[1/5] Flames and smoke rise from the Greek-flagged oil tanker Sounion, which has been on fire since August 23, on the Red Sea, August 25, 2024. Yemen's Houthis said they attacked the Sounion in the Red Sea. EUNAVFORASPIDES/Handout via REUTERS/File Photo Purchase Licensing Rights

Oil Spill Preparedness and Response Mechanisms in the Western Indian Ocean – Eastern Africa Region

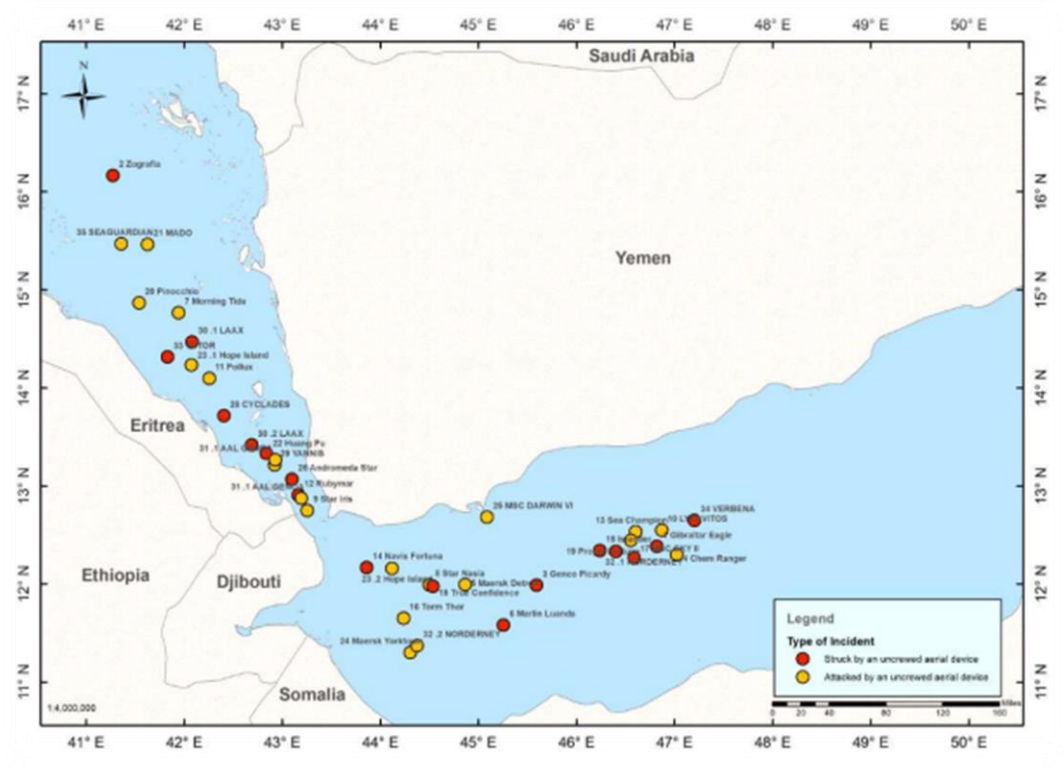
Presented by Capt. Sam Gontier, RCOC Director

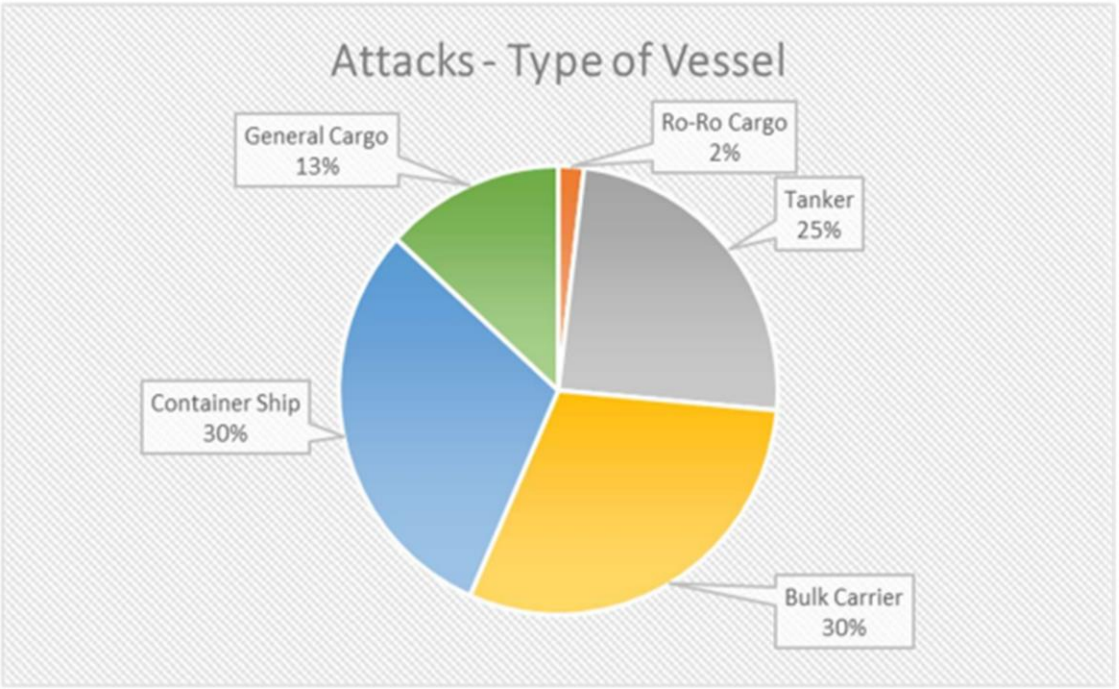
Contents

1. Background Information: Houthis
2. Incident Overview
3. Impacts of Oil Spill
4. Challenges to Operations
5. Response Mechanisms
6. Availability of Equipment

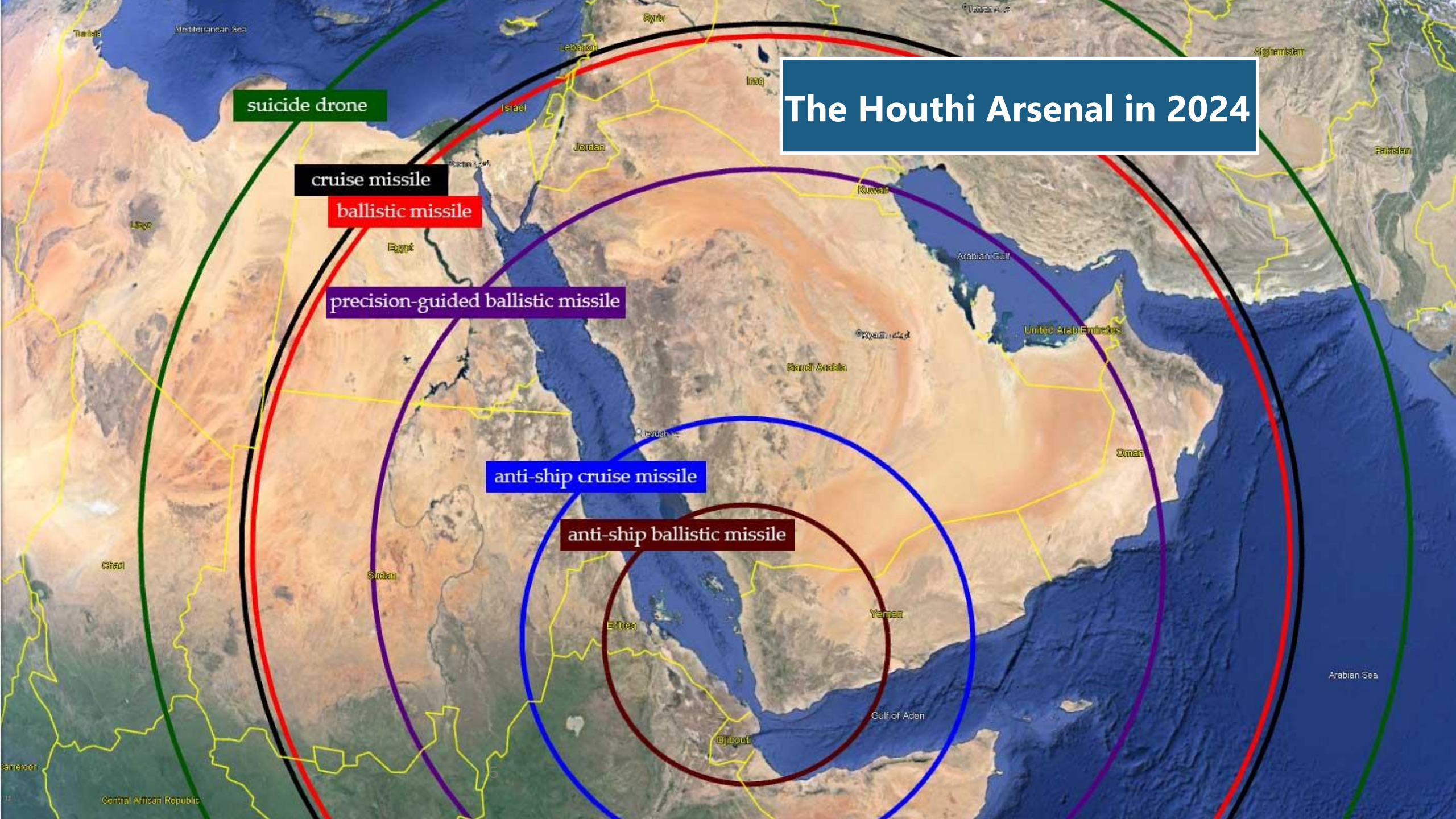
Background Information: Houthis

Mapping of Houthi Attacks & Incidents by Type of Vessel.





Source: IMO


The Houthi Arsenal in 2024
suicide drone
cruise missile
ballistic missile
precision-guided ballistic missile
anti-ship cruise missile
anti-ship ballistic missile
Mediterranean Sea
Syria
Lebanon
Israel
Iraq
Jordan
Kuwait
Arabian Gulf
Saudi Arabia
United Arab Emirates
Oman
Yemen
Eritrea
Djibouti
Gulf of Aden
Arabian Sea
Sudan
Chad
Libya
Egypt
Tunisia
Afghanistan
Pakistan
Cameroon
Central African Republic

Ships sunk by Houthi attacks in the Red Sea.

- **MV Rubymar (IMO 9138898)** - Belize-flagged general cargo ship. Struck by two uncrewed aerial devices on February 19, 2024, causing significant damage, and eventually sank on March 2, 2024, 16 miles west of the port of Mocha, Yemen.

- **TUTOR (IMO 9942627)** - Liberia-flagged bulk carrier. Struck by an uncrewed surface device and later by an aerial device on June 12, 2024, causing significant damage and flooding, leading to the ship sinking on June 18, 2024.

Incident Overview

Incident Overview

1. Vessel Details

1. Name: **M/T SOUNION**
2. Type: **Crude Oil Tanker**
3. Flag State: **Greece**
4. IMO: **9312145**
5. Call Sign: **SWE**
6. Tonnage: **85206 GT**

2. Key Incident:

- On 21/08/24, *M/T SOUNION*, carrying **150,000T of crude oil (900,000 barrels)**, was attacked by Houthis off Yemen's coast in the Red Sea.
- The attack led to a fire and the loss of power.
- The crew was safely evacuated by EU NAVFOR operation Aspides.
- The tanker is still on fire, anchored in the Red Sea posing a tremendous risk to the marine environment, maritime security, freedom of navigation, and the adjacent coastal communities.

[1/5] Flames and smoke rise from the Greek-flagged oil tanker Sounion, which has been on fire since August 23, on the Red Sea, August 25, 2024. Yemen's Houthis said they attacked the Sounion in the Red Sea. EUNAVFOR ASPIDES/Handout via REUTERS/File Photo Purchase Licensing Rights

- incident poses a risk of a massive oil spill, with 150,000 tons of crude oil potentially being released into the Red Sea.
- Although the oil spill may initially occur in the Red Sea, ocean currents can carry the spill far beyond the immediate area, potentially affecting not only the coastal states of the Red Sea but also the shores of East Africa and the broader WIO region
- WIO and Eastern African States rely heavily on marine resources for economic stability, food security, and biodiversity.
- A spill of this size could have devastating, far-reaching impacts on coastal communities, marine ecosystems, and economies, which must be addressed urgently.

Goal is to ensure we are prepared to act swiftly, collaboratively, and effectively to prevent long-term damage and protect our vital maritime resources.

Picture of M/T SOUNION taken on 26 August 2024

Oil Spill Pollution Incident Impacts

Potential Impacts of the Oil Spill: A Comparison

"one of the largest environmental disasters in U.S. history"

"https://darrp.noaa.gov/oil-spills/exxon-valdez#:~:text=On%20March%2024%2C%201989%20the,environmental%20disasters%20in%20U.S.%20history.

Exxon Valdez Oil Spill (1989)

Amount of Oil Spilled: **40,000 tons** of crude oil

Immediate Area Affected: **1,300 miles** of coastline

Impact on Marine Environment: **Severe damage** to marine ecosystems (e.g., fish, seabirds, otters, and orcas)

Long-term effects persisted for over 30 years before full recovery in some areas

Massive efforts in cleanup and **restoration costing over $7 billion**

Exxon Valdez oil spill workers and maxi-barge hose beach after Corexit test on Quayle beach, Smith Island in Prince William Sound, Alaska, US, on 7 August 1989. Photograph: Alaska Resources Library and Information Services (Arlis) Photograph: ARLIS

Current Oil Spill Threat from **M/T SOUNION**

Potential Amount of Spill: **150,000 tons** of crude oil

Risk of Impact: Nearly **4 times the volume** of Exxon Valdez

Potential to devastate **larger areas of coastline and critical marine** habitats

Long-term effects could **take decades to recover, particularly for fragile ecosystems** in the Red Sea and Western Indian Ocean

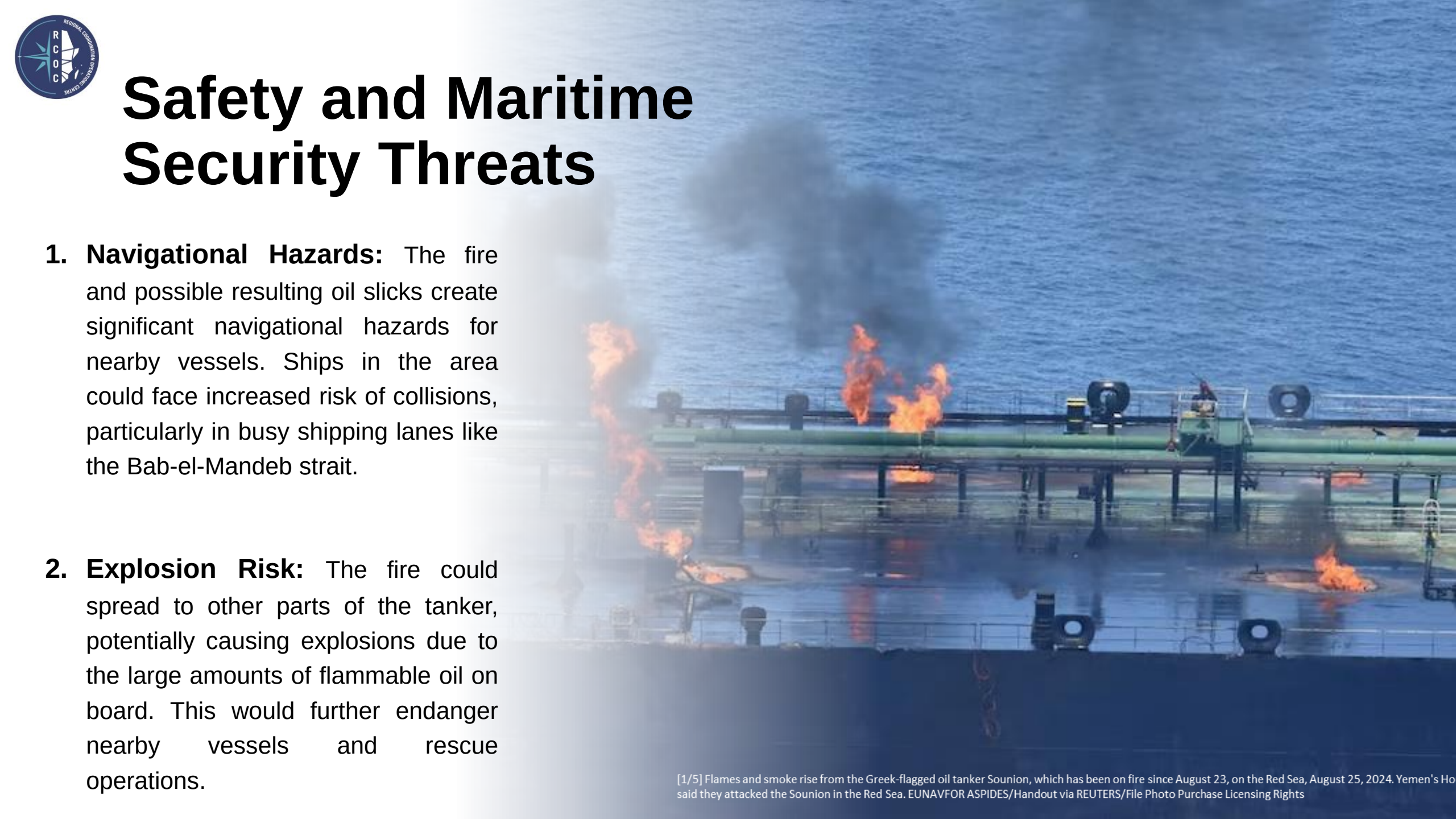
Environmental and Ecological Devastation

- **Destruction of Natural Habitats:** Impact on coral reefs, seagrass beds, and coastal wetlands, disrupting marine ecosystems.
- **Long-Term Effects on Biodiversity:** Toxicity of hydrocarbons affecting reproduction and survival of marine species, leading to lasting ecological imbalance.
- **Reduced Ecological Resilience:** Lower ability of marine ecosystems to recover from future disasters.

Safety and Maritime Security Threats

1. **Navigational Hazards:** The fire and possible resulting oil slicks create significant navigational hazards for nearby vessels. Ships in the area could face increased risk of collisions, particularly in busy shipping lanes like the Bab-el-Mandeb strait.

2. **Explosion Risk:** The fire could spread to other parts of the tanker, potentially causing explosions due to the large amounts of flammable oil on board. This would further endanger nearby vessels and rescue operations.



[1/5] Flames and smoke rise from the Greek-flagged oil tanker Sounion, which has been on fire since August 23, on the Red Sea, August 25, 2024. Yemen's Ho
said they attacked the Sounion in the Red Sea. EUNAVFOR ASPIDES/Handout via REUTERS/File Photo Purchase Licensing Rights

Economic Consequences for Local Industries

- **Desalination Plants:** Contamination of seawater reduces or destroys drinking water supply for up to 35 million people.

- **Fishing Sector**: Loss of marine biodiversity and closure of fishing areas directly affecting fishermen's income.

- **Impact on Tourism**: Degradation of beaches and coastal areas leads to declining tourism and local revenue.

Social and Health Impacts

1. **Public Health Risk**: Hydrocarbon exposure leads to respiratory diseases, skin irritations, and food poisoning.

2. **Population Displacement**: Need to evacuate contaminated coastal areas, impacting social stability and quality of life.

3. **Loss of Livelihoods**: Decrease in income for communities dependent on fishing and aquaculture.

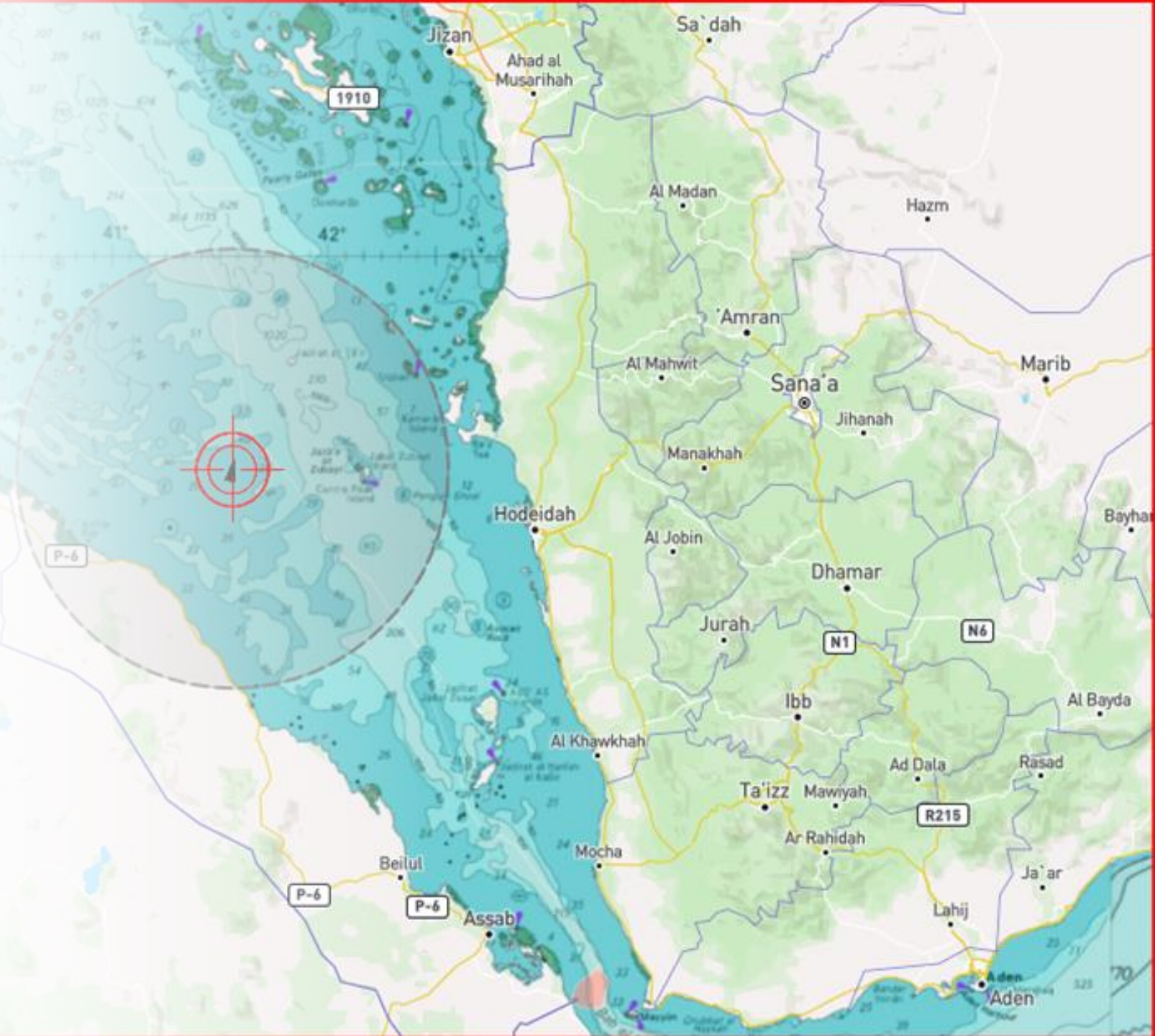
Challenges to Conduct Operations in the Area

1. Security Risks

- **Continuous Threat from Houthis**: Aggravated warfare, frequent drone, missile, and armed boat attacks pose a constant risk to rescue and security operations.
- **IEDs**: Potential presence of floating IEDs adds risk for operating ships in the area.

2. Logistical Challenges

- **Restricted Access and Remoteness**: The ship is located in a difficult-to-access conflicting area.
- **Maritime Conditions**: Strong currents, waves, and high winds can complicate rescue and recovery operations.

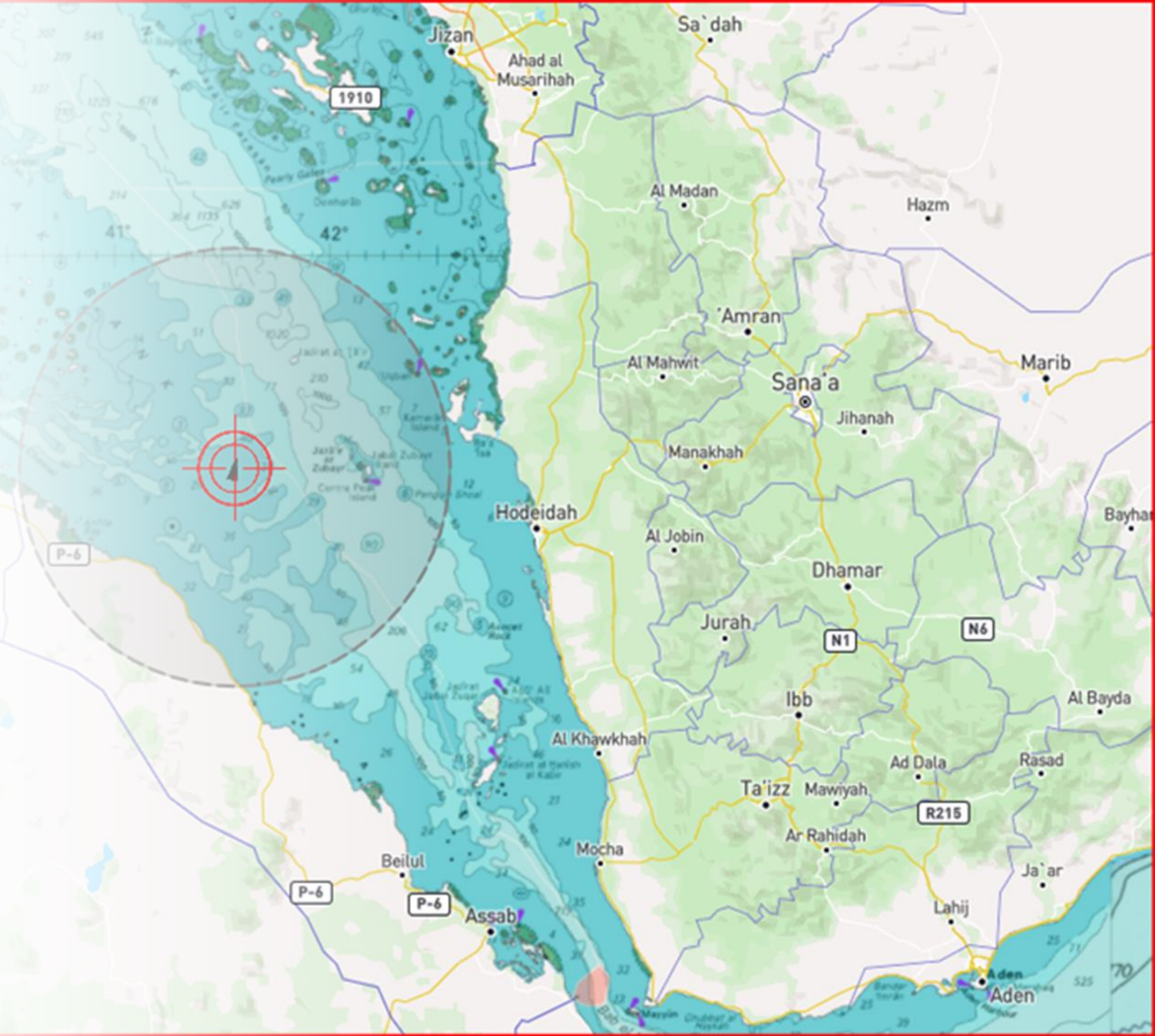


3. Environmental Issues

- **Proximity to Ecologically Sensitive Areas**: The Red Sea's coral reefs and marine ecosystems are at risk of significant damage from oil spills
- **Risk of Oil Spill**: In case of further attacks or hull breaches, ship is vulnerable to large quantity oil spills

4. International Coordination

- **Multinational Coordination**: Involving multiple countries and international organizations requires complex coordination to ensure effective collaboration.
- **Secure Communication**: Maintaining secure communication to prevent sensitive information from being intercepted by potential adversaries.



5. Legal and Diplomatic Issues

-**Sovereignty and Jurisdiction:** Military or security actions in international or Yemeni territorial waters can raise legal and diplomatic questions.

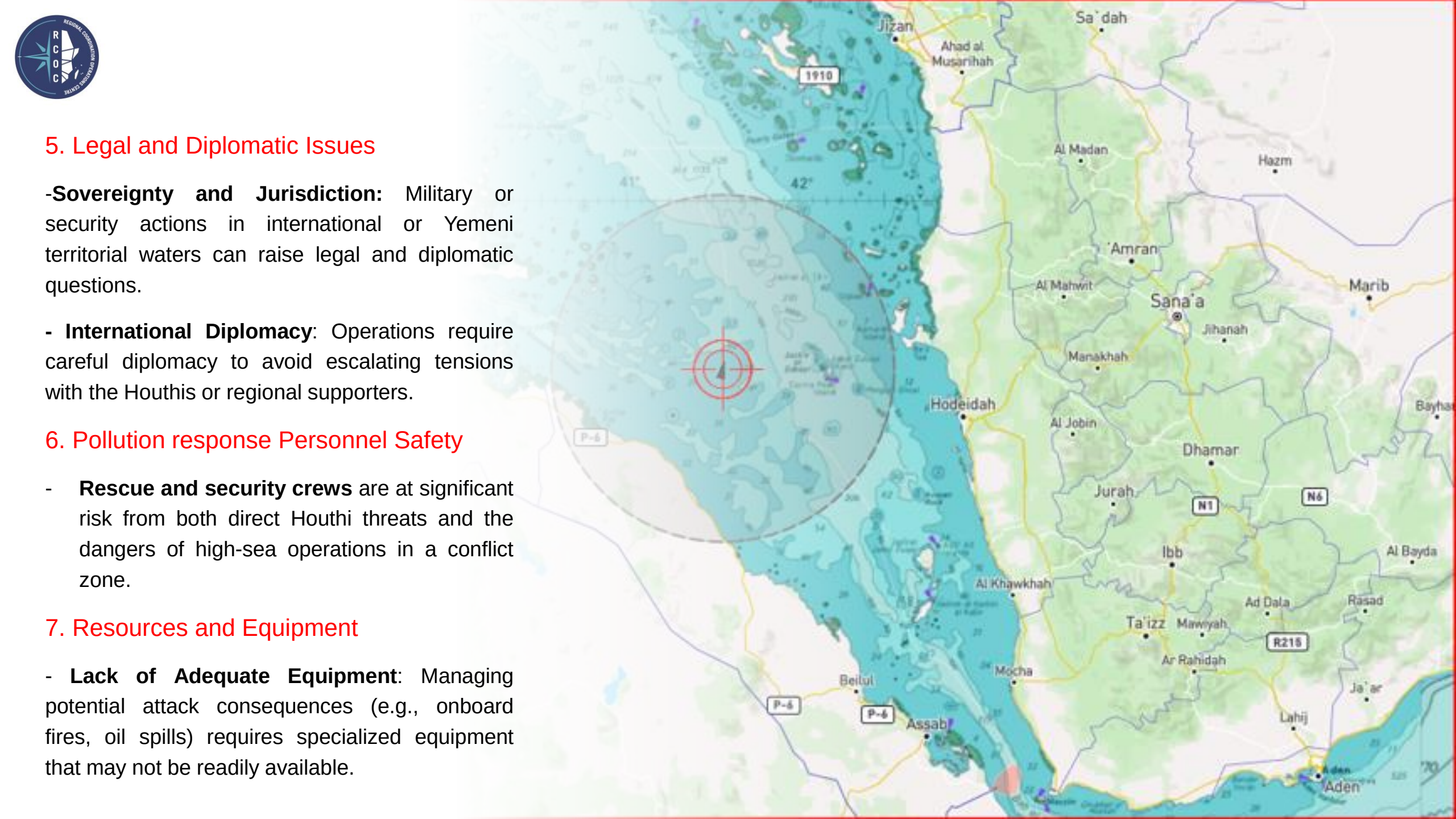
- International Diplomacy: Operations require careful diplomacy to avoid escalating tensions with the Houthis or regional supporters.

6. Pollution response Personnel Safety

- **Rescue and security crews** are at significant risk from both direct Houthi threats and the dangers of high-sea operations in a conflict zone.

7. Resources and Equipment

- **Lack of Adequate Equipment**: Managing potential attack consequences (e.g., onboard fires, oil spills) requires specialized equipment that may not be readily available.



Emergency Response Strategies

Moving to a Safe Location

- **Damage Assessment**: Quickly inspect the ship for critical damage, leaks, and mechanical issues.
- **Safe Route Planning**: Chart a course that avoids conflict zones and potential threats, in coordination with maritime authorities.
- **Security Escort**: Deploy warships or security vessels to protect the tanker while it moves to a safe harbor.
- **Continuous Communication**: Keep stakeholders (owners, insurers, authorities) informed about the ship's status and actions taken.

Emergency Response and Environmental Protection

- **Oil Spill Containment:** Use floating barriers and other equipment to control and contain crude oil spills.
- **Deployment of Specialized Teams**: Engage emergency response teams to clean spills and reduce ecological impacts.
- **Collaboration with Environmental Agencies:** Work with local and international organizations for a coordinated response.
- **Environmental Impact Assessment:** Conduct a thorough assessment of environmental damage to plan restoration and minimize long-term effects.

Key Regional Frameworks for Oil Spill Preparedness and Response in the Region

1. **International Maritime Organization (IMO):**
   a) Sets global standards (MARPOL, OPRC) for marine pollution prevention.
   b) Provides technical support and supports international coordination during an oil incident.

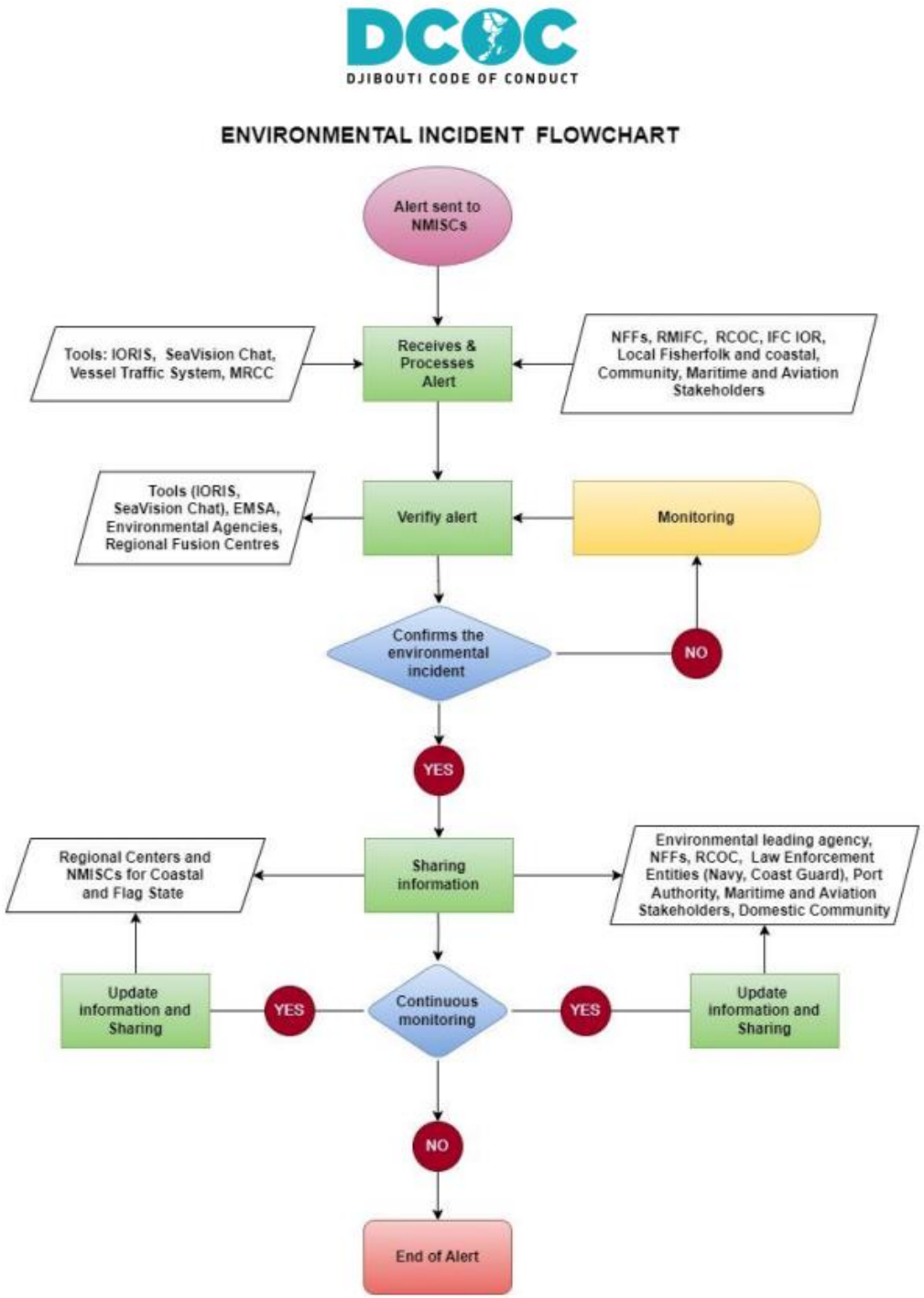
2. **DCOC/Jeddah Amendment (JA):**
   a) Enhances regional maritime security and information sharing.
   b) Encourages States to put in place legislation which ensures effective protection of the marine environment.

3. **Nairobi Convention:**
   a) Legal framework for regional cooperation in marine protection.
   b) Includes guidelines that member states must adhere to in the event of marine pollution incidents, such as oil spills.

4. **Regional Centres (RCOC & RMIFC):**
   a) Coordinate information sharing and operational response.
   b) RMIFC can provide early warnings and manage maritime security threats.
   c) RCOC works closely with national, regional and international bodies to ensure a coordinated and efficient response, minimizing the environmental impact of oil spills.

Call to Action

- **Regional and International Cooperation:** Critical importance of continued cooperation under the DCOC and RMSA frameworks to build a collective regional response capacity. Importance of cooperating with relevant international States and organizations.
- **Political Support:** Commitment from member states to strengthen regional maritime security and environmental protection measures.
- **Resource Mobilization:** Allocation of necessary costs and resources for prevention, response, and rehabilitation in case of a spill.
- **Regional Contingency Plans (Draft):** While the Regional Oil Spill Contingency Plan has yet to be fully formalized, it serves as a valuable framework that can guide our actions and decision-making as we move forward in responding to this crisis.



RMSA Legal Frameworks for Oil Pollution Preparedness

1. International Maritime Law

a) **OPRC** (Oil Pollution Preparedness, Response and Cooperation): Guidelines for national and international cooperation in oil spill preparedness and response, planning and assistance.

b) **UNCLOS:** Defines state responsibilities for protecting the marine environment and managing maritime resources within EEZs and beyond.

2. Regional Agreements

a) **MASE Agreements**: The Regional Agreement on Coordination of Operations describes its missions by including "the protection of the marine environment in the event of a foreseeable threat", among others.

b) The **Nairobi Convention,** administered by UNEP is a regional treaty that provides a platform for governments, civil society, and the private sector to work together for the sustainable management and use of the marine and coastal environment.

c) The **Emergency Protocol** is complementary to the OPRC Convention, covering requirements on cooperation in case of marine pollution incidents, the establishment of contingency plans and procedures for effective response within the region.

d) **DCOC/JA**: emphasize the need for regional cooperation and information sharing and measures for protection of the marine environment.

3. National Legal Frameworks

a) Each country has specific legislation governing maritime operations and environmental protection, which guides national response efforts and legal obligations.

Country	UNCLOS	OPRC Agreement	OPRC-HNS Protocol	Nairobi Convention	Emergency Protocol to the Nairobi Convention	MASE Regional Agreements	MARPOL Convention (Annex I/II)
Comoros	✓	✓		✓	✓	✓	✓
Djibouti	✓	✓	✓			✓	✓
France	✓	✓	✓	✓	✓	✓	✓
Kenya	✓	✓		✓	✓	✓	✓
Madagascar	✓	✓	✓	✓	✓	✓	✓
Mauritius	✓	✓	✓	✓	✓	✓	✓
Mozambique	✓	✓		✓	✓		✓
Seychelles	✓	✓		✓	✓	✓	✓
South Africa	✓	✓		✓	✓		✓
Tanzania	✓	✓		✓	✓		✓

Availability of Equipment in the Region

Thank You

Any Questions/ Comments/ Clarifications?

Capt. Sam Gontier
RCOC Director
Sam.gontier@gov.sc
Tel: +248 2 826713
WhatsApp: +15149286116

#MASE Programme
A Strong Partnership Towards a Safe and Secure Maritime Domain

INDIAN OCEAN COMMISSION

This project is funded by the European Union