



2021
2030
United Nations Decade
of Ocean Science
for Sustainable Development



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission

Ocean Science In The IOCINDIO Region

Dr. Maryam Ghaemi

Vice-Chair, IOCINDIO Sub-Commission

IOCINDIO Side Event on Strengthening Ocean Science and Regional Cooperation
in the Central Indian Ocean at IIOSC-2025, Hyderabad / India
December 3, 2025



Bangladesh, France, India, Indonesia, Iran, Kuwait, Mauritius, Oman, Russian Federation, Saudi Arabia, Sri Lanka, United Arab Emirates, United States of America.

Vision

The science we need for the ocean we want

DECADE OUTCOMES

“THE OCEAN WE WANT”

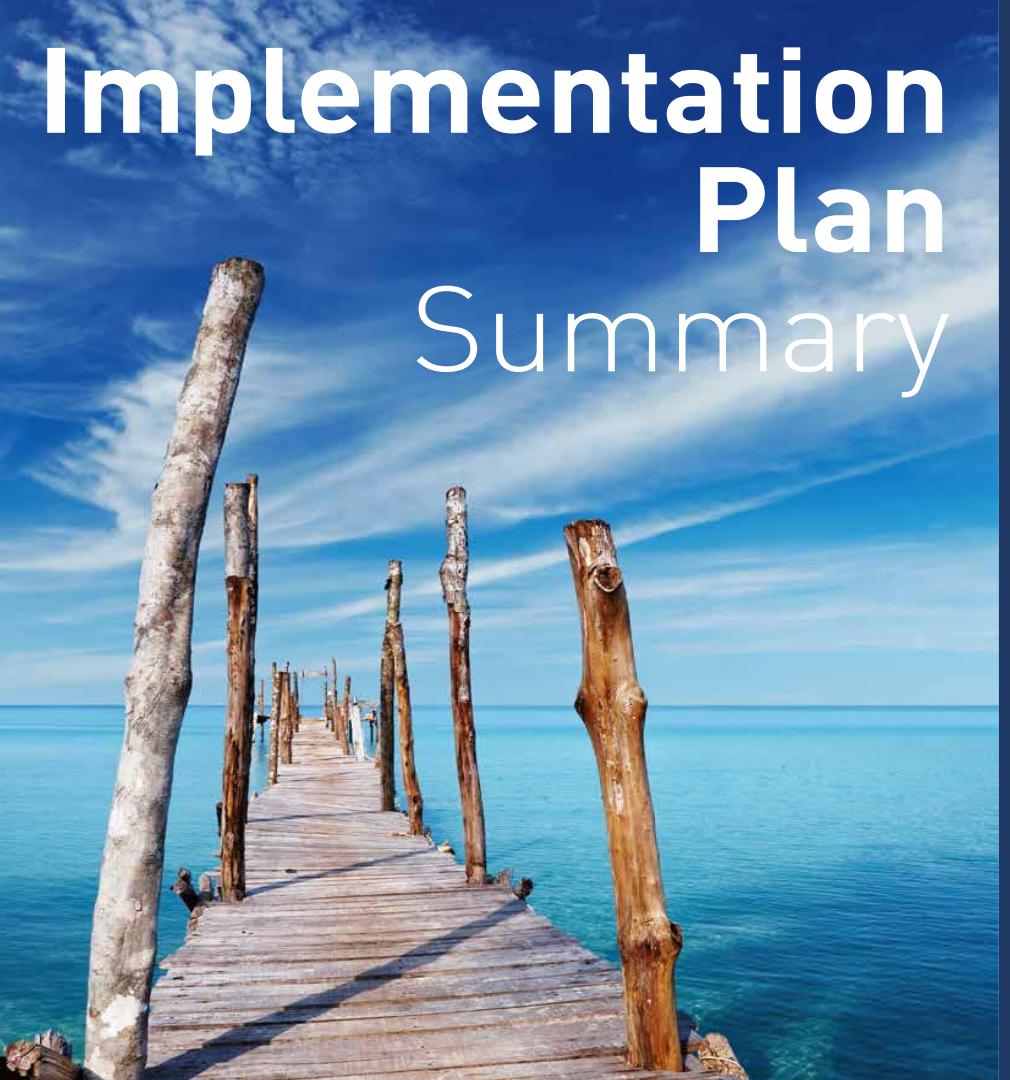
- Clean
- Healthy and resilient
- Productive
- Predicted
- Safe
- Accessible
- Inspiring and engaging



2016->

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

Implementation Plan Summary



The United Nations Decade of Ocean Science for Sustainable Development (2021-2030)

2021 United Nations Decade of Ocean Science for Sustainable Development

OCEAN DECADE CHALLENGES



Pollutants



Ecosystems



Food from the Ocean



Ocean economy



Ocean-climate nexus



Ocean-related risks



Ocean observing system



Ocean digital representation



Capacity development



Behaviour change

Key Strengths of the Central Indian Ocean Region



1. Strong Scientific Foundations

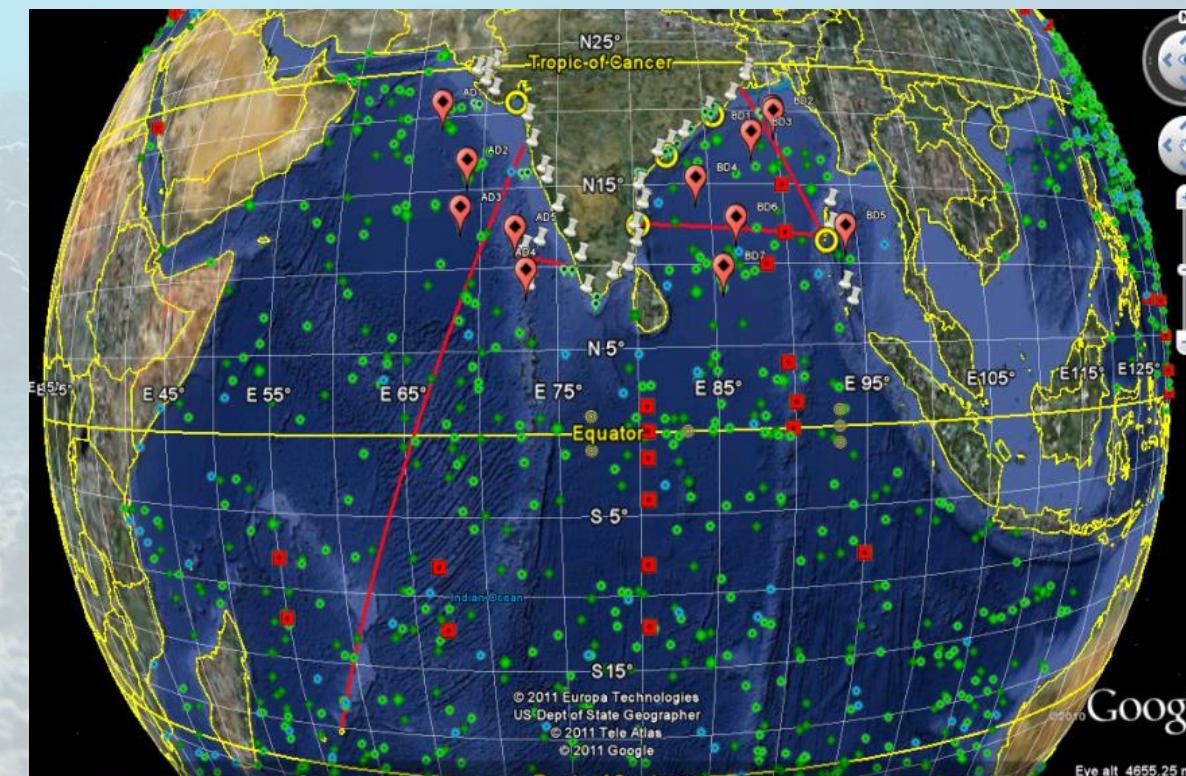
Decades of research and a robust baseline understanding of regional ocean processes.

2. Expanding Infrastructure & Institutional Capacity

Growing national monitoring systems, research vessels, marine institutes, and technical expertise.

3. Shared Commitment to Regional Challenges

A unified response to monsoon variability, climate impacts, pollution, and extreme events.



Scientific publications and marginal sea synthesis



Deep Sea Research Part II: Topical Studies in Oceanograph | Supports open access

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Guide for authors

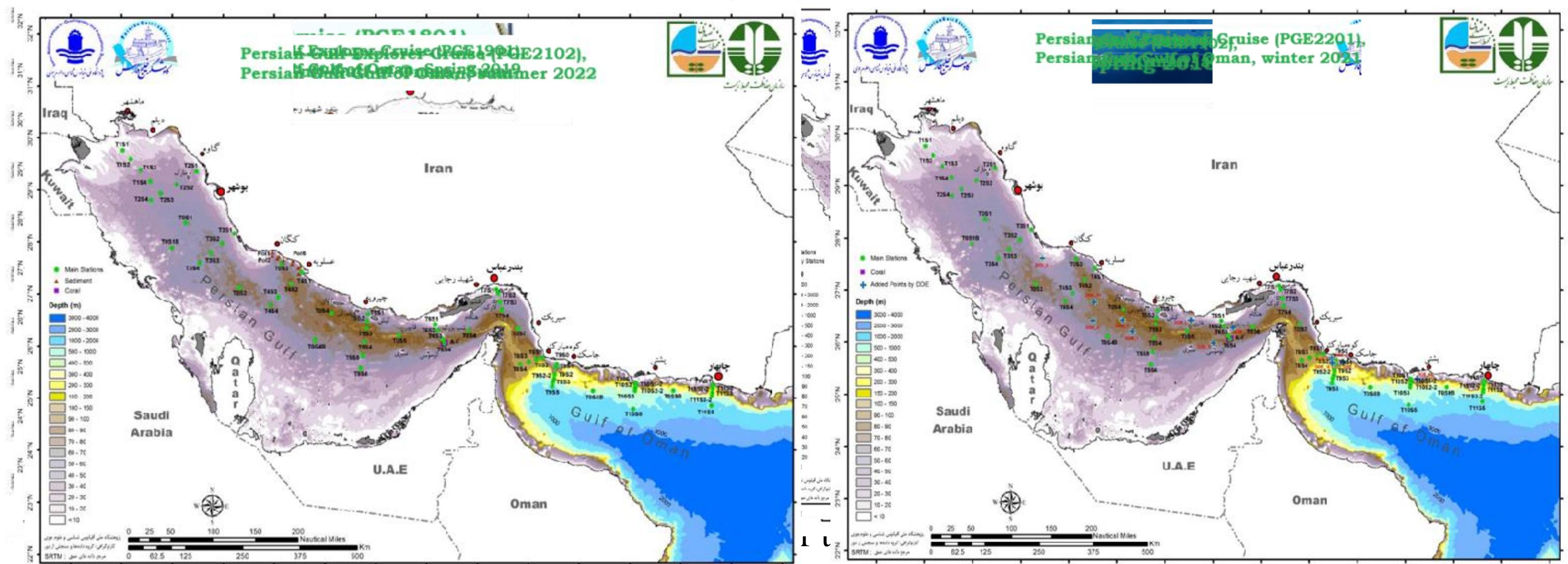
Understanding Oceanographic and Ecosystem Characteristics of the Persian Gulf: A Poorly Understood system

Edited by

- Maryam Ghaemi
- Ying Wu
- Samina Kidwai
- Gi Hoon Hong

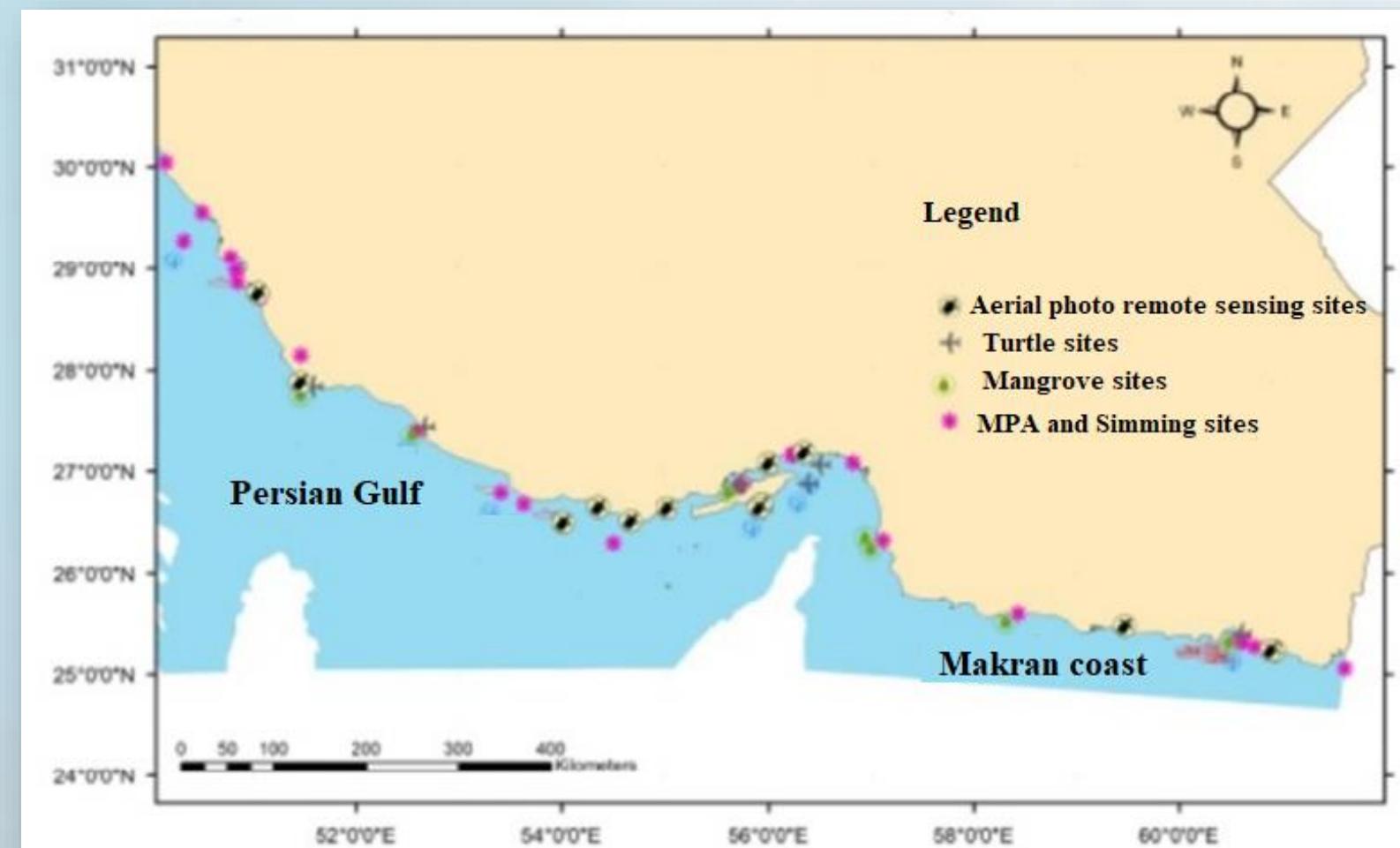
Last update 21 March 2025

Persian Gulf and Gulf of Oman Oceanographic Monitoring Program (started from 2018)



the existing knowledge gap in the region.

Iran's Coastal Area Monitoring Program (started from 2018)



Multidisciplinary field data collection

Data collection from sensitive coastal area include: coral reefs, mangrove areas, wetlands, intertidal area, sea turtle monitoring, etc.



Kuwait Marine Researches



Environmental Characteristics of the MPA (STMP) (October 2018 – March 2022)

&

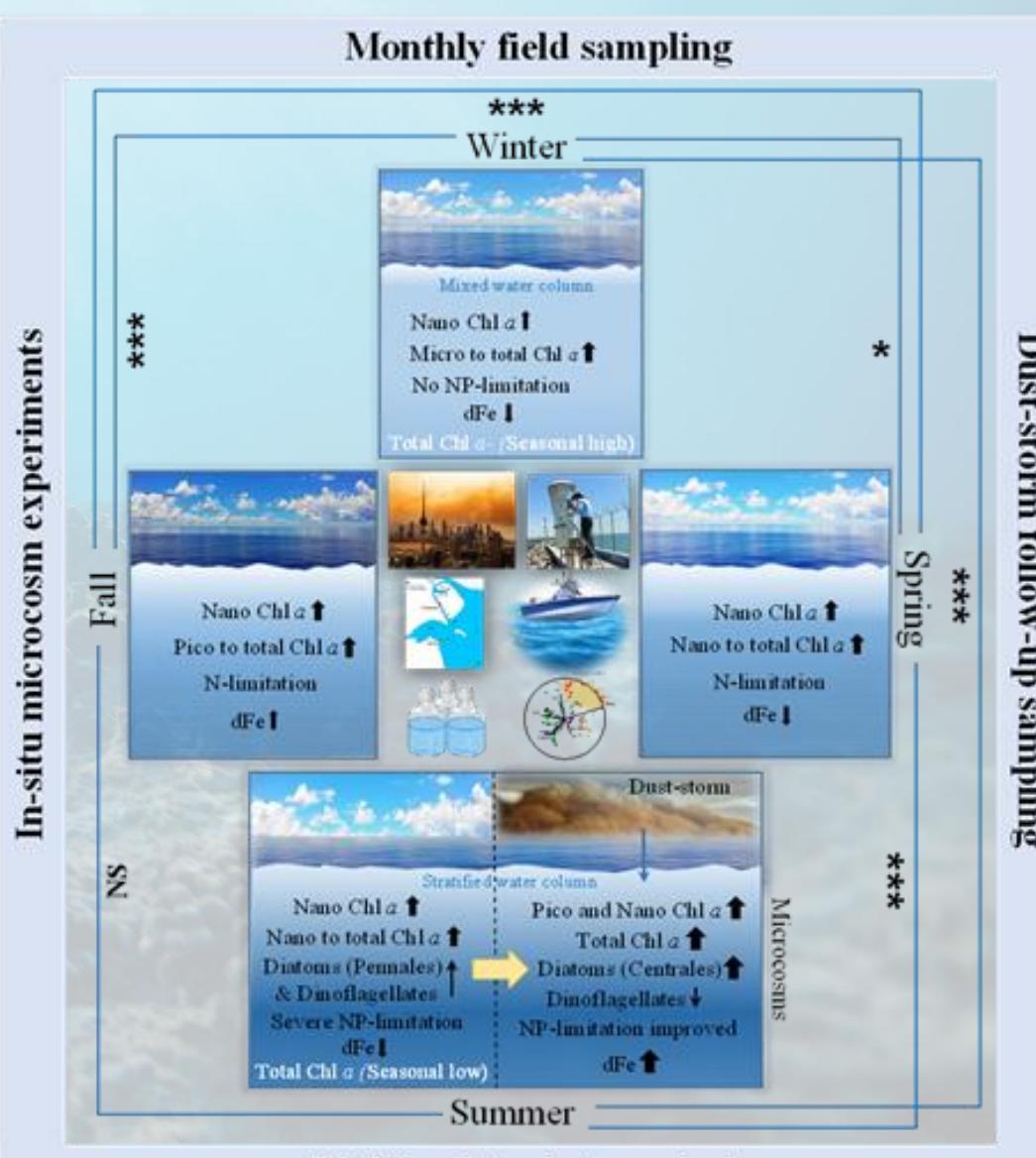
Long-term Management Plan (LTMP) (2024-2036)



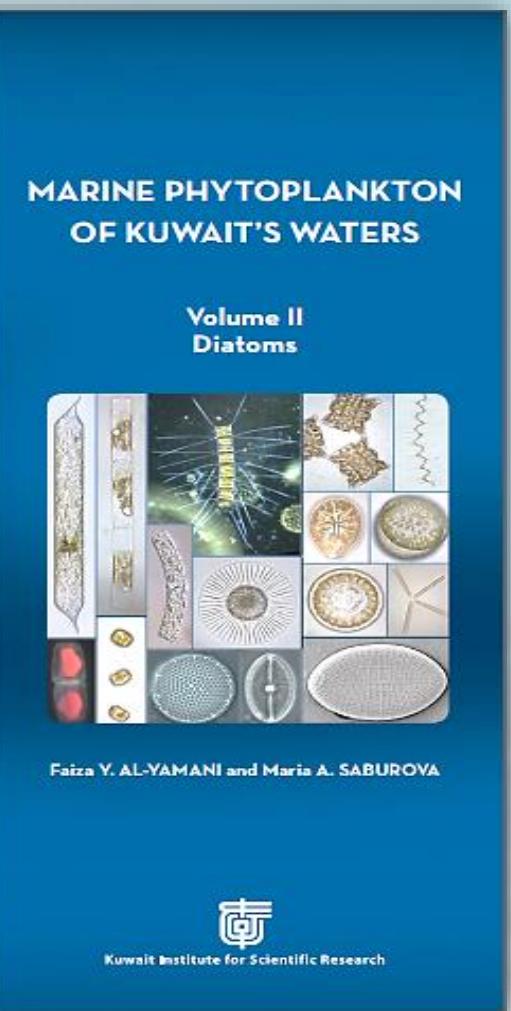
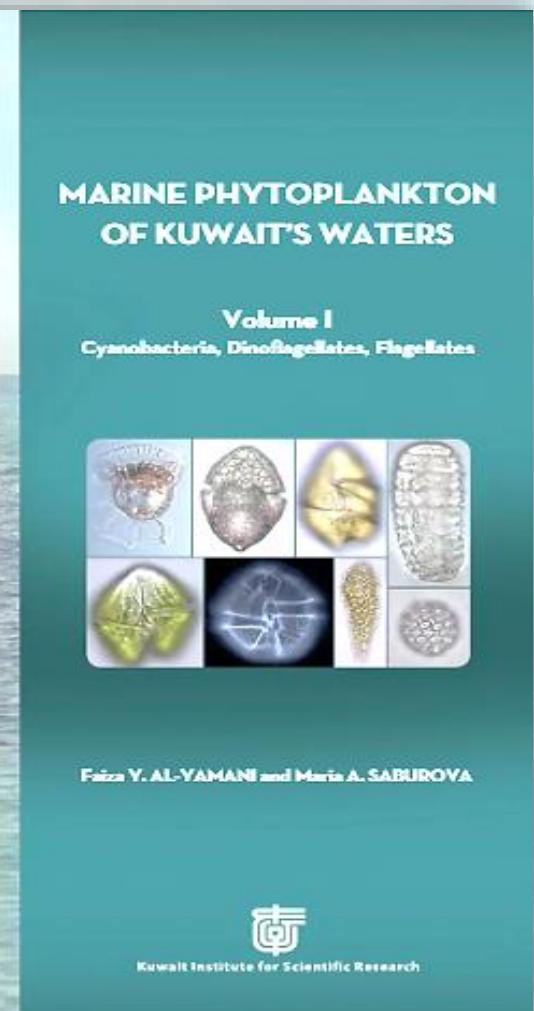
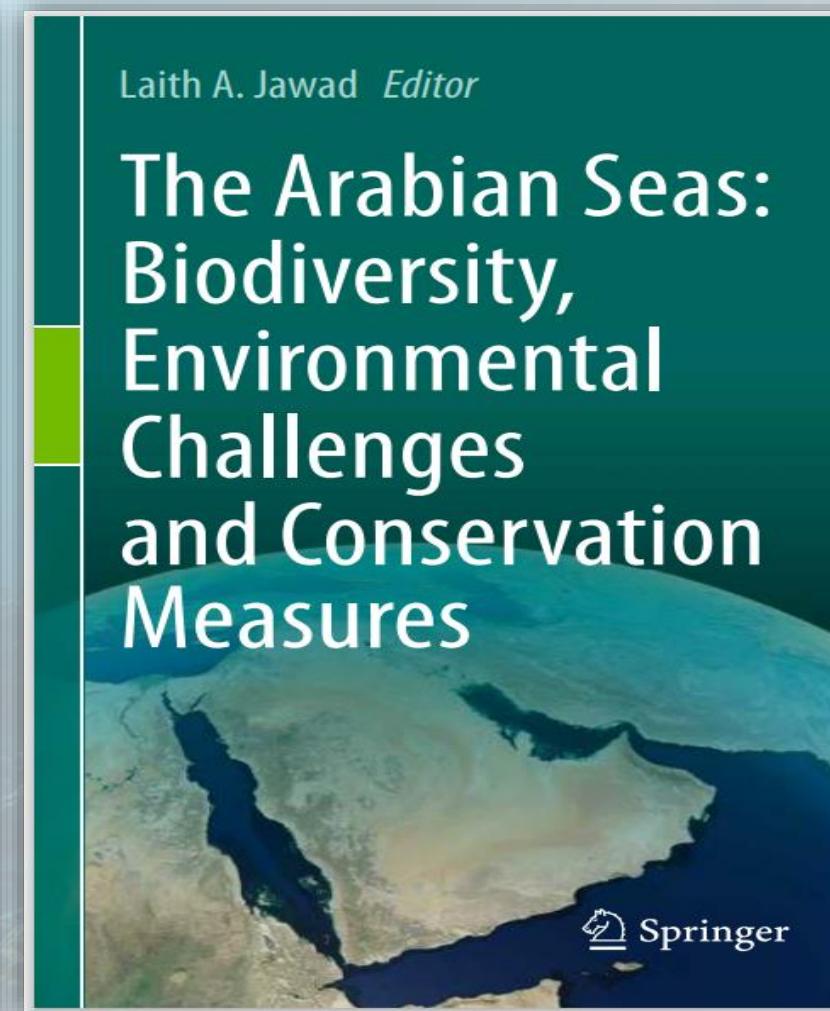
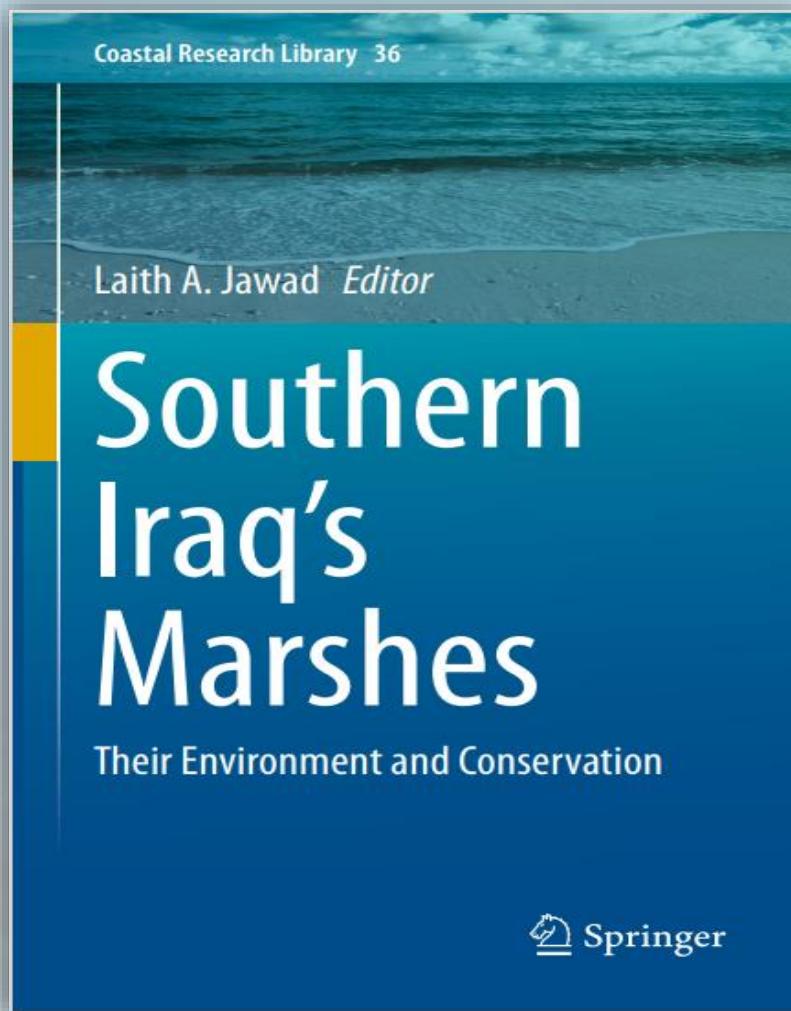
Rosenthal sampler with CTD and Niskin bottles in operation



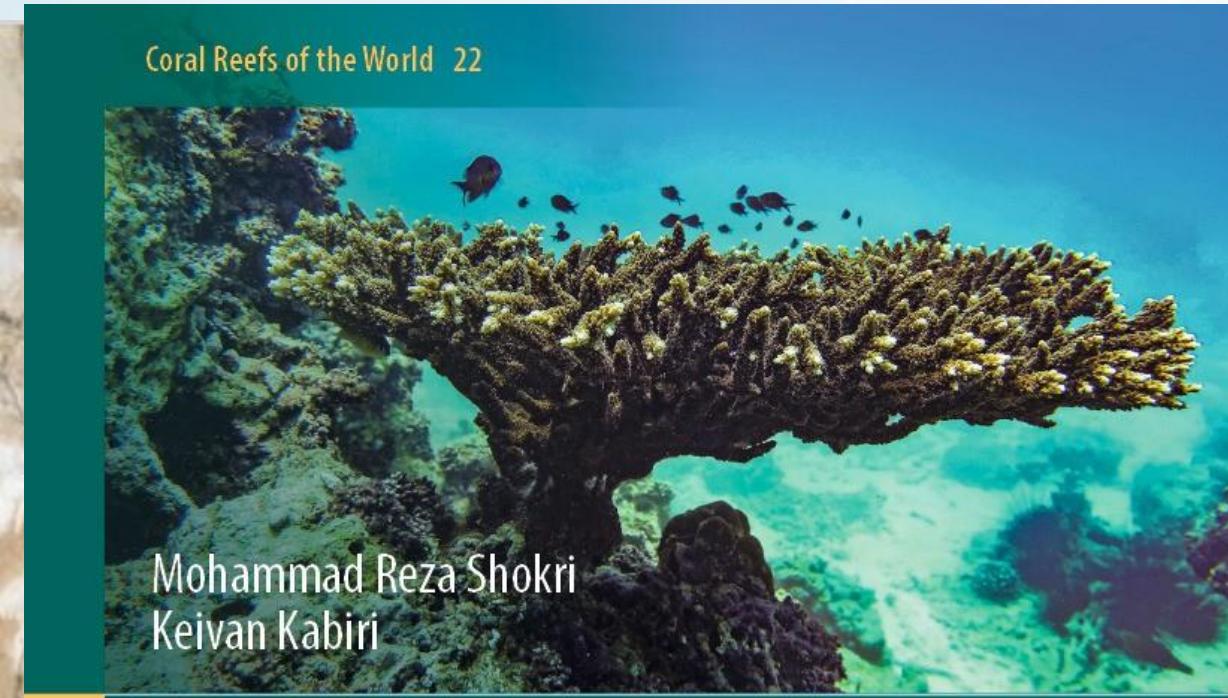
Multiple plankton net in operation (over local's trawled sampling)



Publications (Book/Book Chapters)



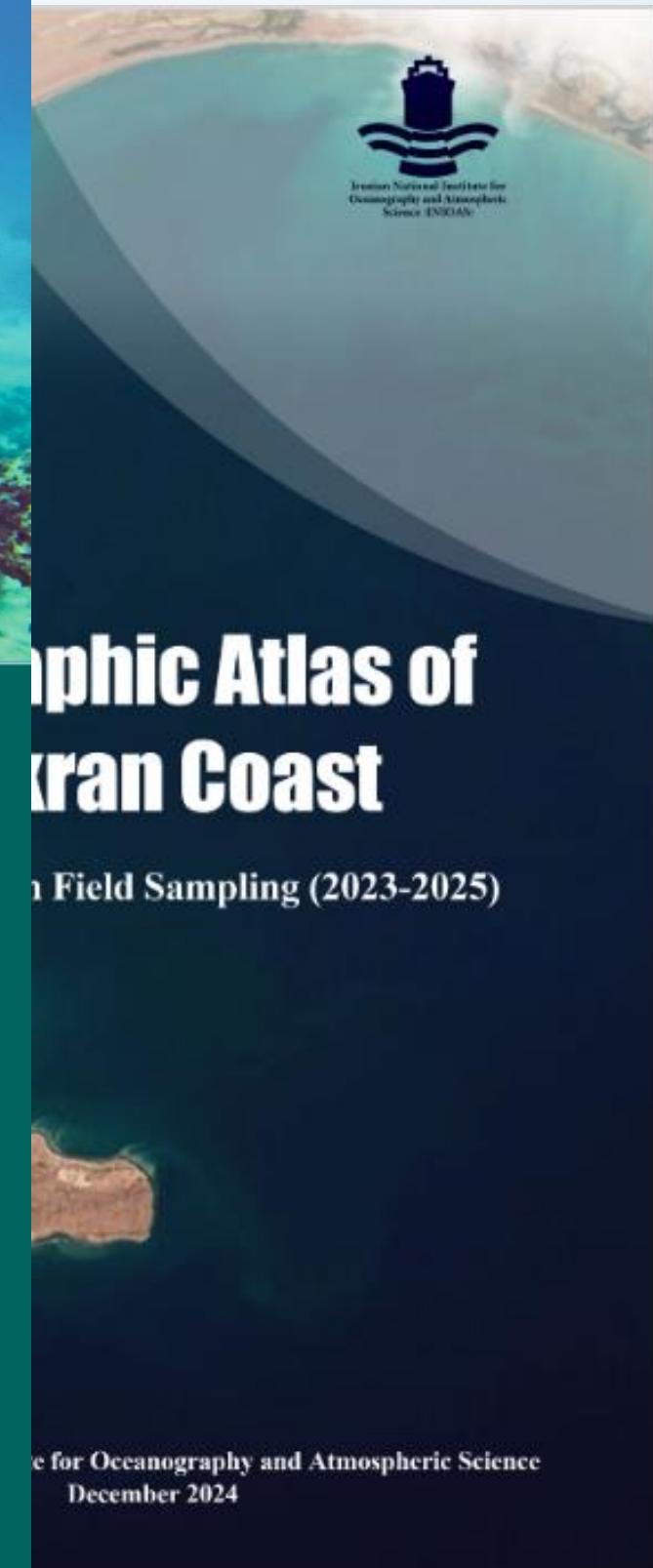
Major regional atlases and a 2025 publication



Coral Reefs of Iran

Biodiversity and Distribution
in Extreme Environments

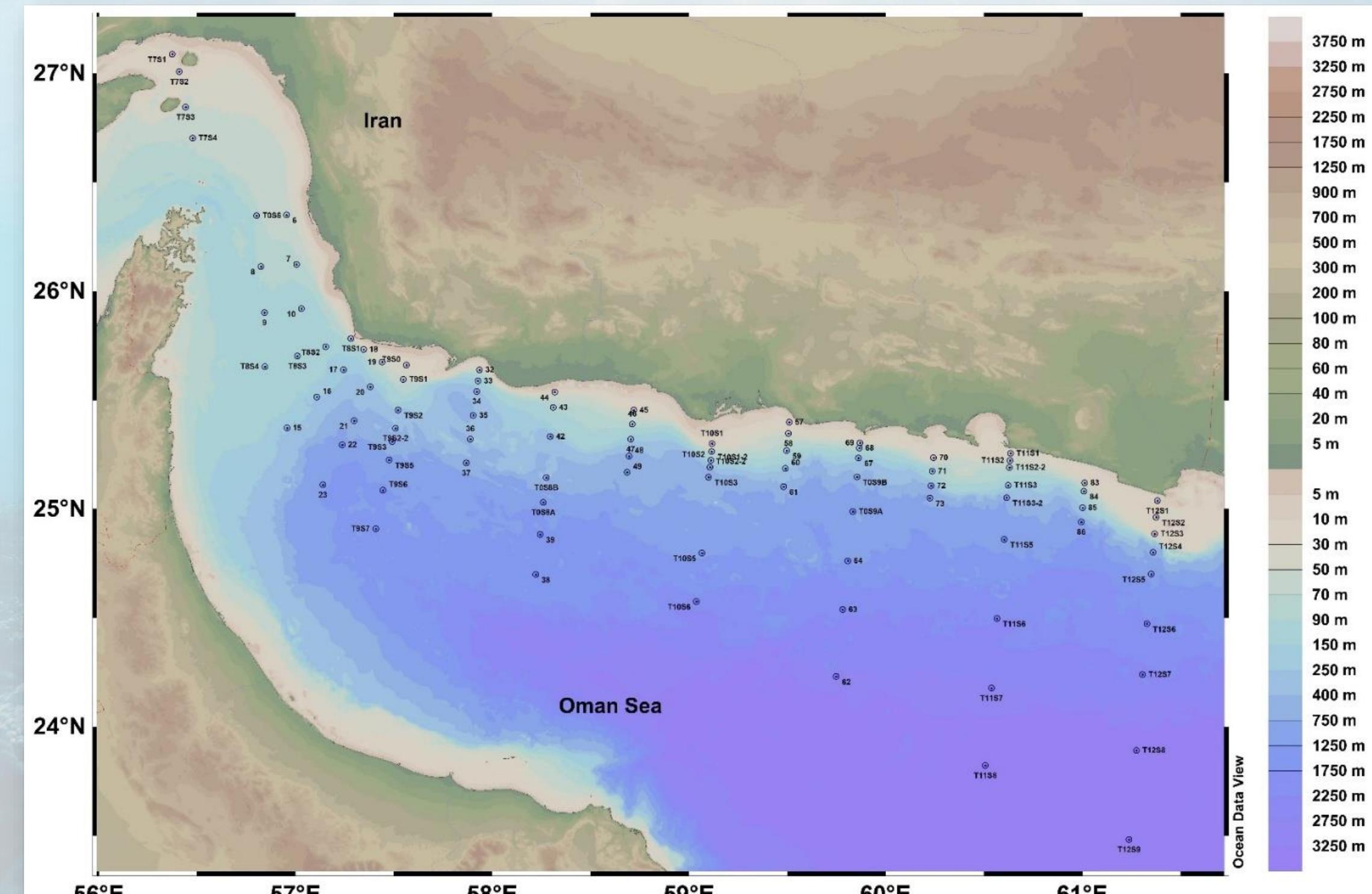
 Springer



Upcoming 2026 basin-scale survey-Oman Sea



- **95 stations across the Oman Sea**
- **From shallow coasts to depths beyond 3,300 m**



IIOE-2 endorsed project



Principal Enquiries: PO India Office

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 2nd International Indian Ocean Expedition 2015-2025

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 United Nations Educational, Scientific and Cultural Organization

 Intergovernmental Oceanographic Commission

 International Science Council
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|-----------------------------|--------------------|---|---------------|---|-----------------------------|---------------------------|
| November, 2025 | IIOE2-EP63 | R/V HAKUHO-MARU CENTRAL INDIAN RIDGE CRUISE 2024 "MOWALL-CIR" (KH-24-4) | ST-2, ST-6 |  | Kyoko OKINO | JAPAN |
| August, 2025 | IIOE2-EP62 | DERIVING KEY OCEAN CIRCULATION VARIABLES TO ENHANCE IMOS OBSERVATION OFF WESTERN AUSTRALIA | ST-2, ST-4 |  | Ming Feng | Australia |
| August, 2025 | IIOE2-EP61 | TRENDS AND ECOSYSTEM RESPONSES IN MARGINAL SEAS OF THE NORTHWESTERN INDIAN OCEAN: A SYNTHESIS OF BIOGEOCHEMICAL AND BIOLOGICAL DATA | ST-1, ST-6 |  | Dr. Maryam Ghaemi | Iran |



Priorities (Aligned with IOCINDIO Workplan)

- 1. Strengthen regional ocean observations** – through the new Task Team on Basin-wide Integrated Ocean Observatory Systems, focusing on infrastructure assessment, data platforms, and early warning systems.
- 2. Advance coordinated research** – via joint cruises feeding the Ocean Science, Biodiversity, Pollution & Governance Task Team priorities: ocean acidification/deoxygenation, coral reef monitoring, deep-sea biodiversity, and macro/micro litter.
- 3. Translate science to action** – supporting coastal resilience (hazard maps, Tsunami Ready), fisheries sustainability, pollution mitigation, and ecosystem-based management via new IOCINDIO Task Teams



THANK YOU!

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