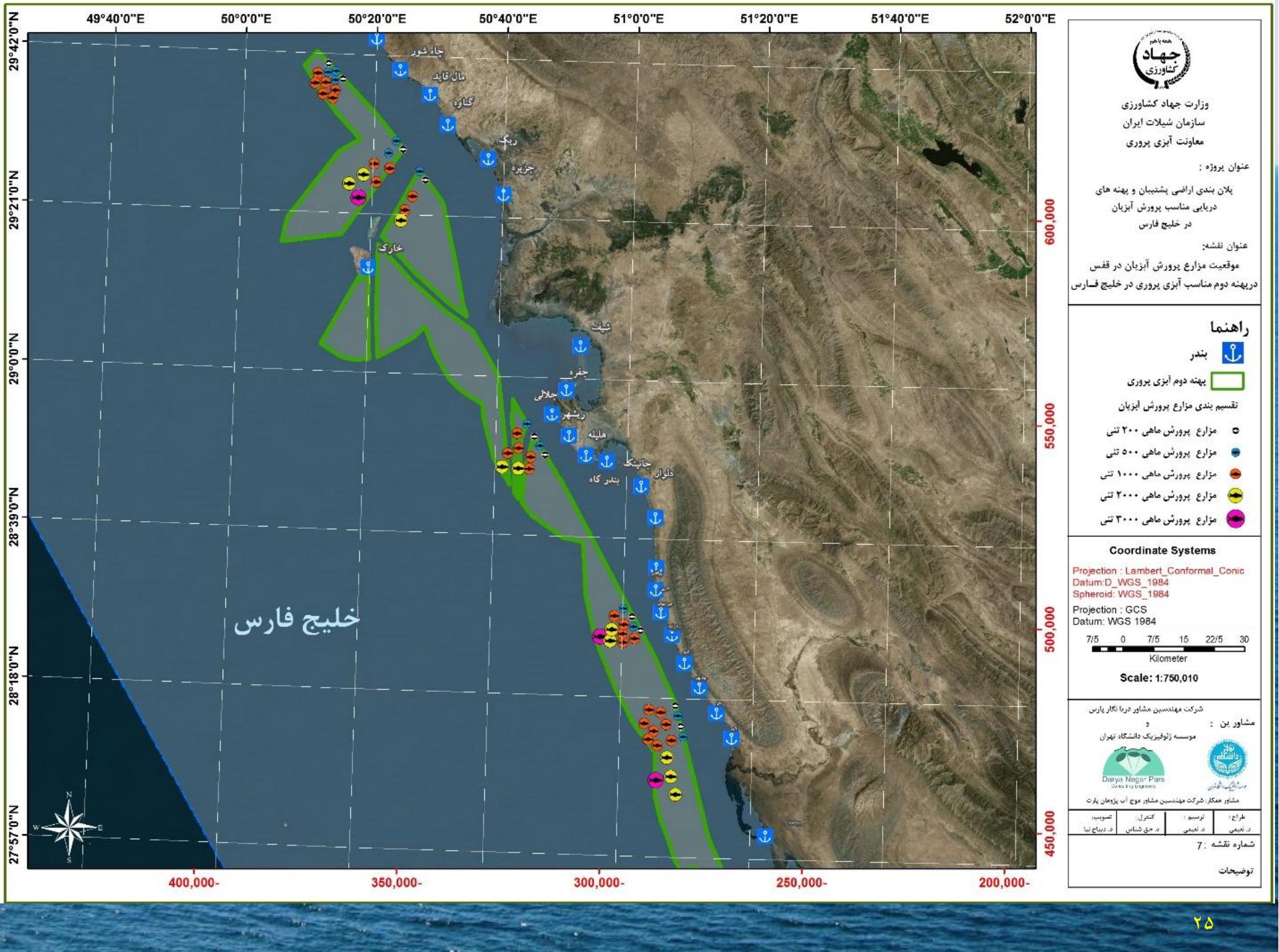


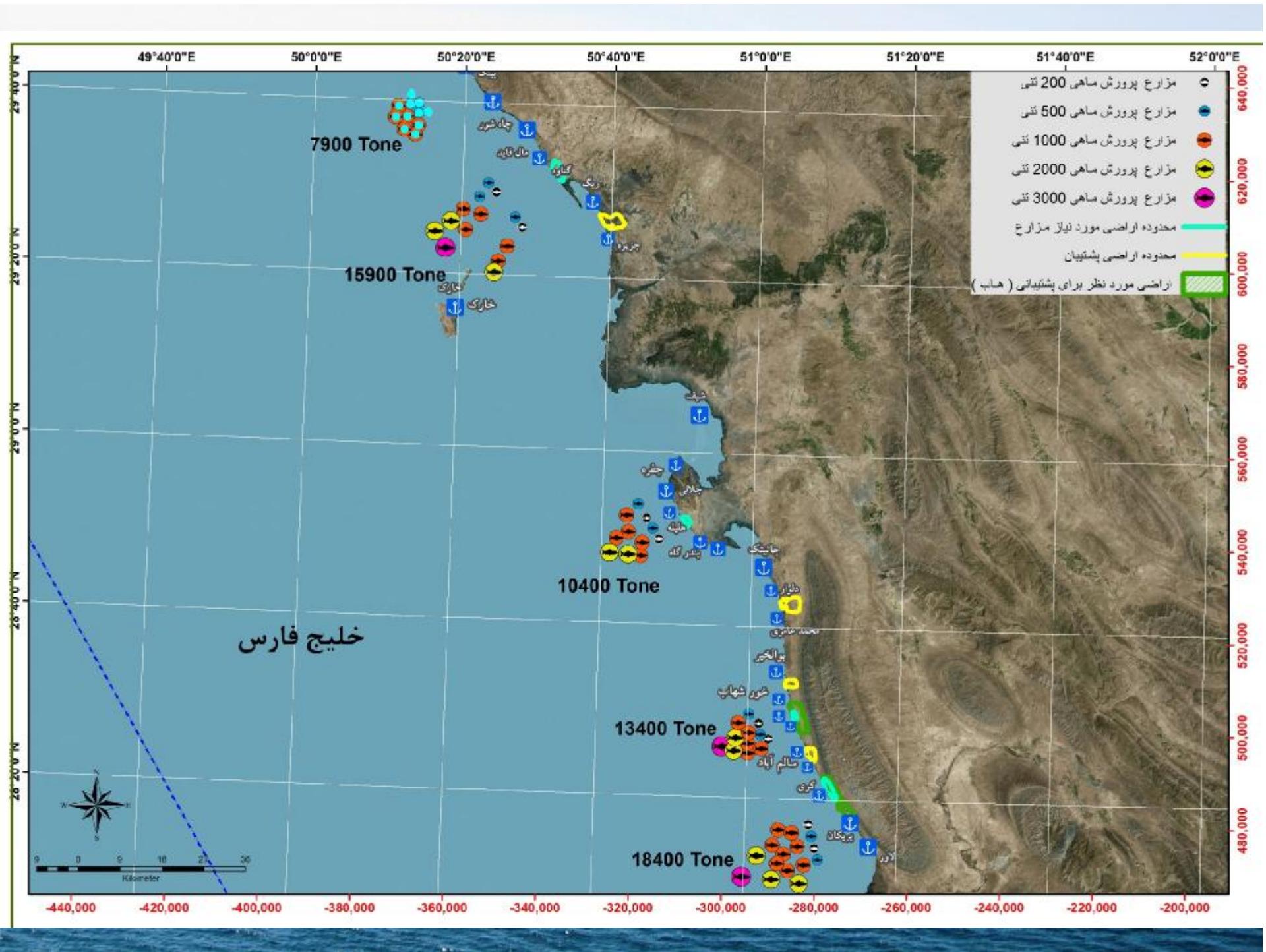


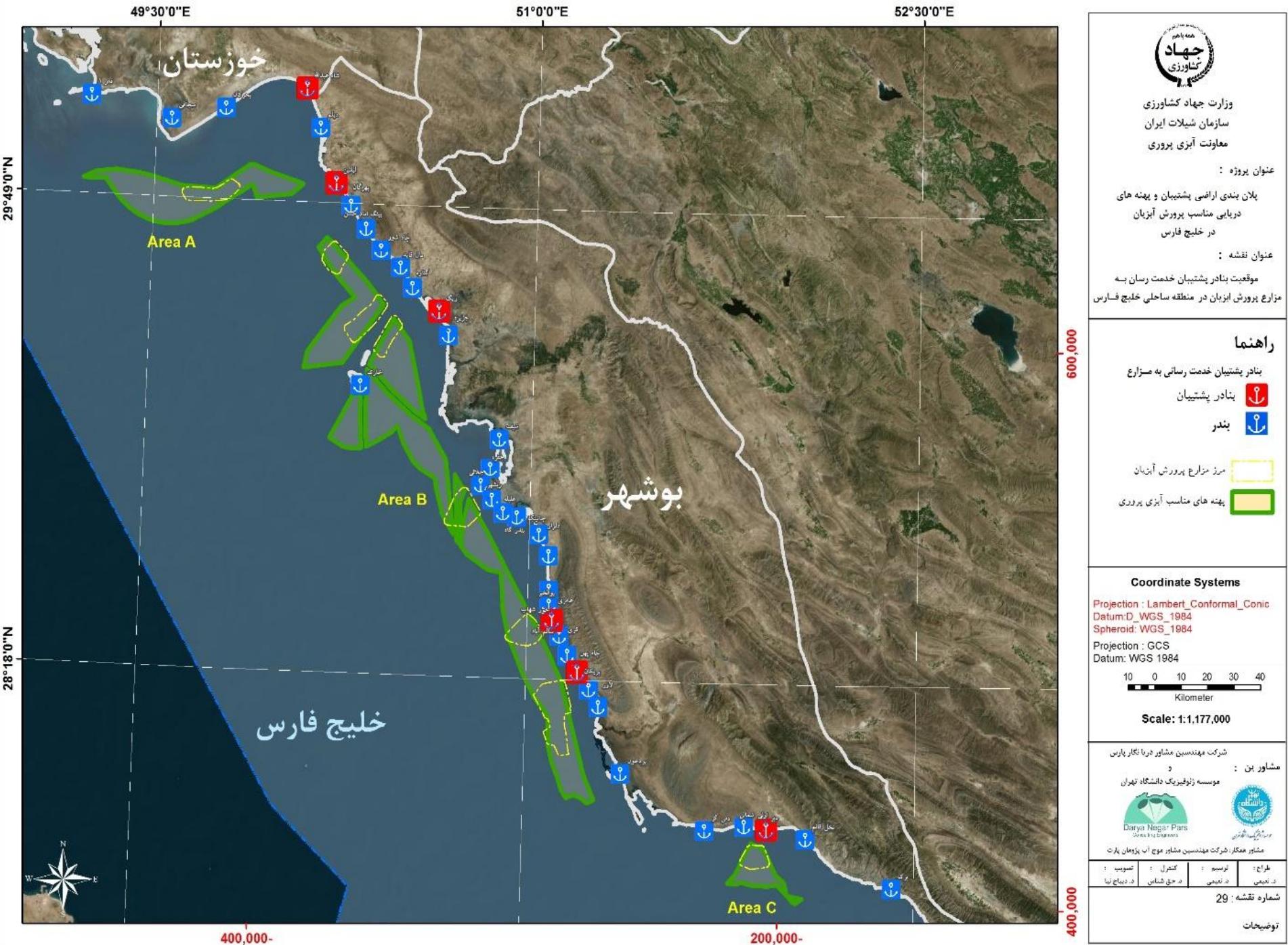


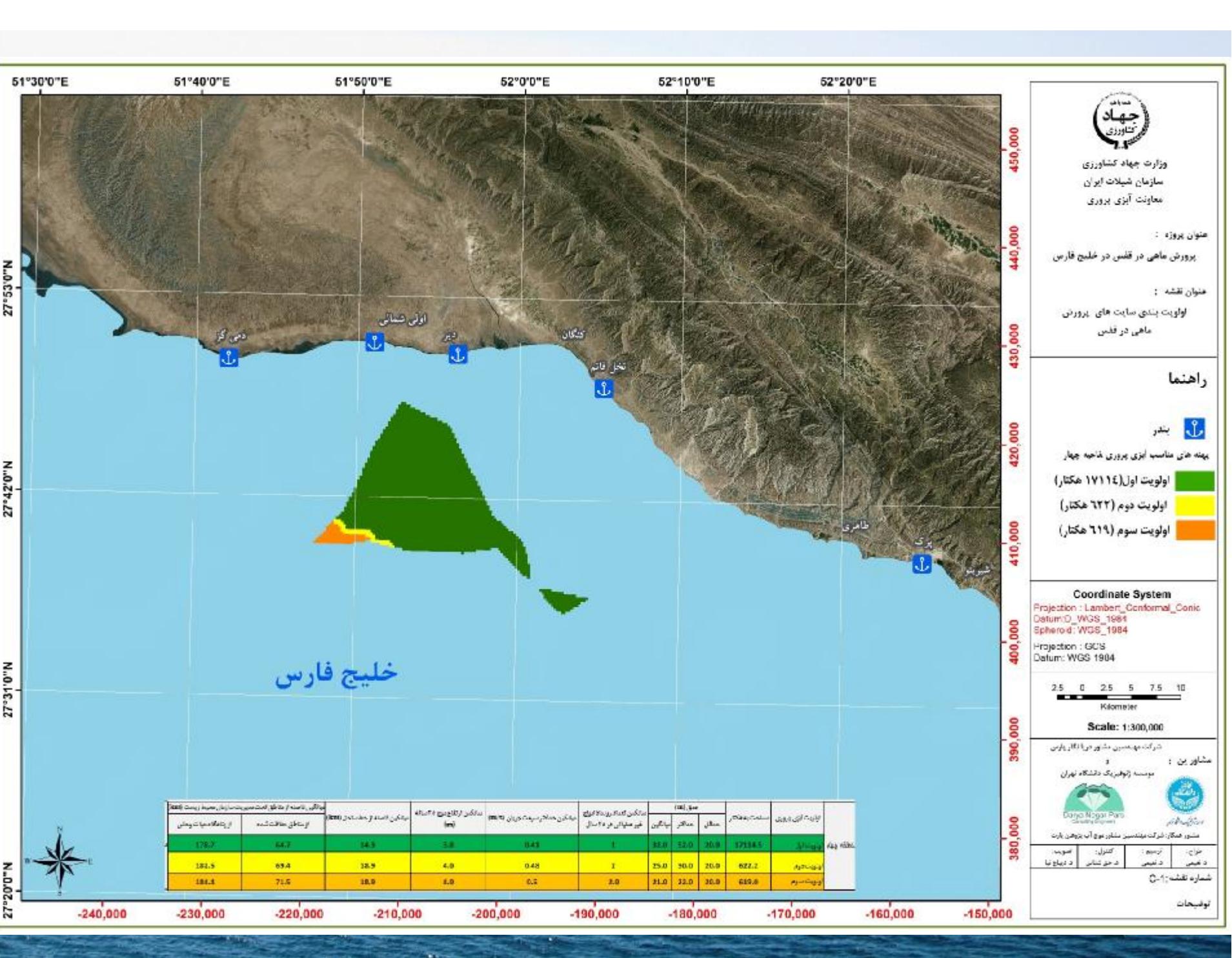


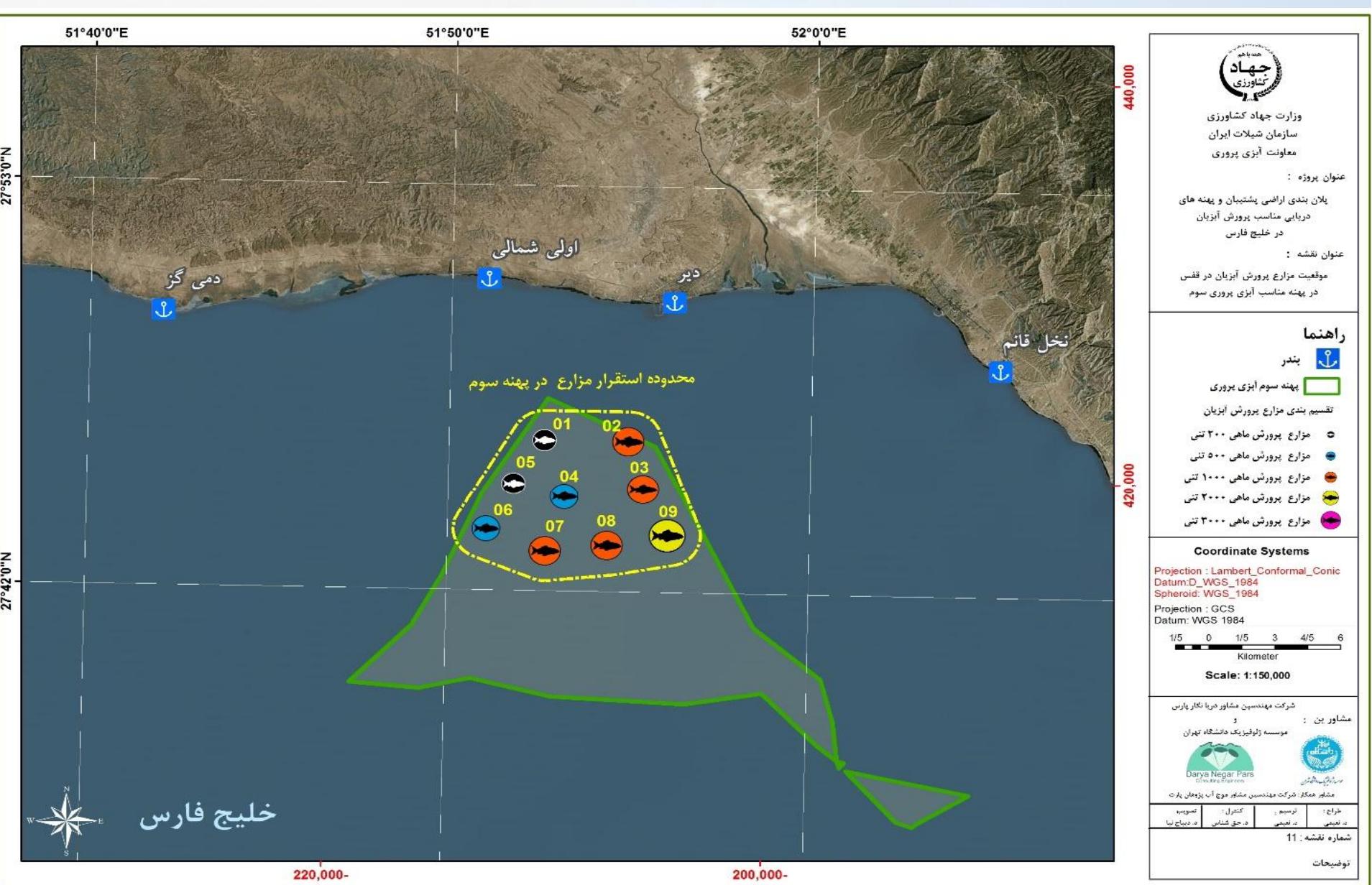


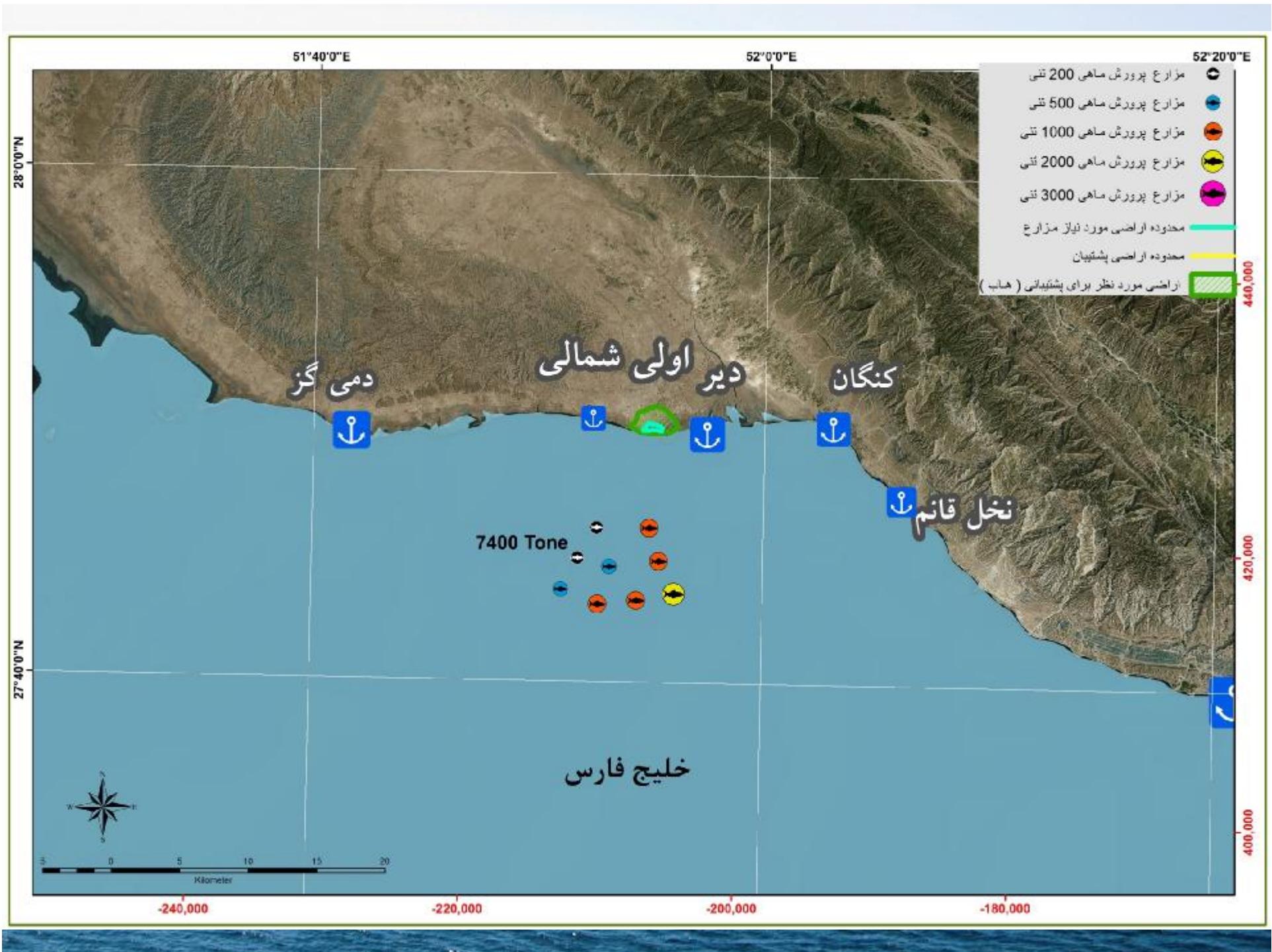


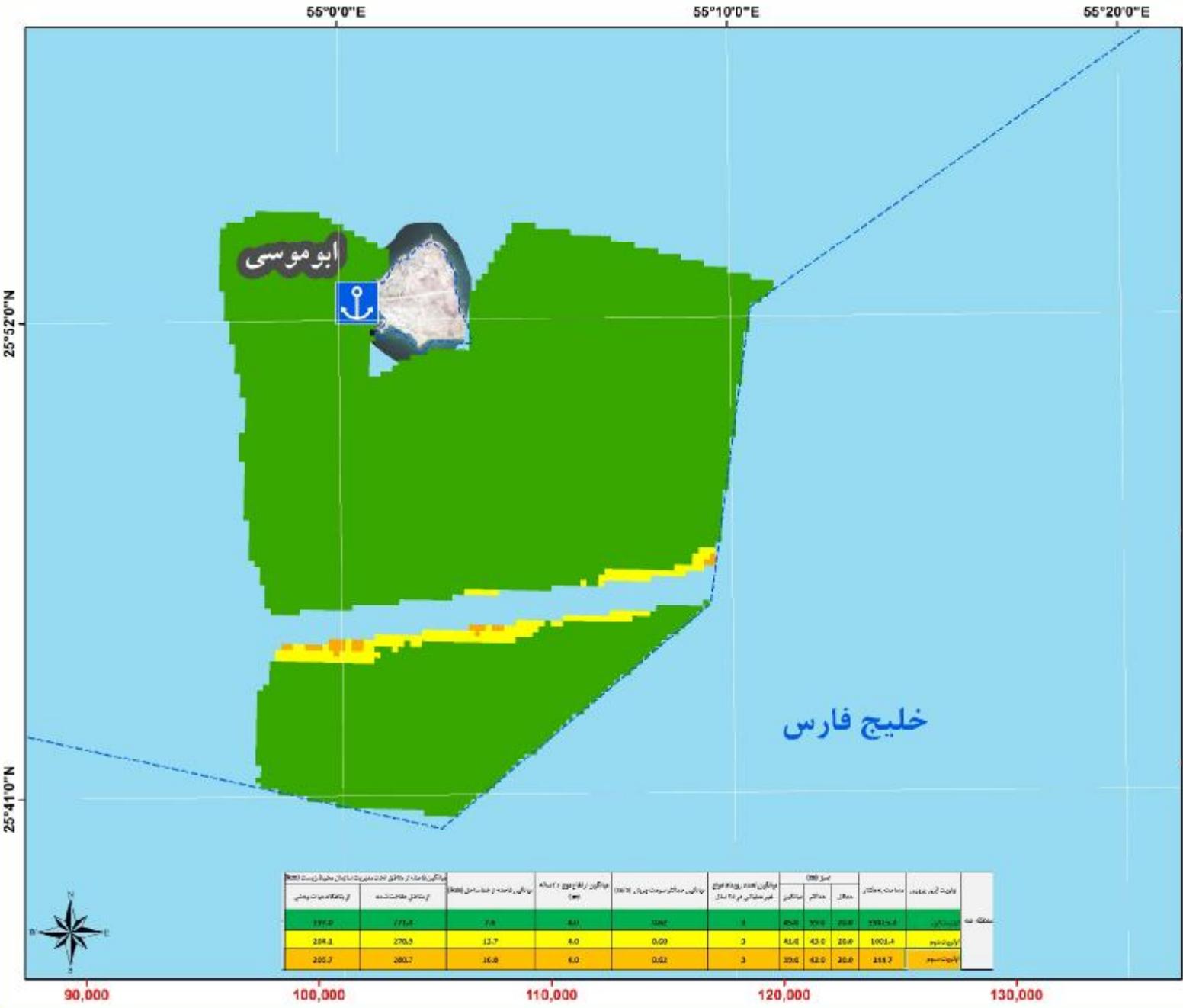


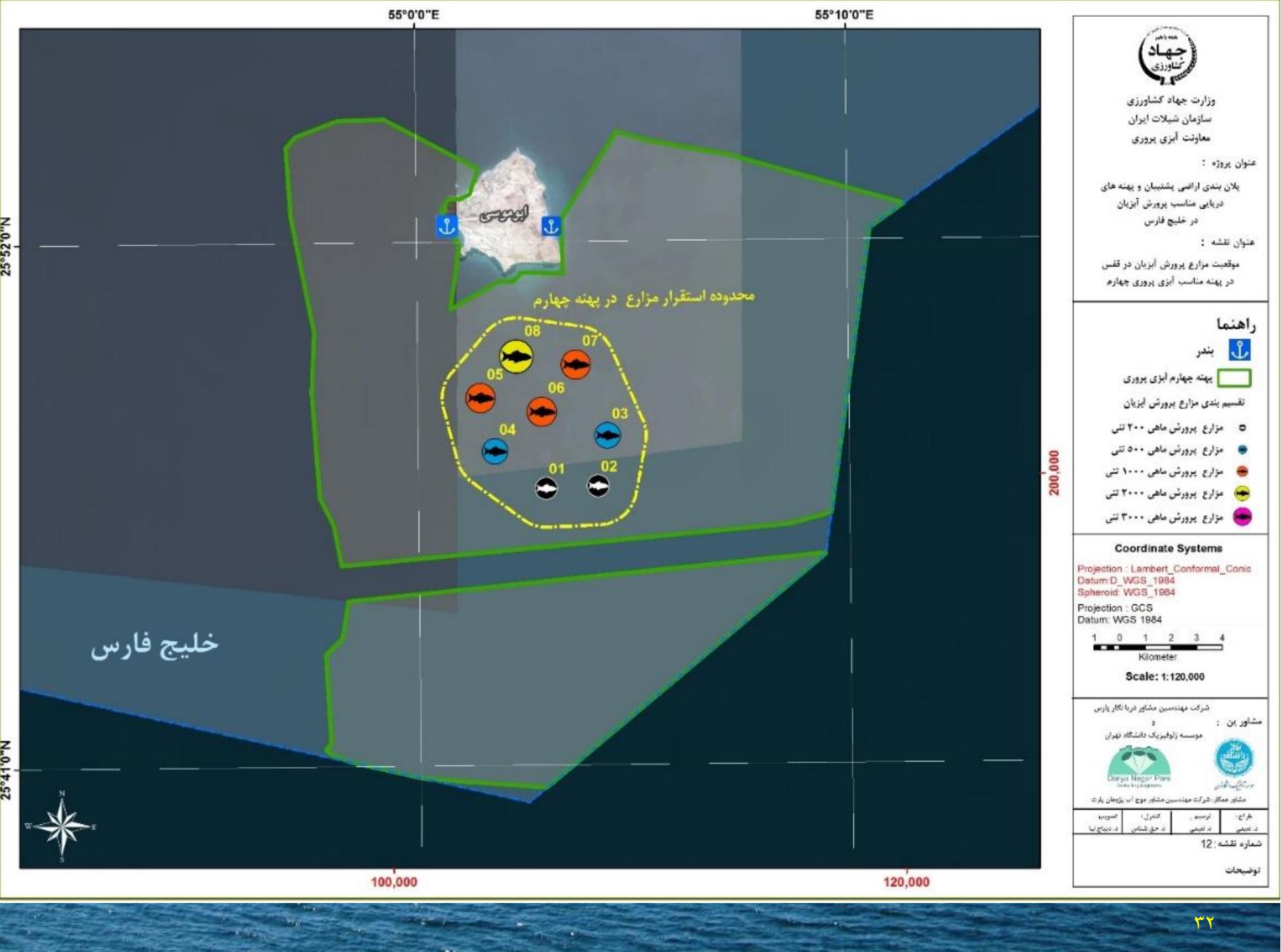


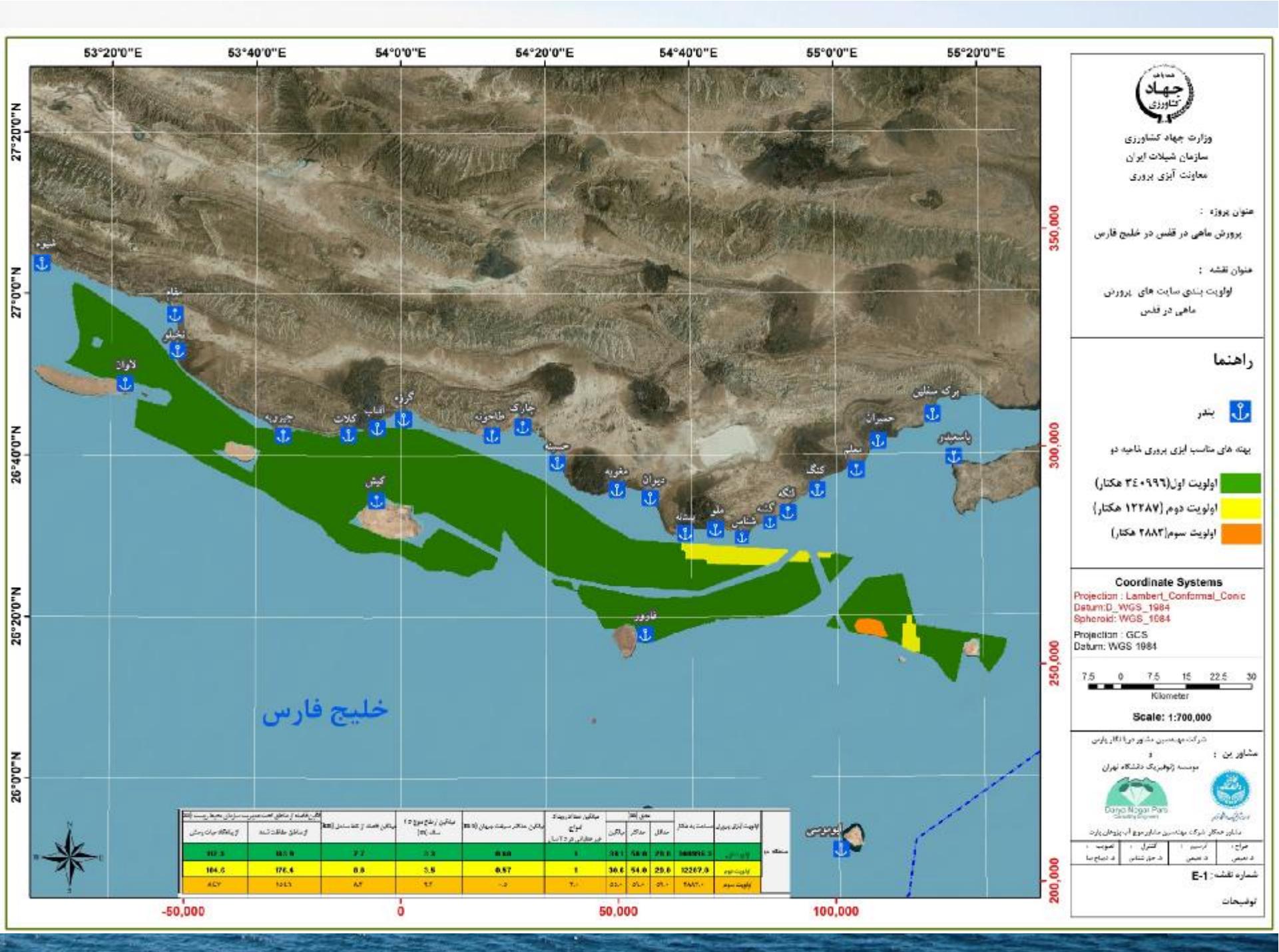




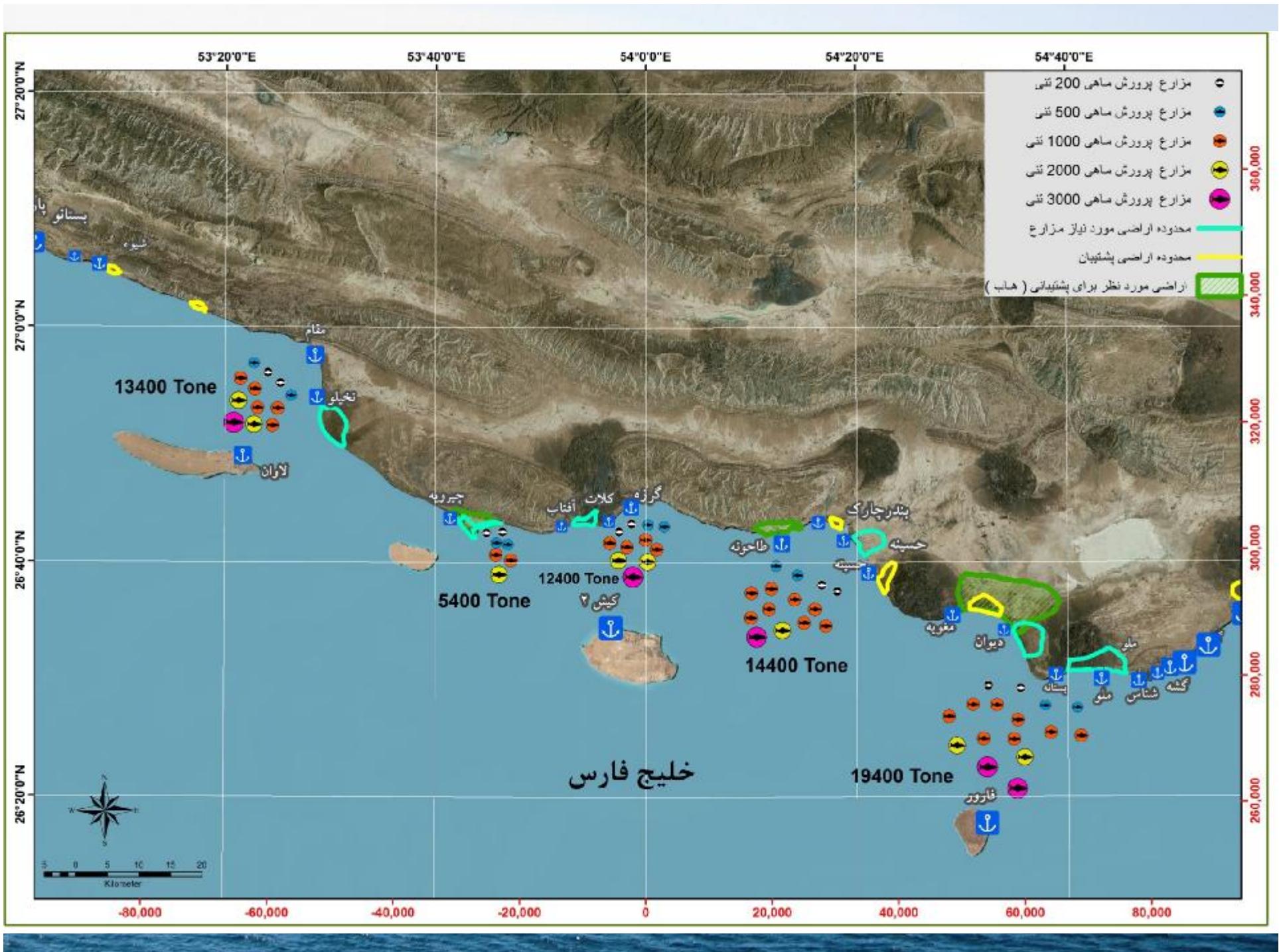


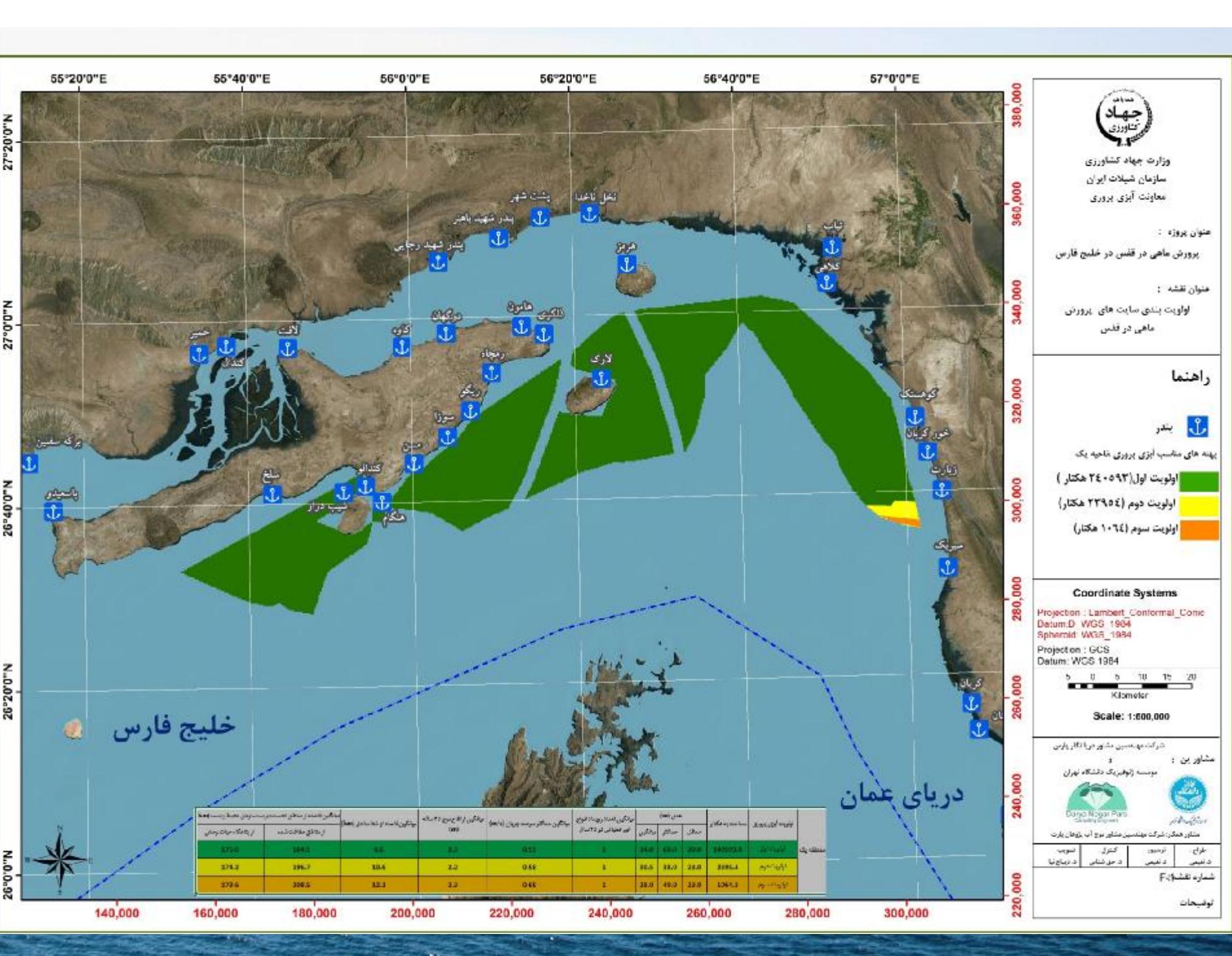


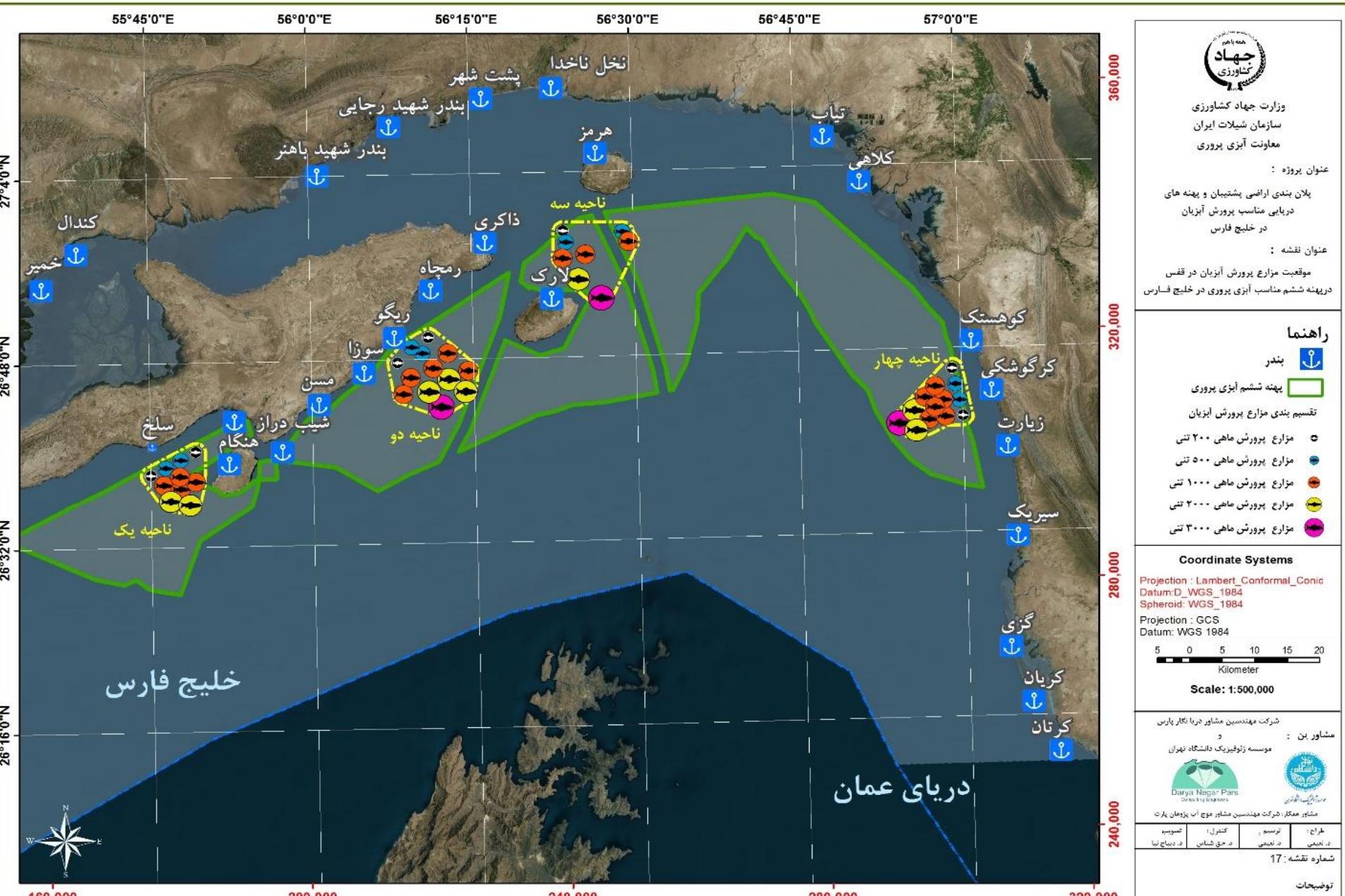


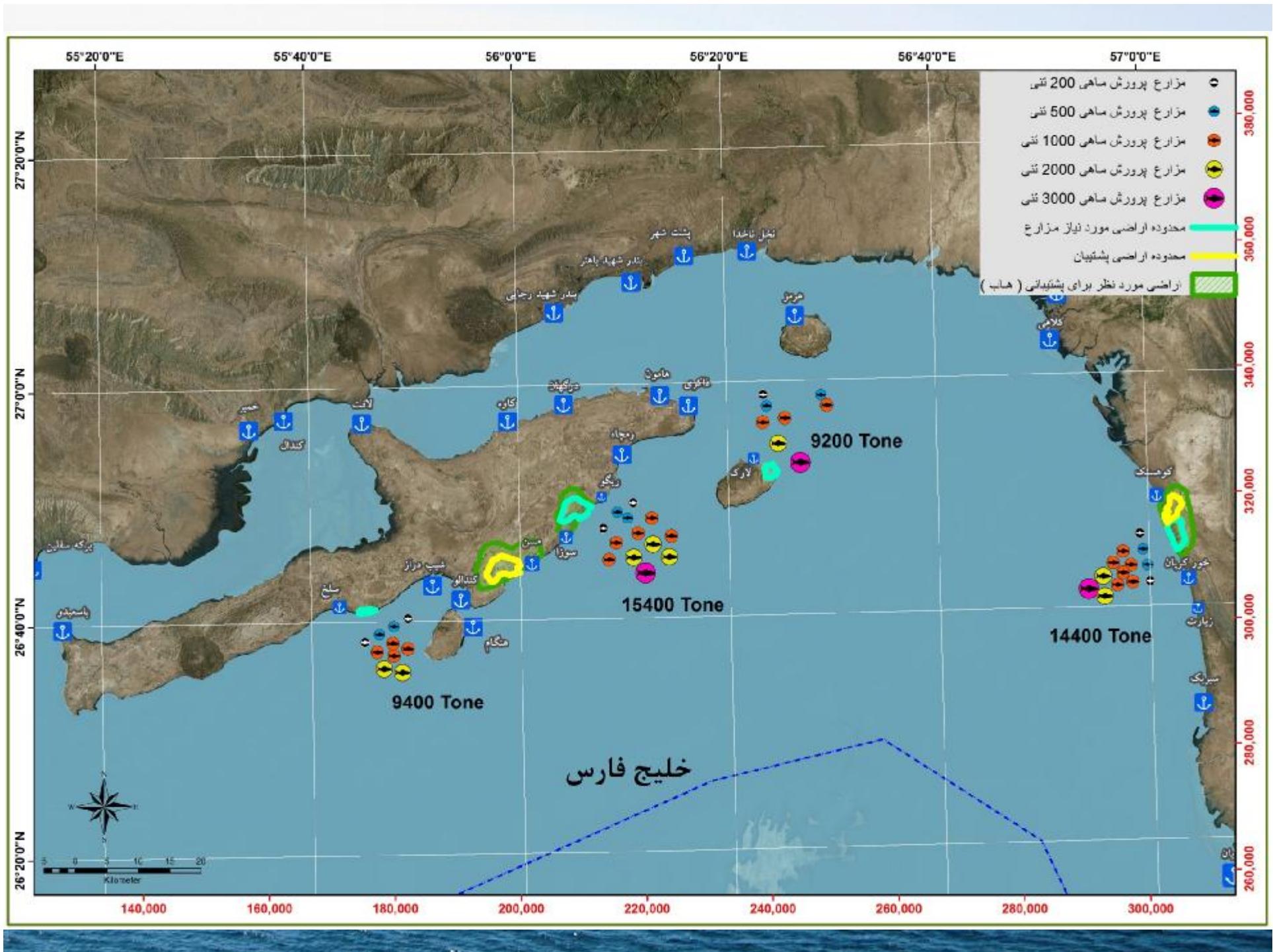


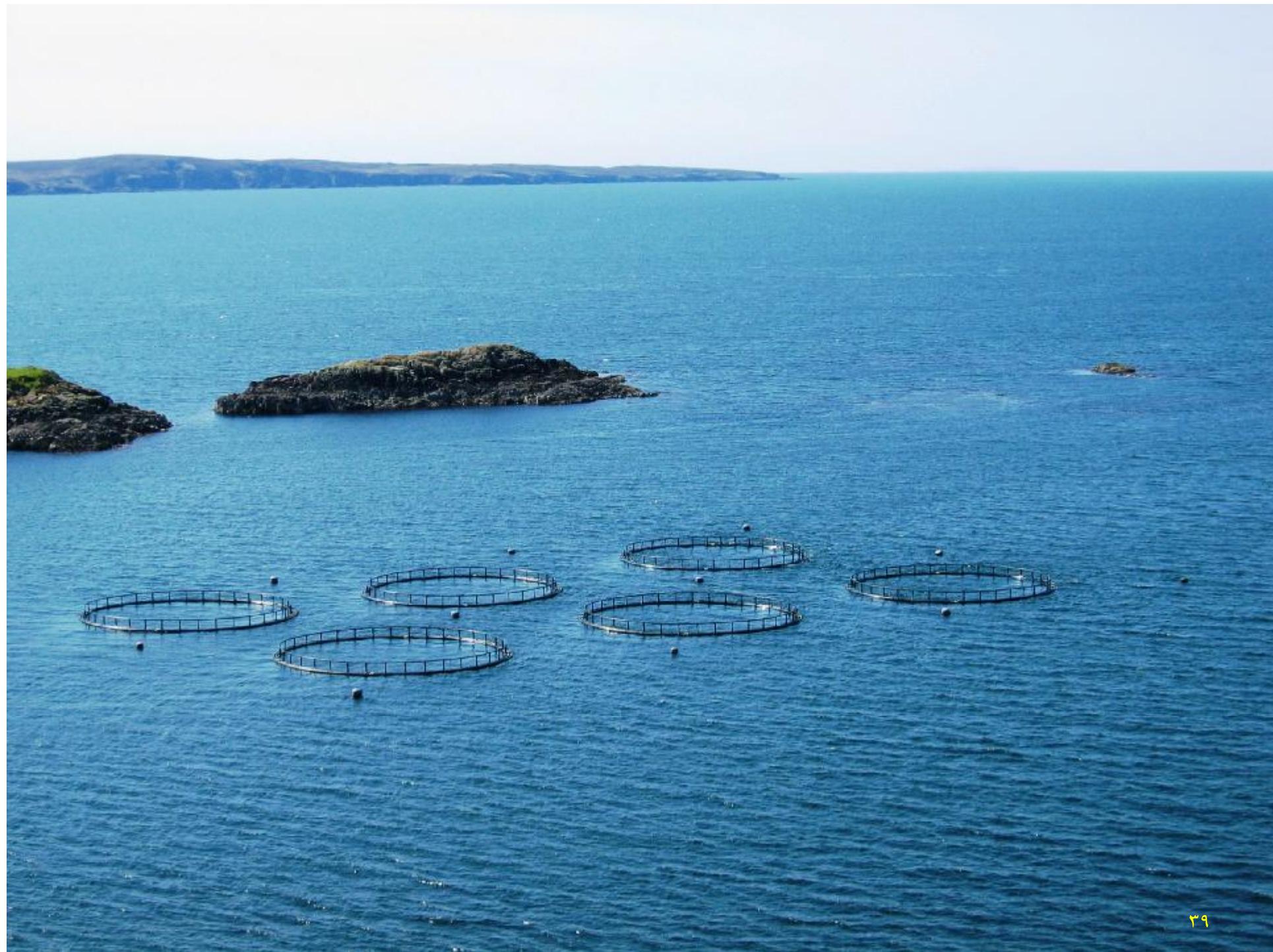








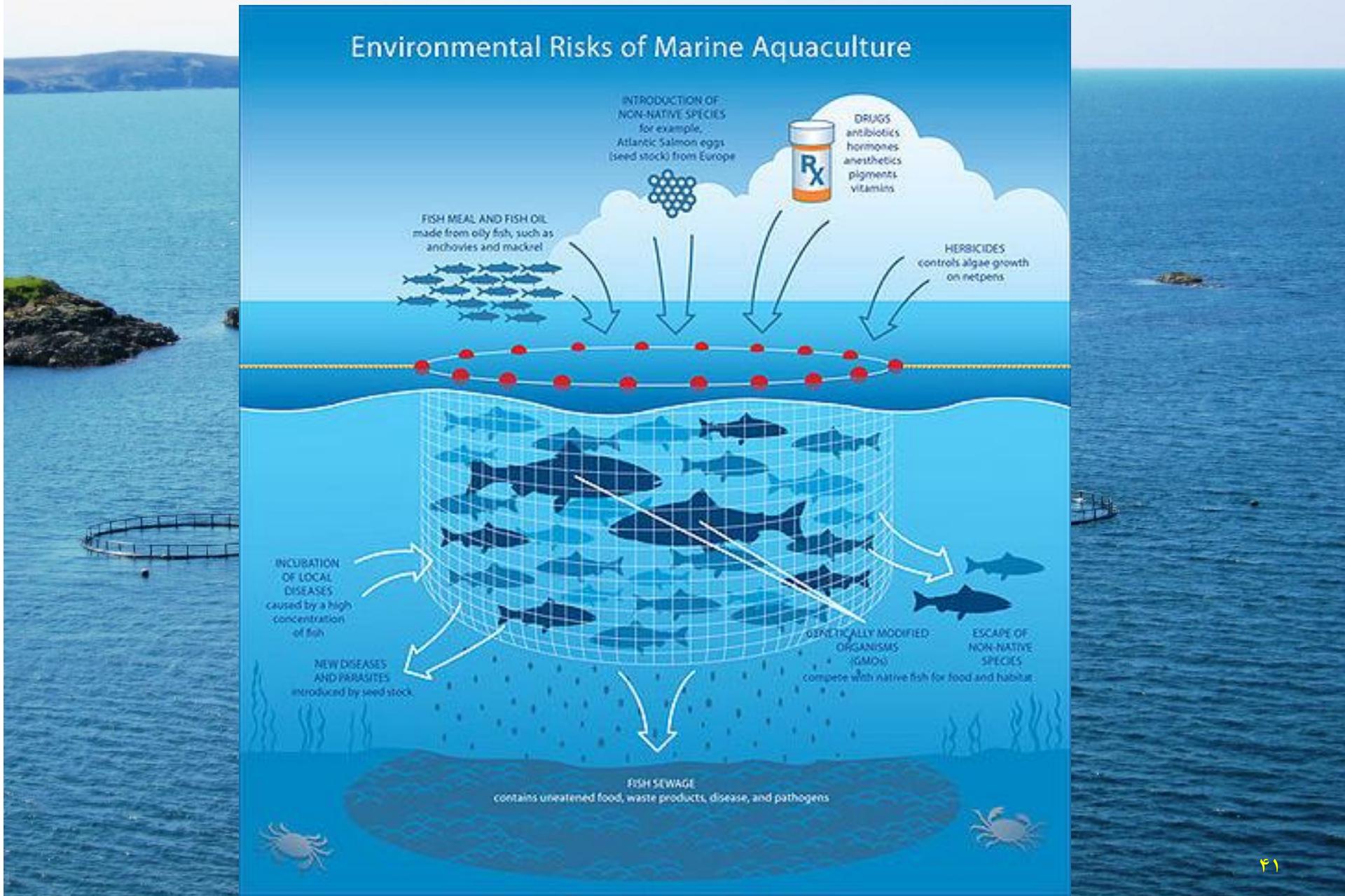






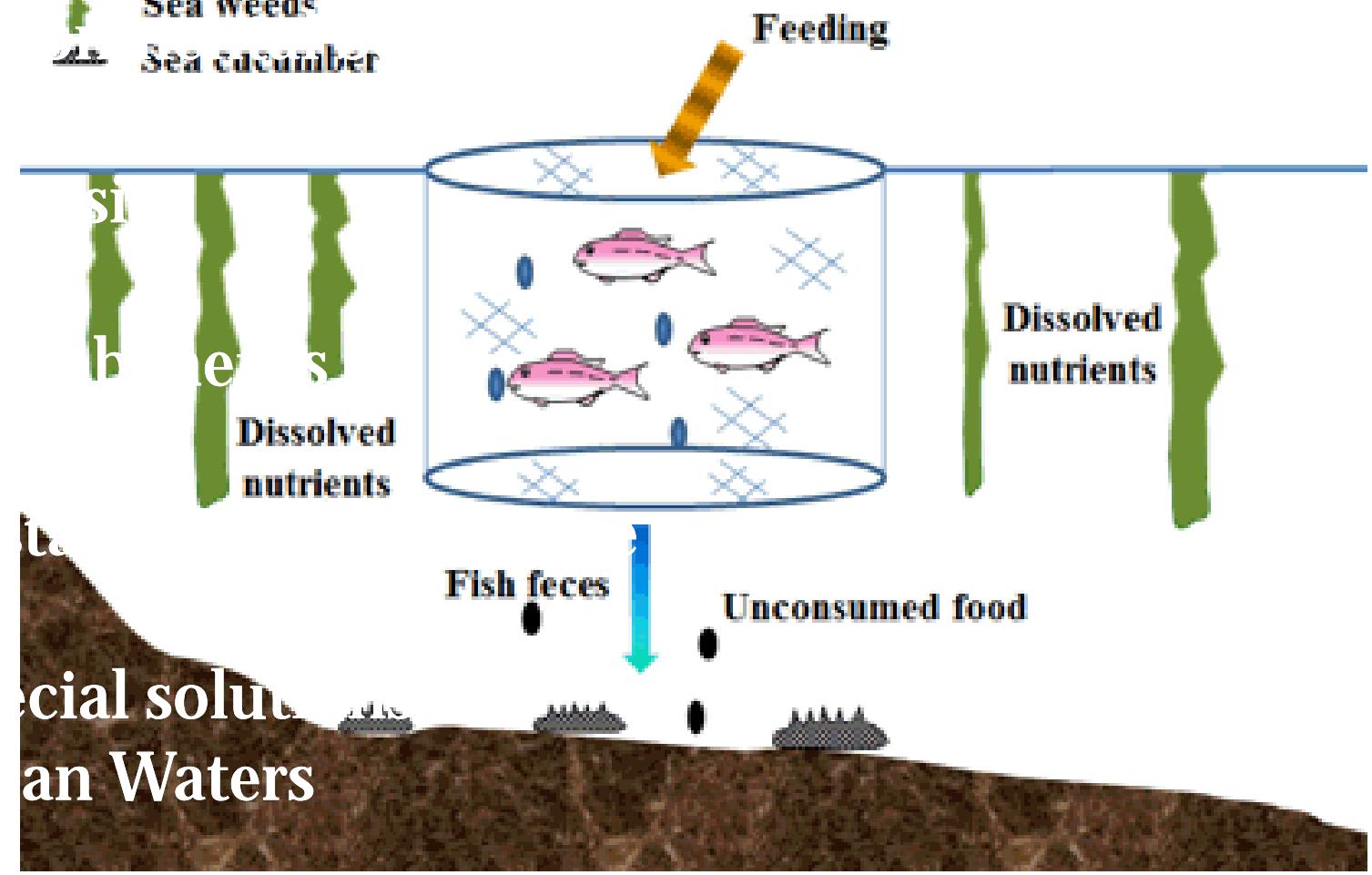
# Environmental Issues Monitoring Plan Sustainability

# Contamination and Pollution

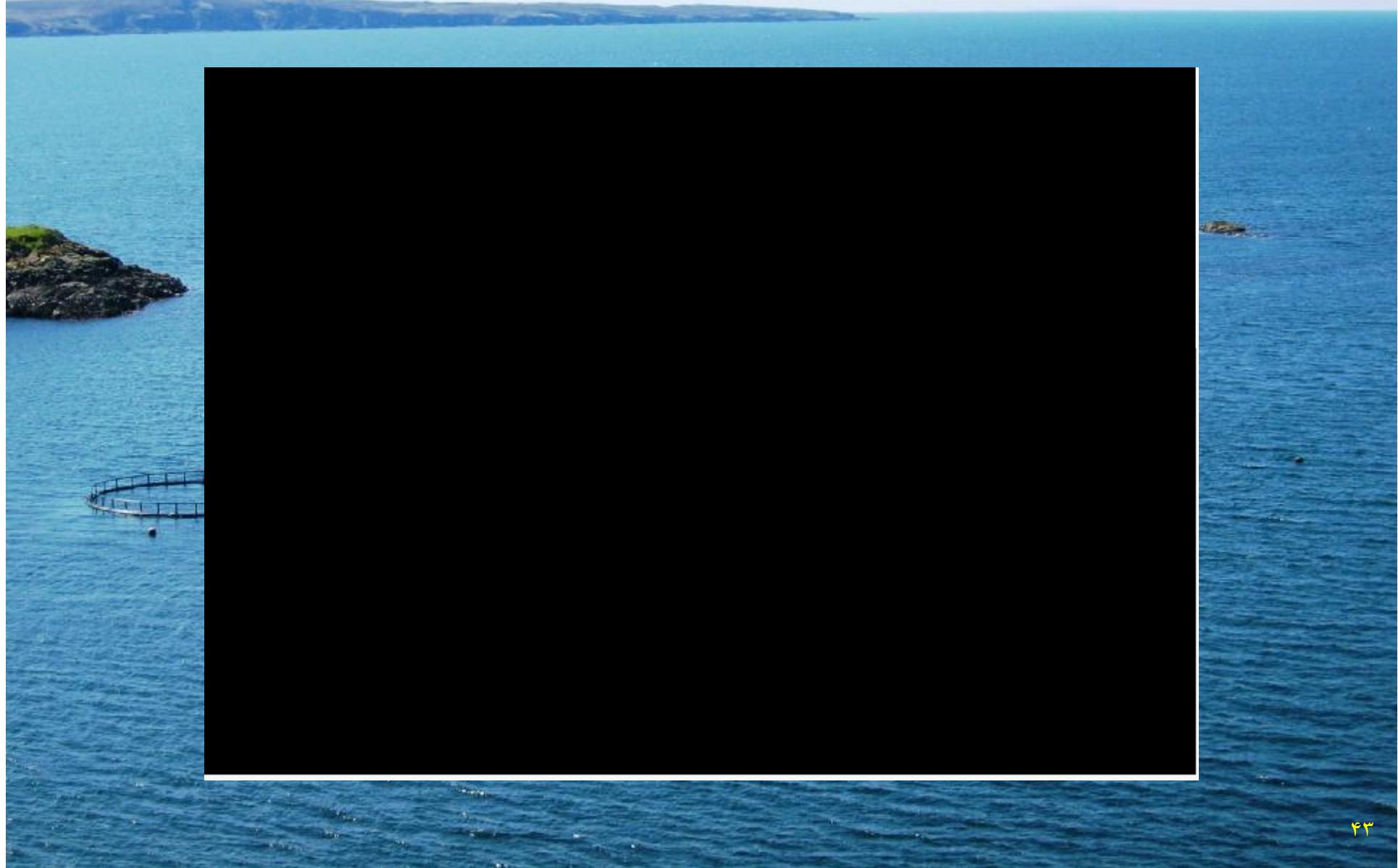


# Integrated Multi-Trophic Aquaculture

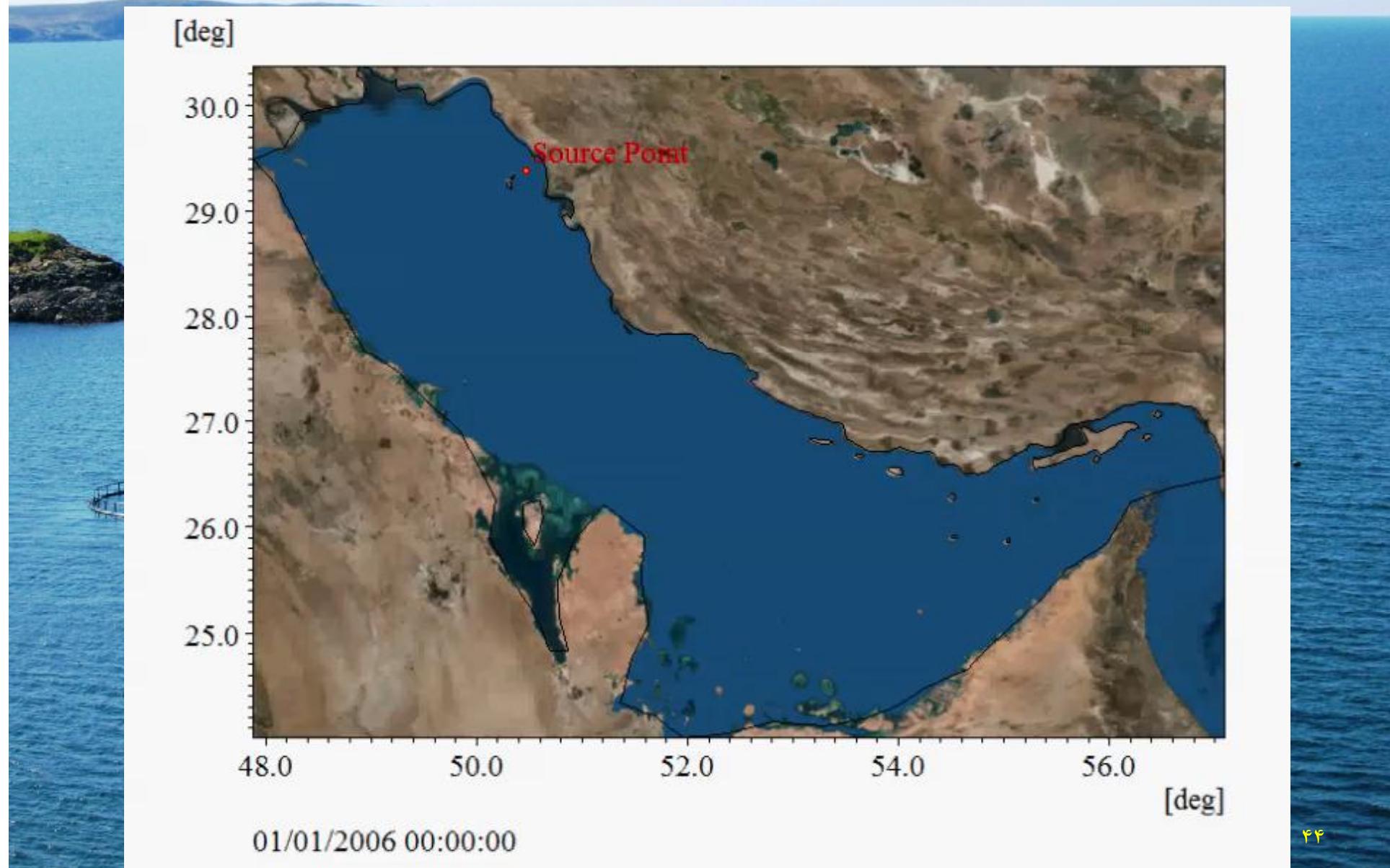
- In Env
- Dis
- M
- Su
- Spe
- Iranian Waters



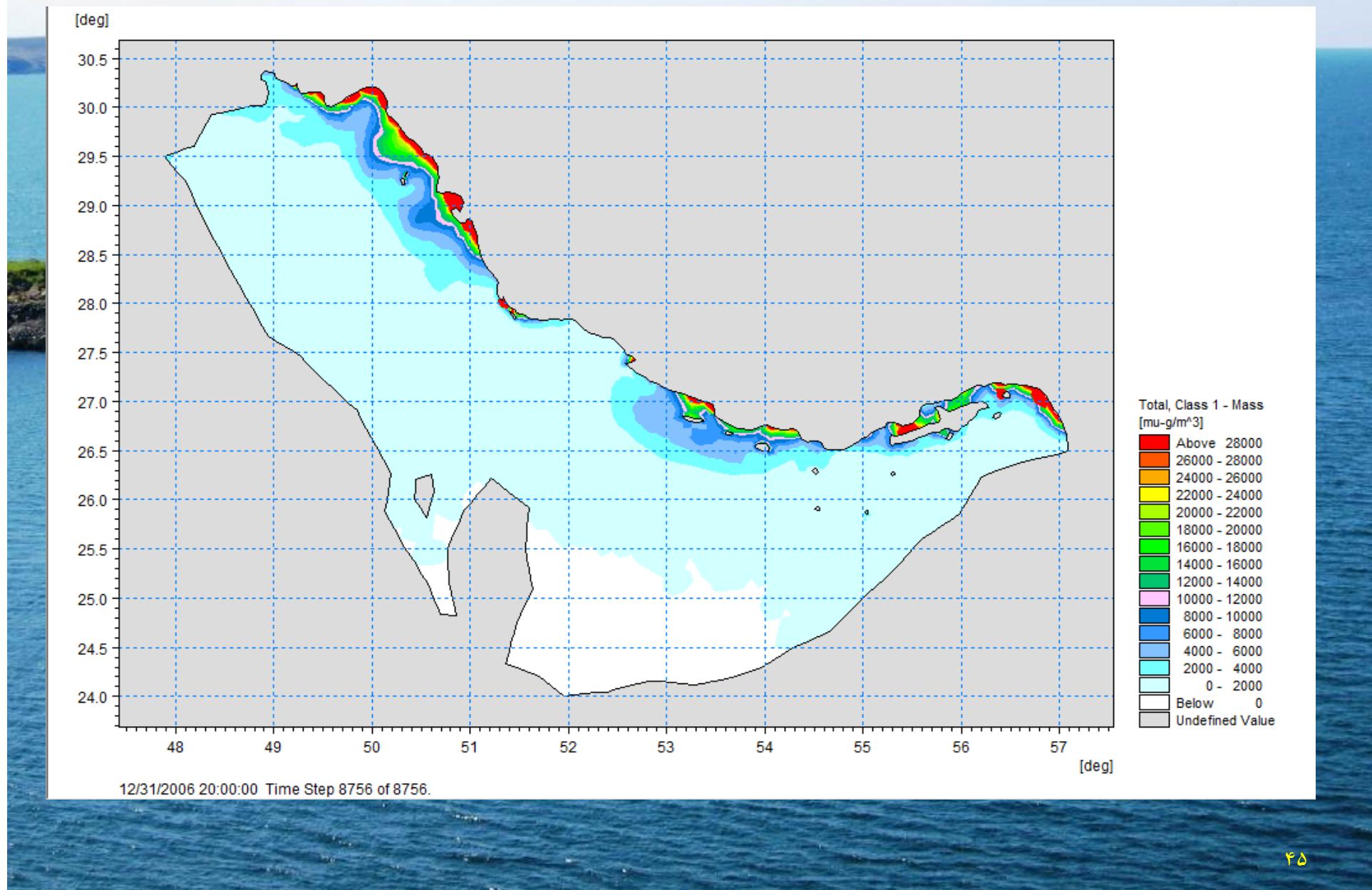
# Environmental Impact assessments



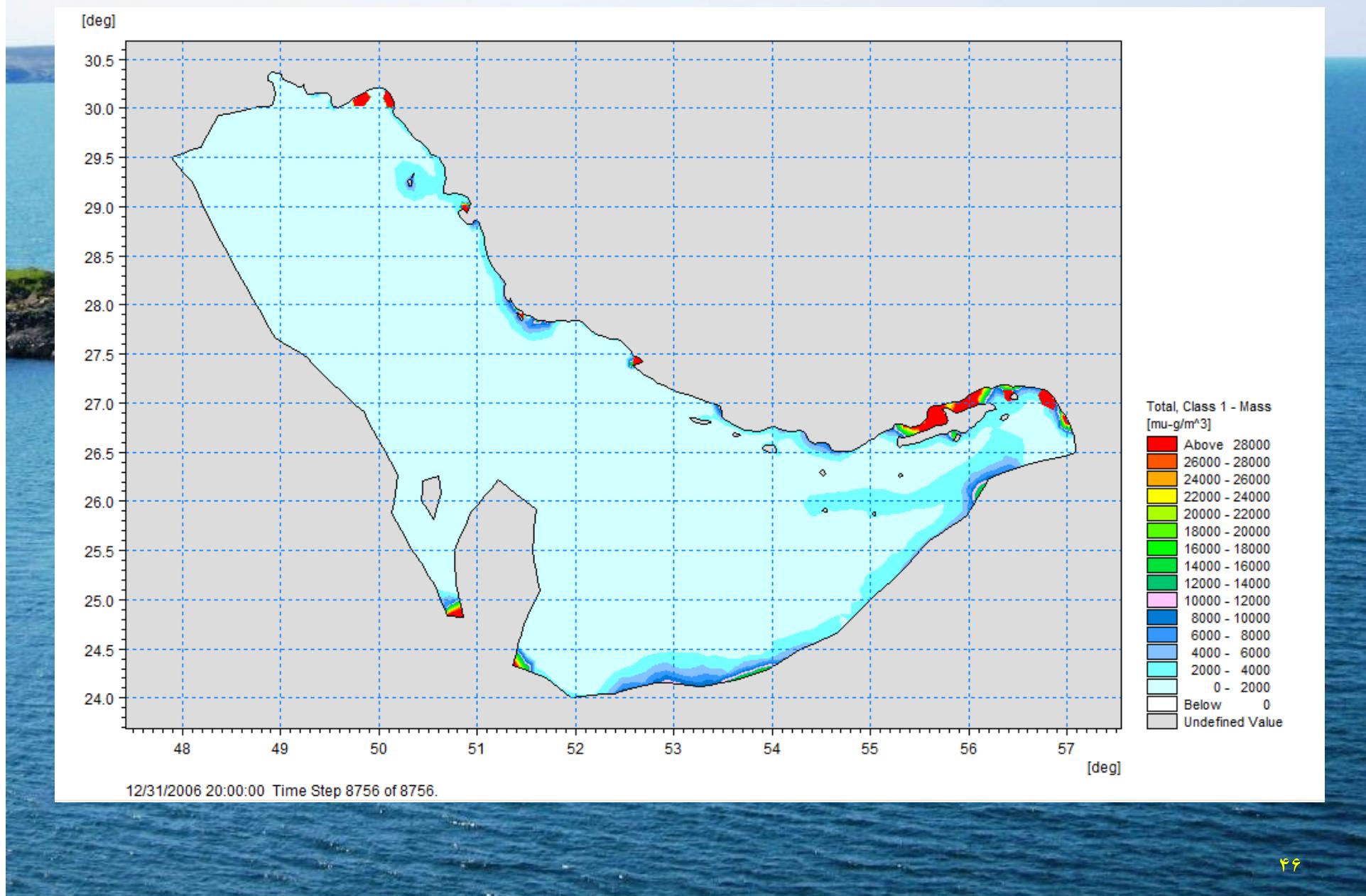
# Environmental Impact assessments



# Environmental Impact assessments



# Environmental Impact assessments



# Environmental Impact assessments

- Monitoring Program
  - Monitoring Plan
  - Effective Measures
  - Paying attention to check points for licence renewal
  - New Technology

Many thanks for your patience!

