

MARINE POLLUTION INCIDENTS & **THE ROLE OF ITOPF**

Richard H. Johnson Technical Director



Steamship P&I - Southampton - 6th July 2023



Promoting Effective Spill Response



Funded by Global Shipping Industry



ITOPF

BACKGROUND

TORREY CANYON (1967)



1970 - 1980



1990 - 2000



50
Years
1968 - 2018



1968: The **International Tanker Owners Pollution Federation** is founded to administer the **TOVALOP**

ITOPF develops its **technical services** through attendance of numerous **large tanker incidents**

ITOPF's services formally extended to **other types of ships**

Main Function

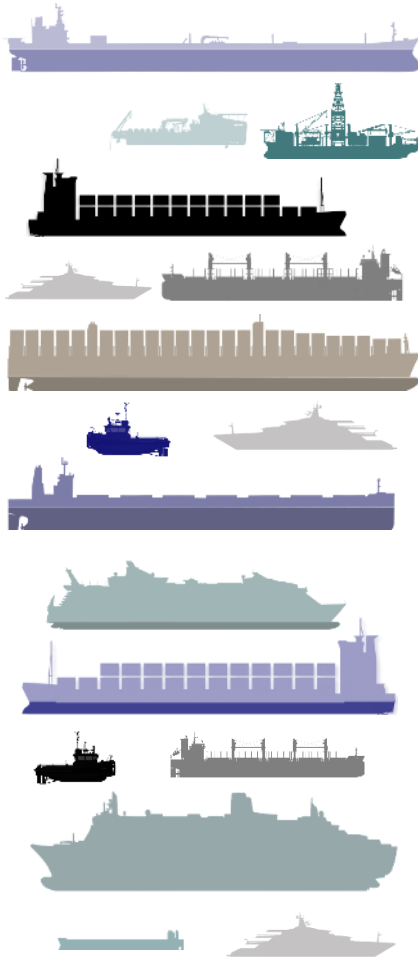
Today ITOPF's members and associates represent **90% of all ocean going tonnage**

Technical advice on effective response to spills of **oil, chemicals and other substances** in the marine environment.

Primarily funded by the **global shipping industry** (annual fee), operating on a **non-for profit** basis.

ITOPF BACKGROUND

ITOPF'S SHIPOWNER MEMBERS & ASSOCIATES



FUNDING



TECHNICAL ADVICE

SPILL RESPONSE COMMUNITY & STAKEHOLDERS



ITOPF 2023 BOARD DIRECTORS

- **Chairman: Erik Hånell (Stena Bulk AB)**
- Bahri, Saudi Arabia
- BW Maritime Pte Ltd, Singapore
- BP Shipping Ltd, UK
- Chevron Shipping Company LLC, USA
- China Shipping Tanker Co. Ltd., China
- Eneos Ocean Ltd, Japan
- Euronav NV, Belgium
- ExxonMobil SeaRiver Maritime Inc., USA
- F Laeisz Schiffahrtsgesellschaft GmbH, Germany
- Gard/Skuld P&I, Norway
- International Seaways Inc., USA
- Japan Ship Owners Mutual P&I Assoc., Japan
- Keystone Shipping Corp., USA
- Maersk Tankers AS, Denmark
- NYK Line, Japan
- Petrobras Transporte SA - Transpetro, Brazil
- Seven Islands Shipping, India
- Shell International Trading & Shipping Co Ltd, UK
- Steamship Insurance Management Services, UK
- Stolt Tankers B.V., Netherlands
- Teekay Shipping , Canada
- Tsakos Energy Navigation, Greece
- West of England / Chairman (IGP&I PSC)



ITOPF

BACKGROUND



Multi-lingual
Fluency in English,
Spanish, French,
Portuguese,
Russian...



Multi-skilled
Biologists, Chemists,
Environmental
Scientists, Geologists,
Engineers



ITOPF STAFF

48



22

RESPONDERS

24/7
365



+44 (0)20 7566 6998

(Please do not email for an emergency situation)

TECHNICAL

5

SERVICES



ITOPF

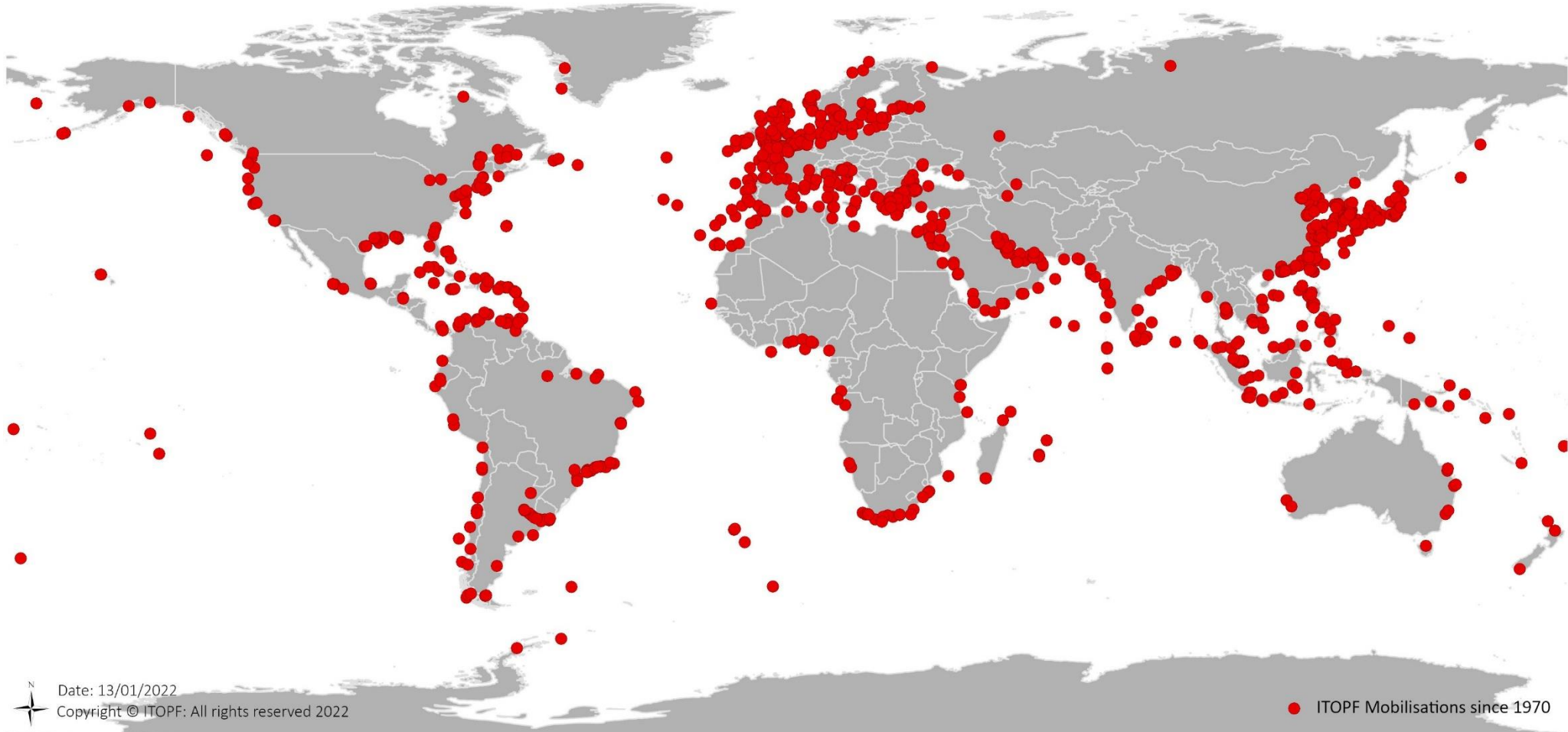
STATISTICS

Attended Spills 1970 - 2022

> 830
incidents

in 100
countries

Avg.
20
spills/yr



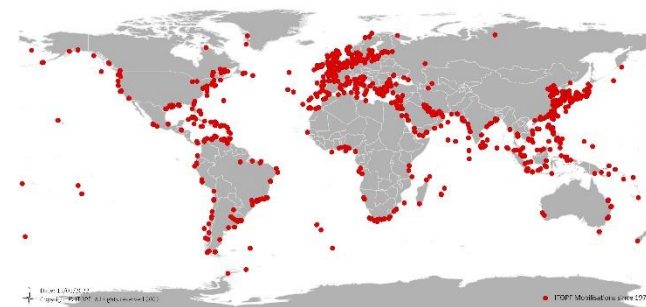
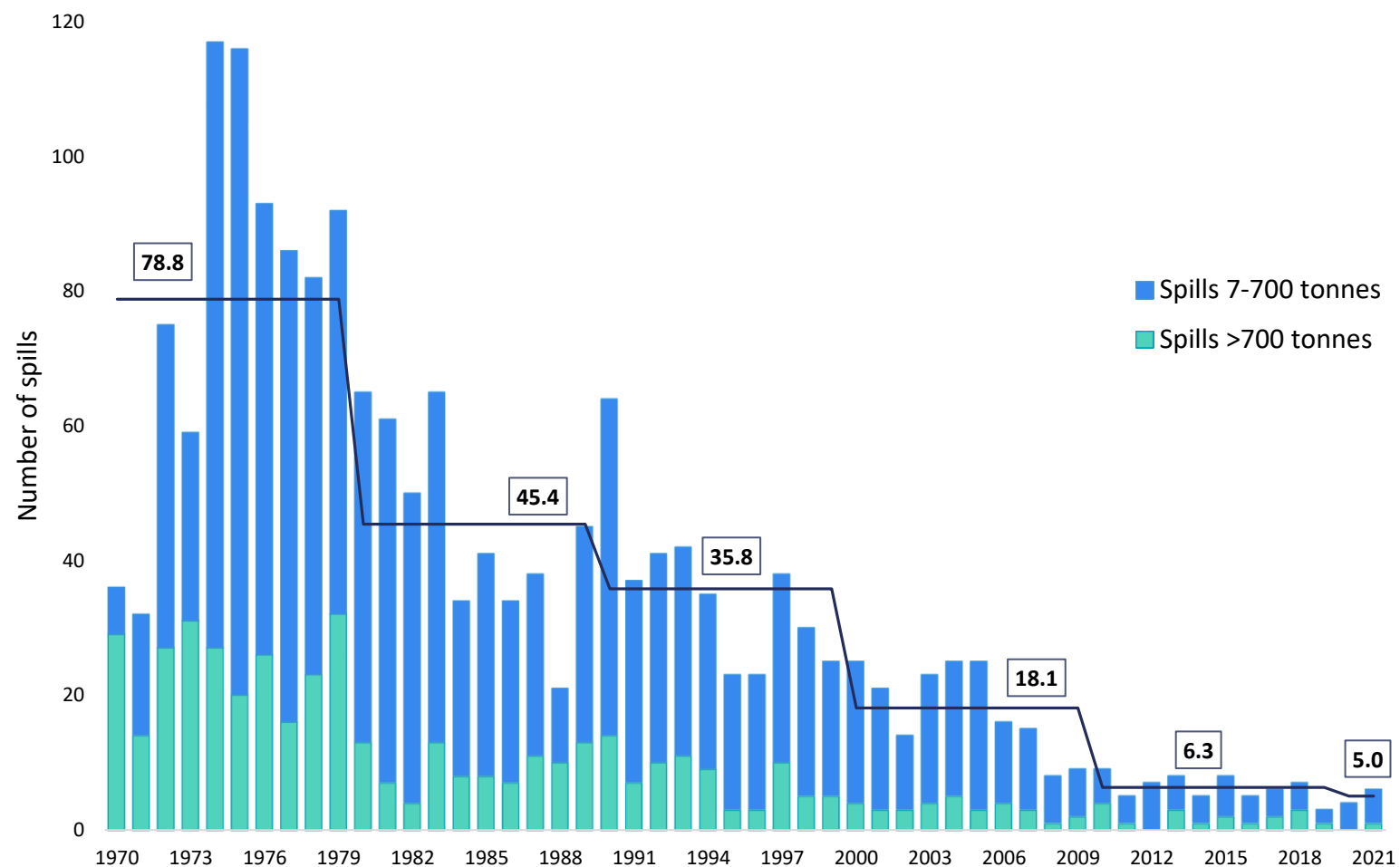
ITOPF'S AIM:



ITOPF

STATISTICS

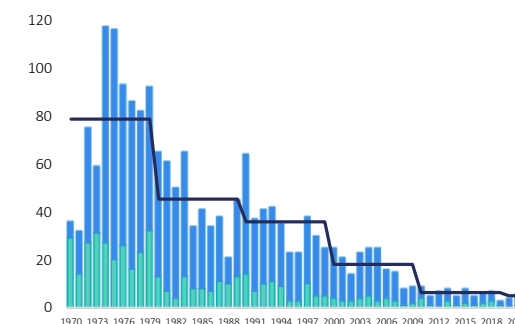
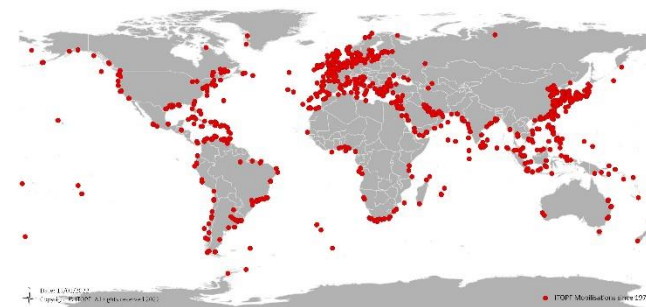
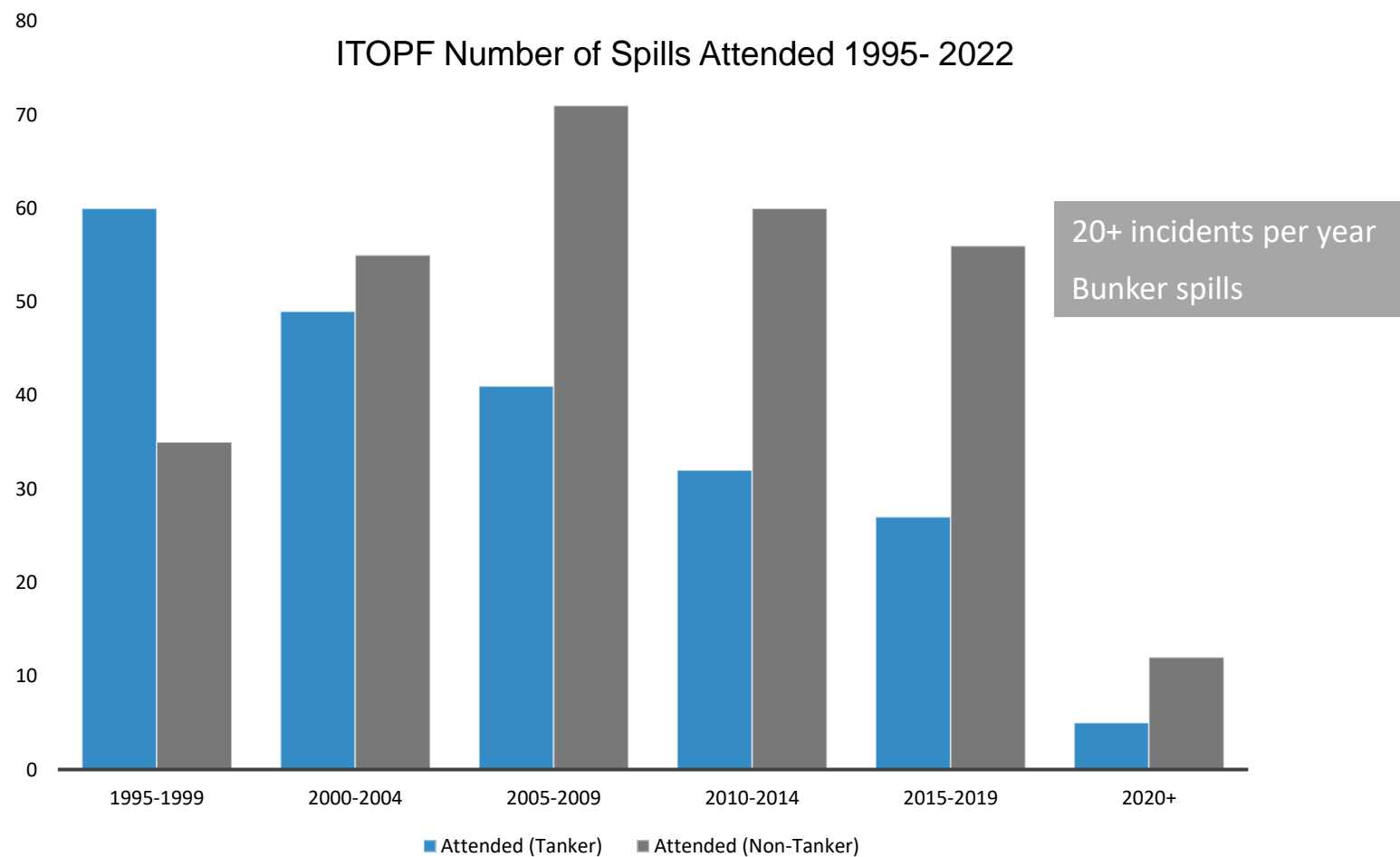
Number of Tanker Spills



ITOPF

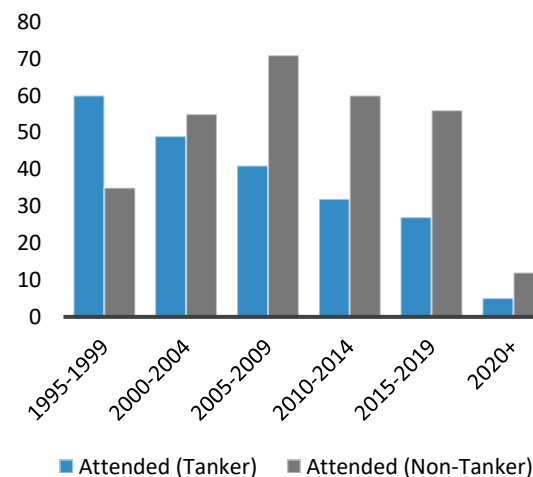
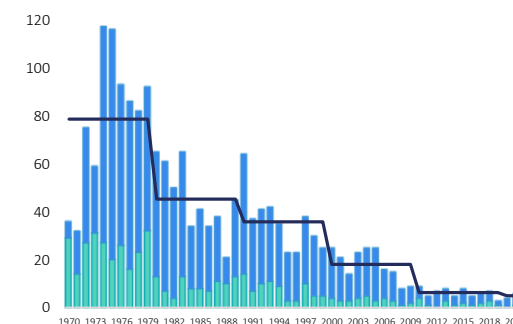
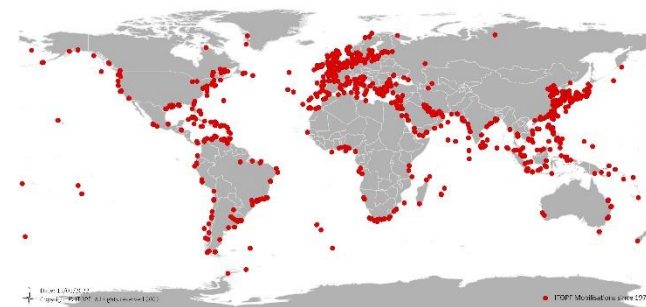
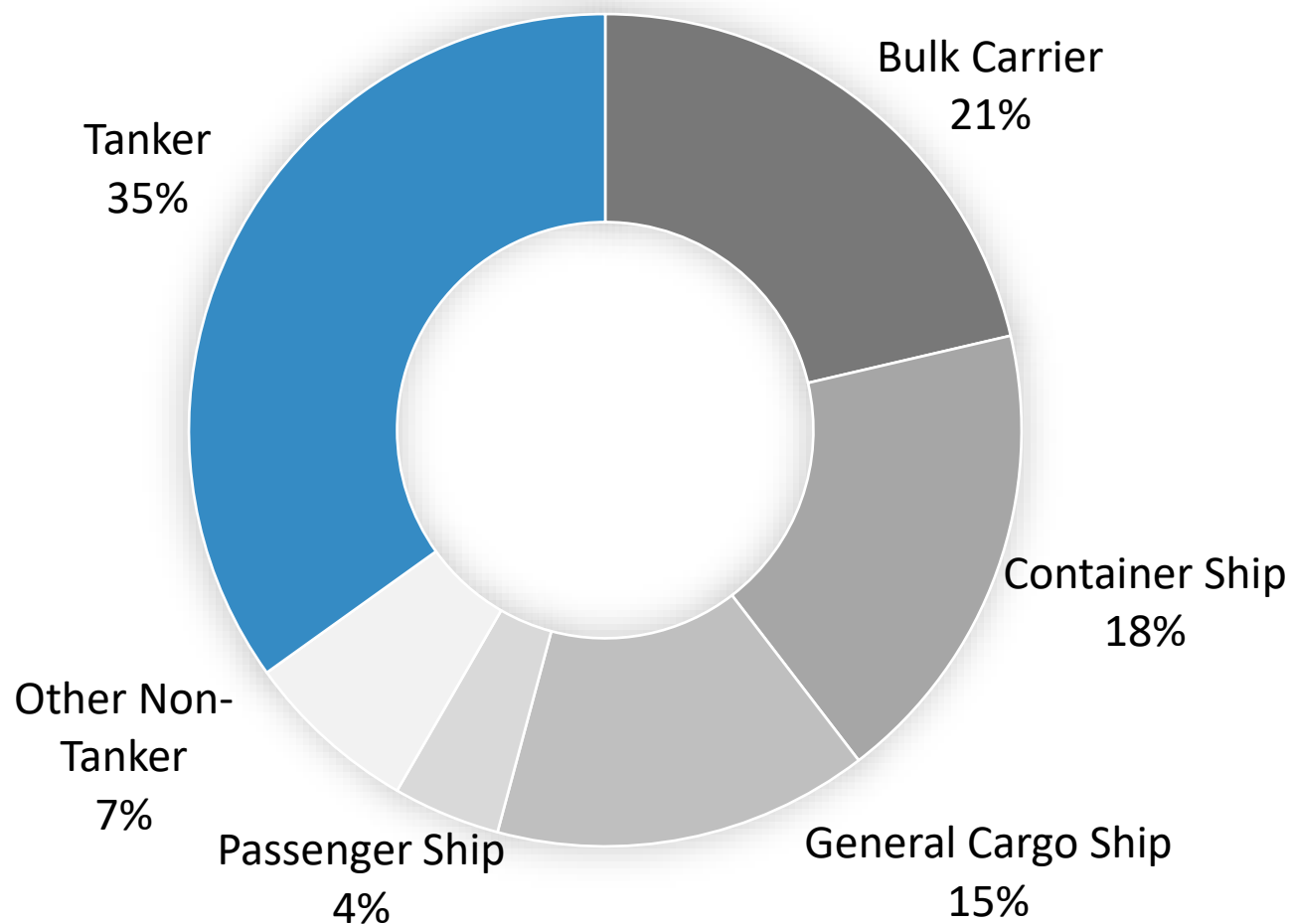
STATISTICS

No. of Attended Spills 1995 - 2022



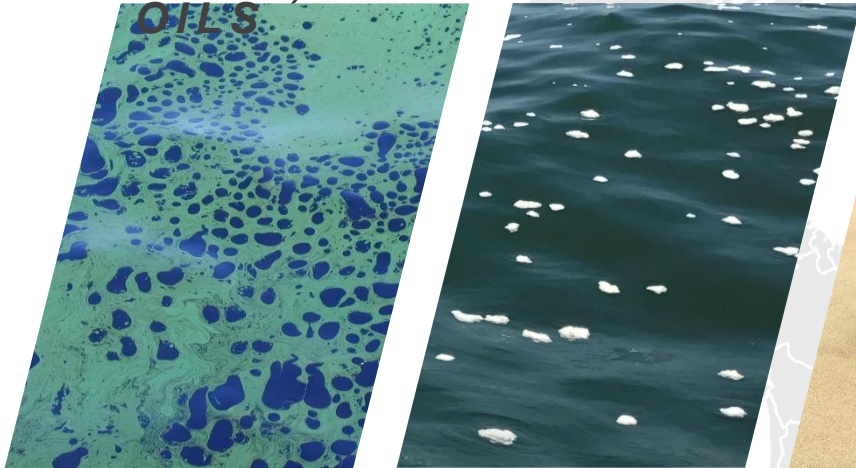
ITOPF STATISTICS

Attended Spills 2010 - 2022



ITOPF'S REMIT:

**MINERAL & VEGETABLE
OILS**



OTHER SUBSTANCES CARRIED BY SHIPS



CHEMICALS

ITOPF'S REMIT:

OTHER SUBSTANCES CARRIED BY SHIPS



Coal



Grain



Timber



Nurdles



Waste water



Livestock

ITOPF'S REMIT:

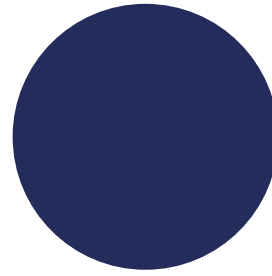
CORAL REEF FOUNDINGS



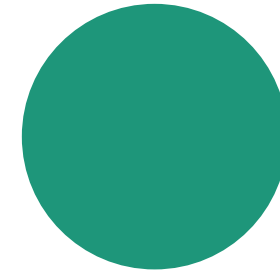
ITOPF

STATISTICS

ITOPF Steamship P&I Attended Spills



60
incidents



ITOPF

RESPONSE ACTIVITIES

The COVID-19 years



ITOPF

RESPONSE ACTIVITIES

The COVID-19 years – Remote Advice

100
incidents

in 56
countries

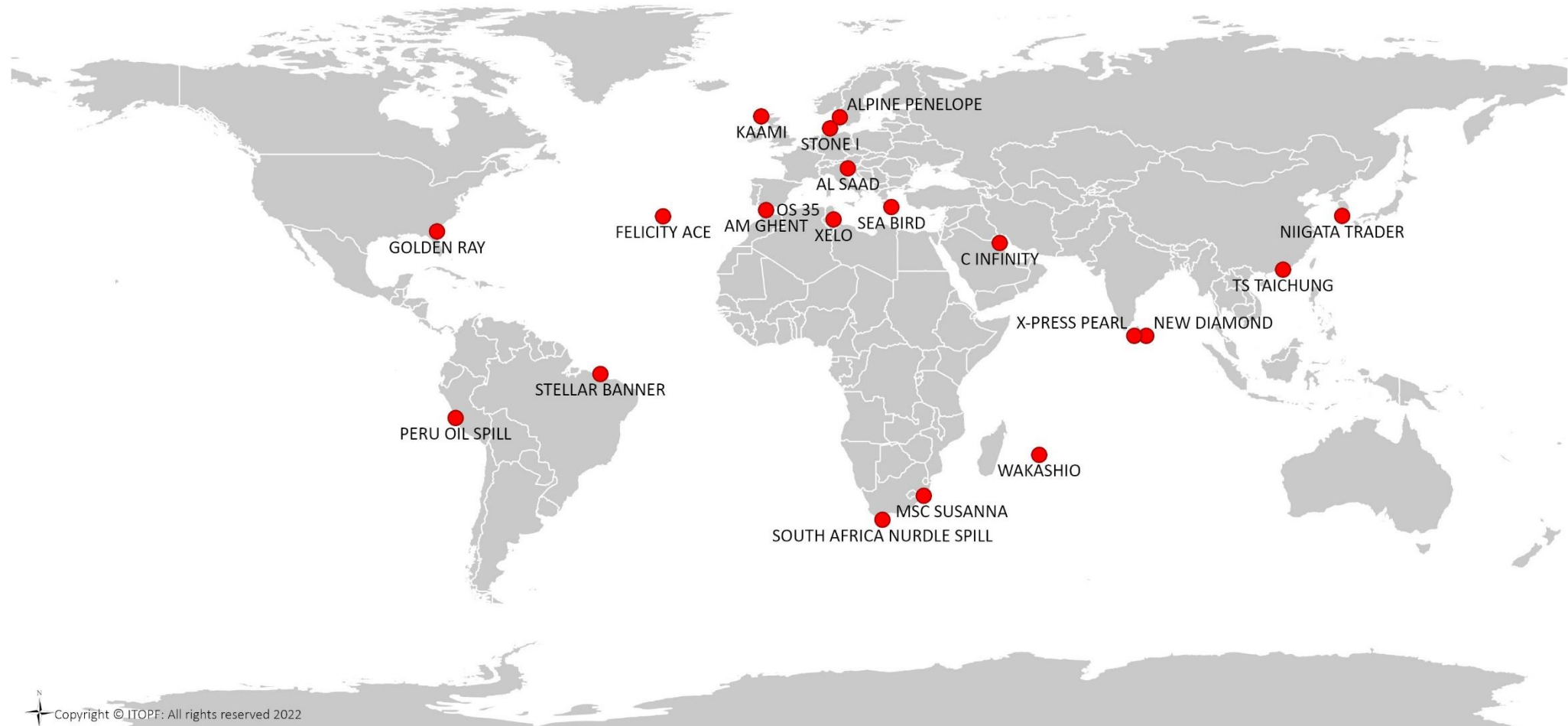


The COVID-19 years – Attended spills

19
incidents

in 16
countries

Extended
rotations,
quarantines,
restrictions



The COVID-19 years – Attended spills

19
incidents

in 16
countries

Extended
rotations,
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RISK

ASSESSMENT

OILS ROB: 255 M³ VLSFO & 50 M³ MGO



RISK

ASSESSMENT

OILS ROB: 255 M³ VLSFO & 50 M³ MGO



DG

Nitric acid

Sodium hydroxide

Methanol

Non-DG

Machinery

Household goods

Food

Nurdles





KEY FOCUS

Shoreline Clean-up

- Mitigating pollution damage
- Recommending techniques

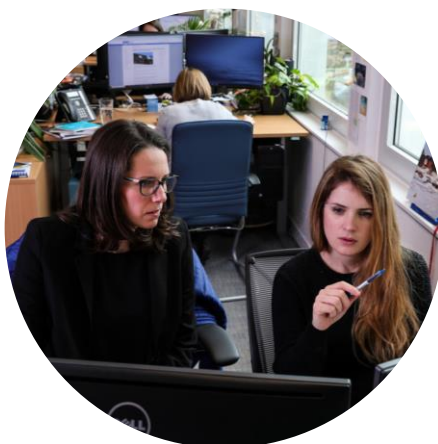


SPILL RESPONSE

ITOPF's Initial Actions

Notification

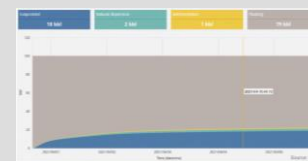
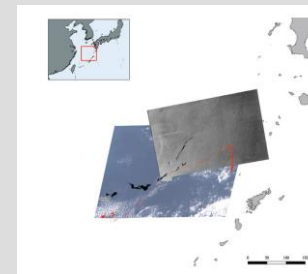
Typically via the vessel's P&I insurers, but can be through correspondents, surveyors, OSROs or national authorities.



Evaluation

Preliminary assessment of likely extent of the pollution, its probable behaviour, fate, potential impact and local level of preparedness

Mobilisation



COUNTRY & TERRITORY PROFILES
JAPAN

The Maritime Disaster Prevention Centre (MDPC) was established in response to oil spills and is funded jointly by government and industry. In addition to the 40 equipment bases established by MDPC, agreements for rapid response to spills have been made with a total of 142 private disaster response contractors in 83 ports. In the event of a major oil spill, coordination within the various government agencies will be established by the National Land Agency.

After notification of a major potential or actual spill, the JCG will dispatch vessels and aircraft to assess the situation. The ship's owner is required to take emergency on damage control measures and to clear up the spill. If the incident exceeds the capacity, JCG will request, either under the direction of JCG under direct contract to the owner.

ITOPF, through its member government, local and private sector organizations, have been established at ports & harbours and on a wider basis to provide contingency planning and to consider equipment requirements. The responsibility of these entities is responding. The Ports & Harbours Department of the Ministry of Transport is responsible for guidance on disposal.

The national contingency plans are under review as a result of the NANKOONDA incident.

RESPONSE POLICY

Japanese policy focuses on physical containment and recovery, anticipating that much of the spilled oil will be recovered with skimmers and rafts and the remainder recovered or disposed using sorbents and dispersants. The latter must be approved by JCG and their use is increasingly rare as the agreement of local fishermen's cooperatives is required. Actual application of dispersants is an option although very rarely undertaken. Recovery of oil is usually considered, although it may be seen from burning or rafting if it is reasonably free from contamination. Contaminated waste may be landfilled.

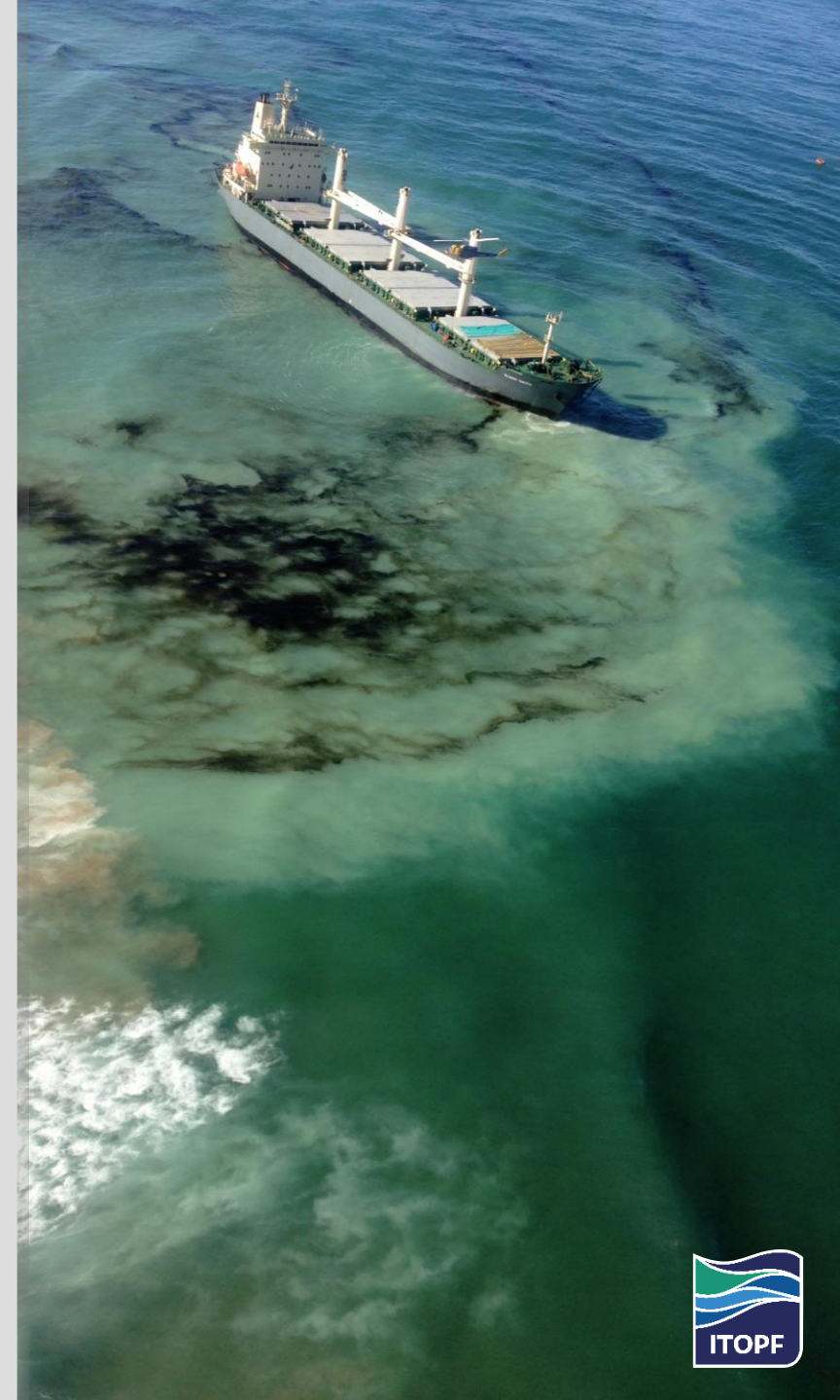
EQUIPMENT

Government

JCG maintains stocks of equipment and materials at its local offices, consisting of specialised vessels, boom, skimmer, recovery raft, dispersant and sorbents, which are normally intended for initial response. MDPC has oil recovery vessels stationed at 10 major oil ports and maintains a network of equipment and materials through a network of 30 commercial cleanup contractors around the coast and inland.

Private

By law, facilities receiving oil and tankers using Japanese ports or entering certain sea areas must maintain stocks of equipment and materials for combating spills. Much of this capability is expected to tankers by MDPC under contract, however the larger refineries have substantial stocks of boom and recovery vessels. The Petroleum Association of Japan (PAJ) has established an inventory of contaminated equipment, including boom, skimmer and temporary storage, at strategic locations around the coast which can be made available in the event of a major spill. It also has 3 other stockpile bases abroad.



REMOTE SENSING AND MODELLING

WAKASHIO

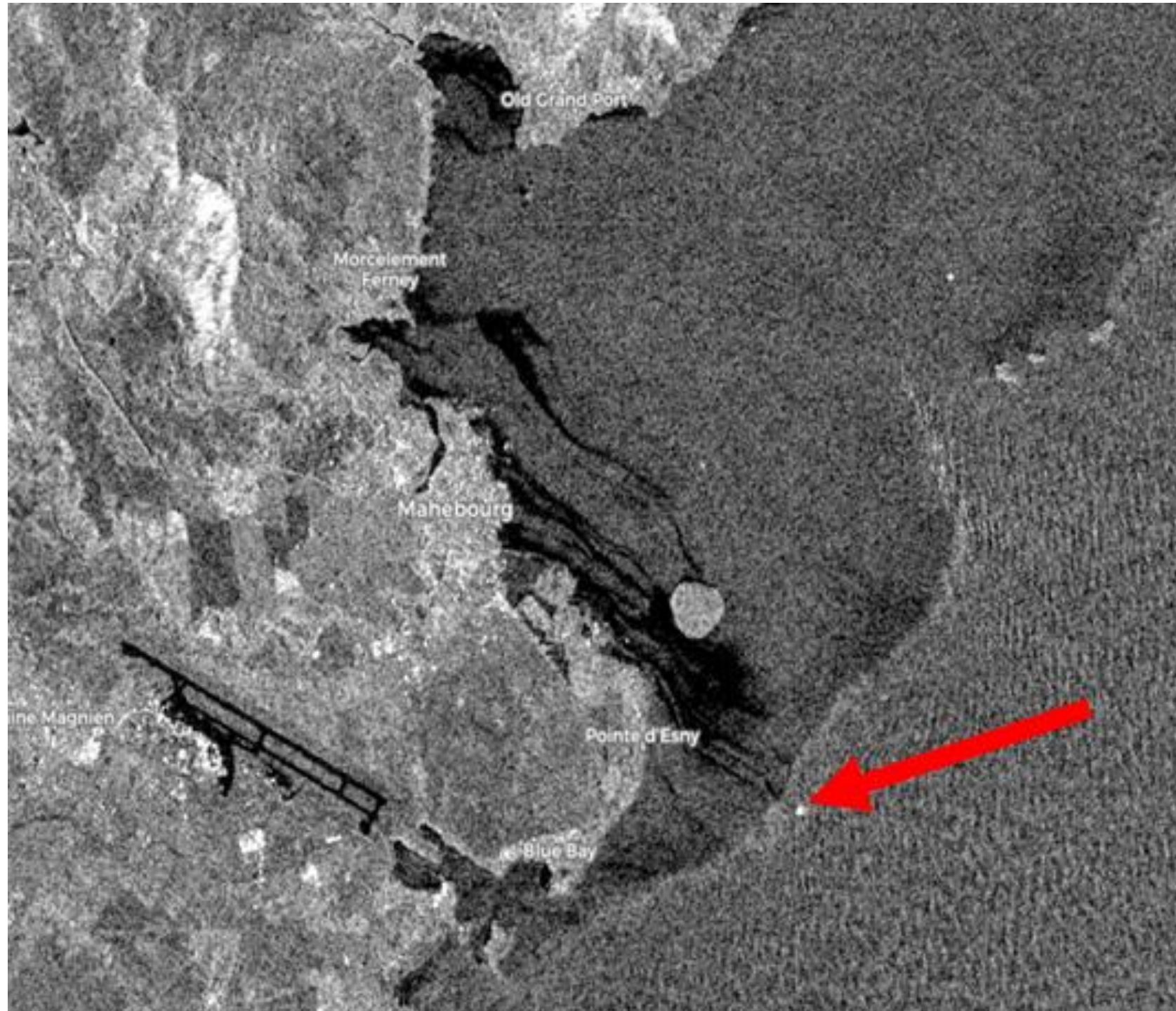
25 JULY 2020



REMOTE SENSING AND MODELLING

WAKASHIO

25 JULY 2020



WAKASHIO

25 JULY 2020



Source: MPF/PHS

ROLE ON-SITE SPILL RESPONSE



- Briefing from correspondent and/or surveyor
- Meet with lead authority and/or spill responders
- Conduct initial survey of affected area (ideally jointly)

ROLE ON-SITE

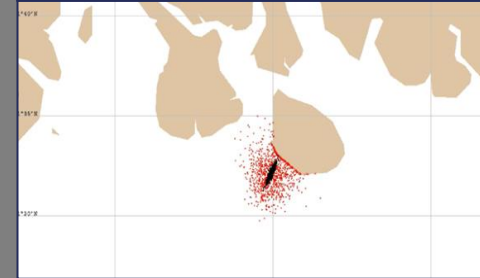
SPILL RESPONSE

- Provide impartial technical advice to government, responders & affected stakeholders
- Promote joint assessments & cooperation between all parties
- Monitor spill response & investigate damage to sensitive resources
- Arrange for additional expertise & equipment to be brought on site



ROLE VARIES DEPENDING ON THE INCIDENT
AND LEVEL OF IN-COUNTRY PREPAREDNESS

FATE & BEHAVIOUR MODELLING



SHORELINE & AT-SEA SURVEYS



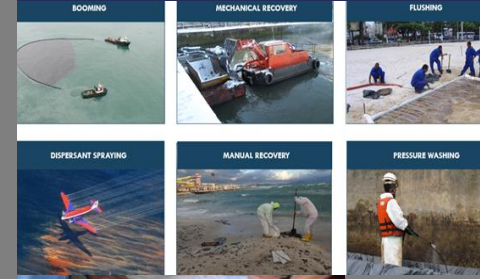
LIAISE WITH STAKEHOLDERS



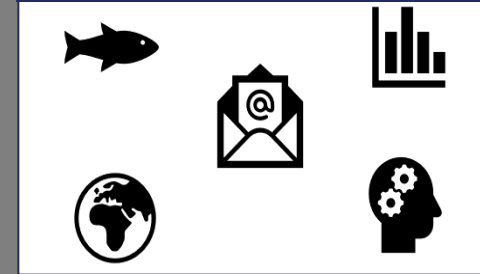
AERIAL SURVEILLANCE



ADVISE ON RESPONSE OPERATIONS



REPORTING



ROLE ON-SITE

Aerial Surveillance

Aerial surveillance offers **valuable information** critical to the early stages of a response:

- **Confirmation of the source of pollution**
- **What is being spilled?**
- **Where is the pollutant heading?**
- **What sensitivities may be at risk?**
- **How is the pollutant interacting with the shoreline?**
- **Are the response measures employed effective?**





Monitor & Evaluate



Containment & Recovery



Chemical Dispersion



In-situ Burning



AT-SEA RESPONSE

Technique toolbox

AT-SEA RESPONSE

SPILL RESPONSE

- Mitigating pollution damage
- Understanding limitations



AT-SEA RESPONSE

SPILL RESPONSE

- Mitigating pollution damage
- Understanding limitations



ROLE ON-SITE

AT-SEA SPILL RESPONSE

- Mitigating pollution damage
- Understanding limitations



Source: Polyeco



Source: Polyeco

WAKASHIO

25 JULY 2020



Source: MPF/PHS



Source: Polyeco

ROLE ON-SITE

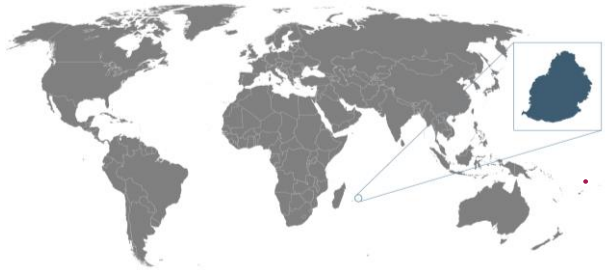
AT-SEA SPILL RESPONSE

- Mitigating pollution damage
- Understanding limitations



WAKASHIO

25 JULY 2020



AT-SEA RESPONSE

SPILL RESPONSE

- Mitigating pollution damage
- Understanding limitations
- Time and place
- Pros and cons



Shoreline Protection

Safety?

Access?

Season?

Technical viability?

Window of opportunity?

Equipment availability?

Amenity beach

Power Station

Port terminals

Fish farms

Nature reserve

Marina

- Shoreline surveys conducted to assess severity of **impact**, plan **response operations** and track progress/recovery.
- Ideally **conducted jointly** with **government authorities** to develop common strategy.

SHORELINE RESPONSE

Shoreline surveys

SHORELINE RESPONSE

Clean-up techniques

- Mitigating pollution damage
- Recommending techniques



SHORELINE RESPONSE

Clean-up techniques

- Mitigating pollution damage
- End Points
- How clean is clean



SHORELINE RESPONSE

Clean-up techniques

- Mitigating pollution damage
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ROLE ON-SITE

Shoreline clean-up techniques

- Mitigating pollution damage
- End Points
- How clean is clean



SHORELINE RESPONSE

Clean-up techniques

- Mitigating pollution damage
- More harm than good



CLAIMS ANALYSIS & DAMAGE ASSESSMENT

ITOPF is ideally placed to provide advice on the technical reasonableness of spill response costs, as well as damage caused by spills

- Aim is to encourage a **cooperative approach** to facilitate the prompt and amicable settlement of claims.
- **Objective** comments on **technical merits** of claims to **all parties**.
- ITOPF's support is regularly requested on the **four claim types** covered by the **international compensation regime**:



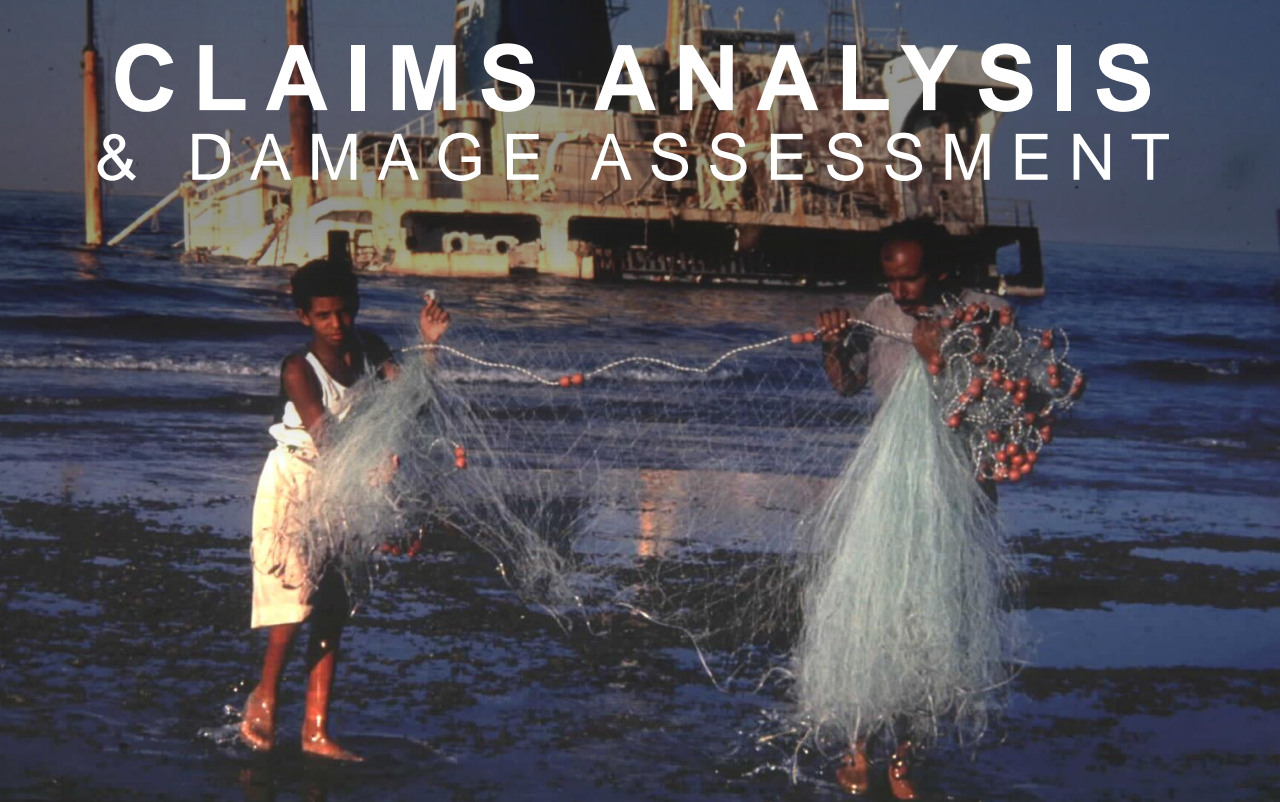
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Preventive measures

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Preventive measures

Property Damage

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Preventive measures

Economic loss

Property Damage



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Preventive measures

Economic loss

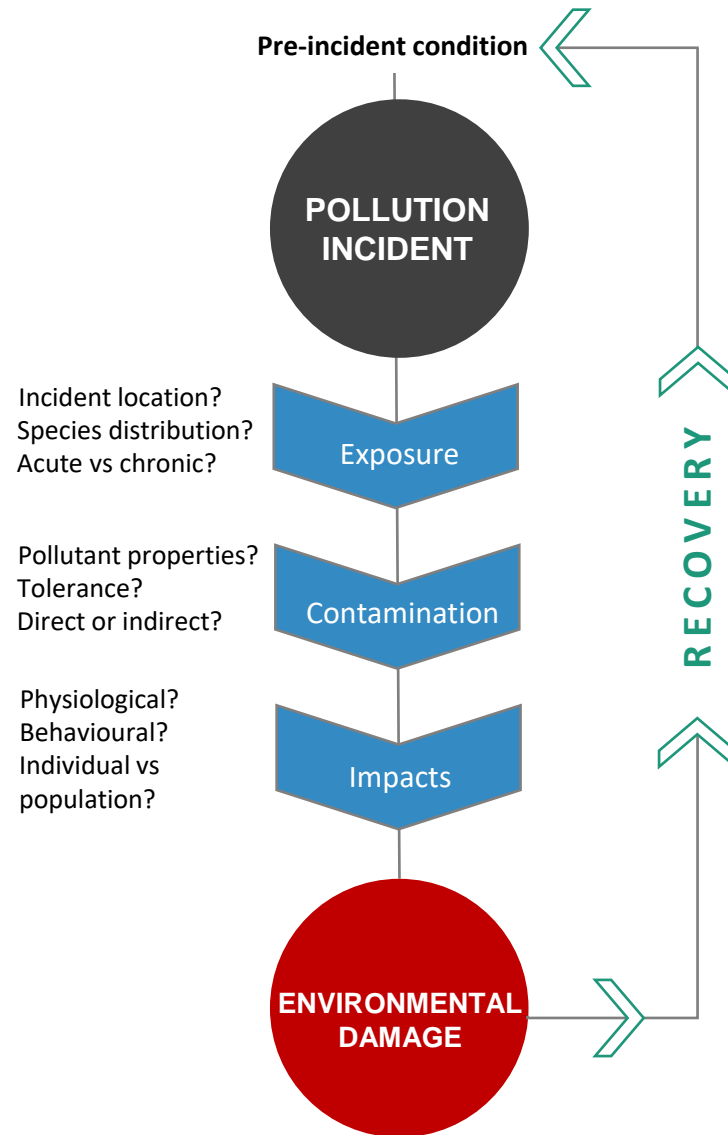
Property Damage

Environmental Damage





ENVIRONMENTAL MONITORING



- **Post spill** studies help determine **severity of impact** and **recovery**.
- **May include chemical** sampling and/or **biological** sampling.
- Studies must be **designed and scaled** according to circumstances.
- Studies inform the need for **restoration measures** to **accelerate recovery**.



SPILL RESPONSE



DAMAGE ASSESSMENT & CLAIMS ANALYSIS



CONTINGENCY PLANNING & ADVISORY



TRAINING & EDUCATION

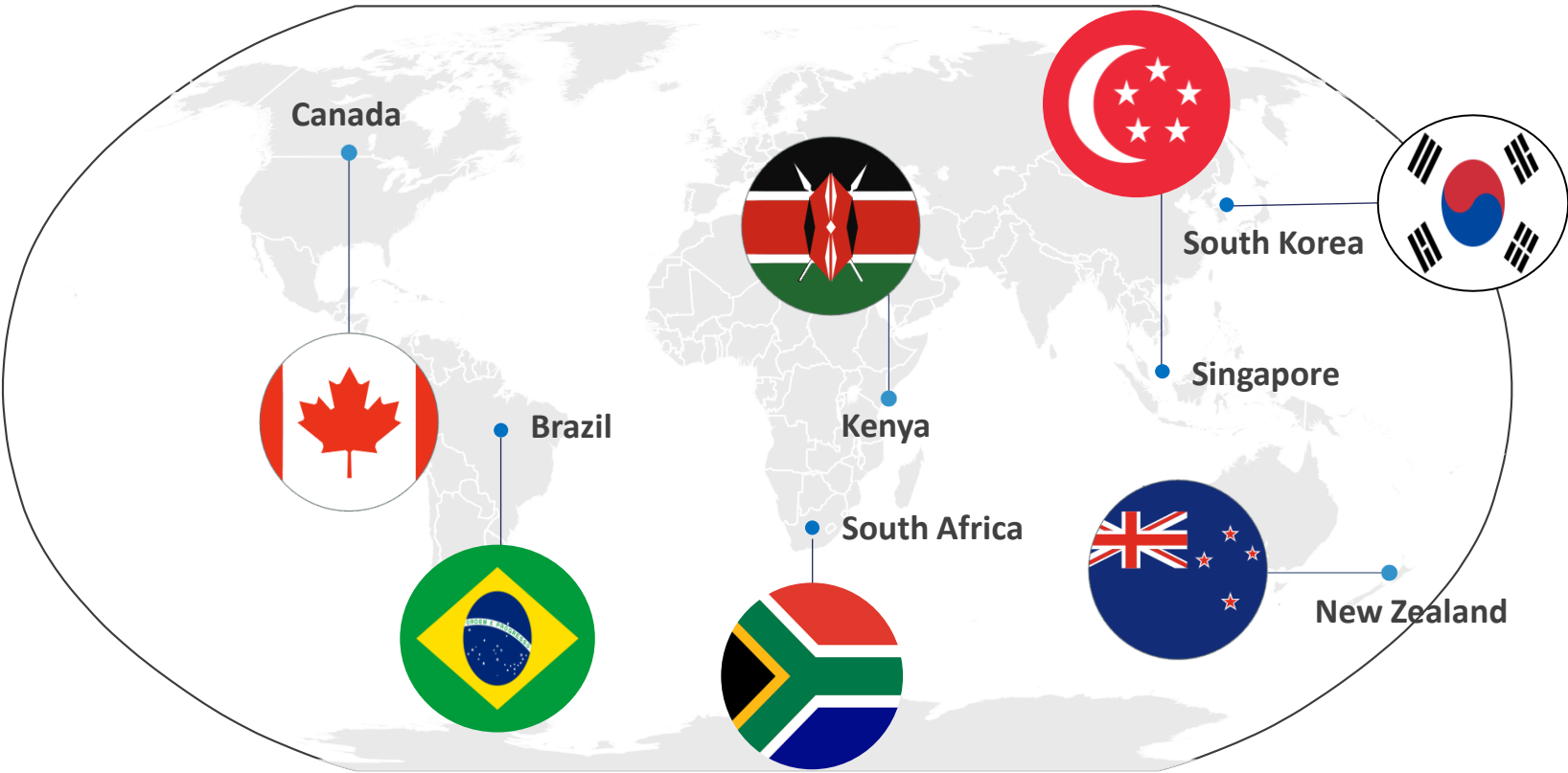


INFORMATION SERVICES



We regularly advise governments and industry on the preparation of contingency plans and other matters related to accidental pollution from ships.

RECENT CONTINGENCY AND ADVISORY PROJECTS:



CONTINGENCY PLANNING & ADVISORY WORK

40+



Projects since 2010

TRAINING & EDUCATION

IMO
Training Partner

230+



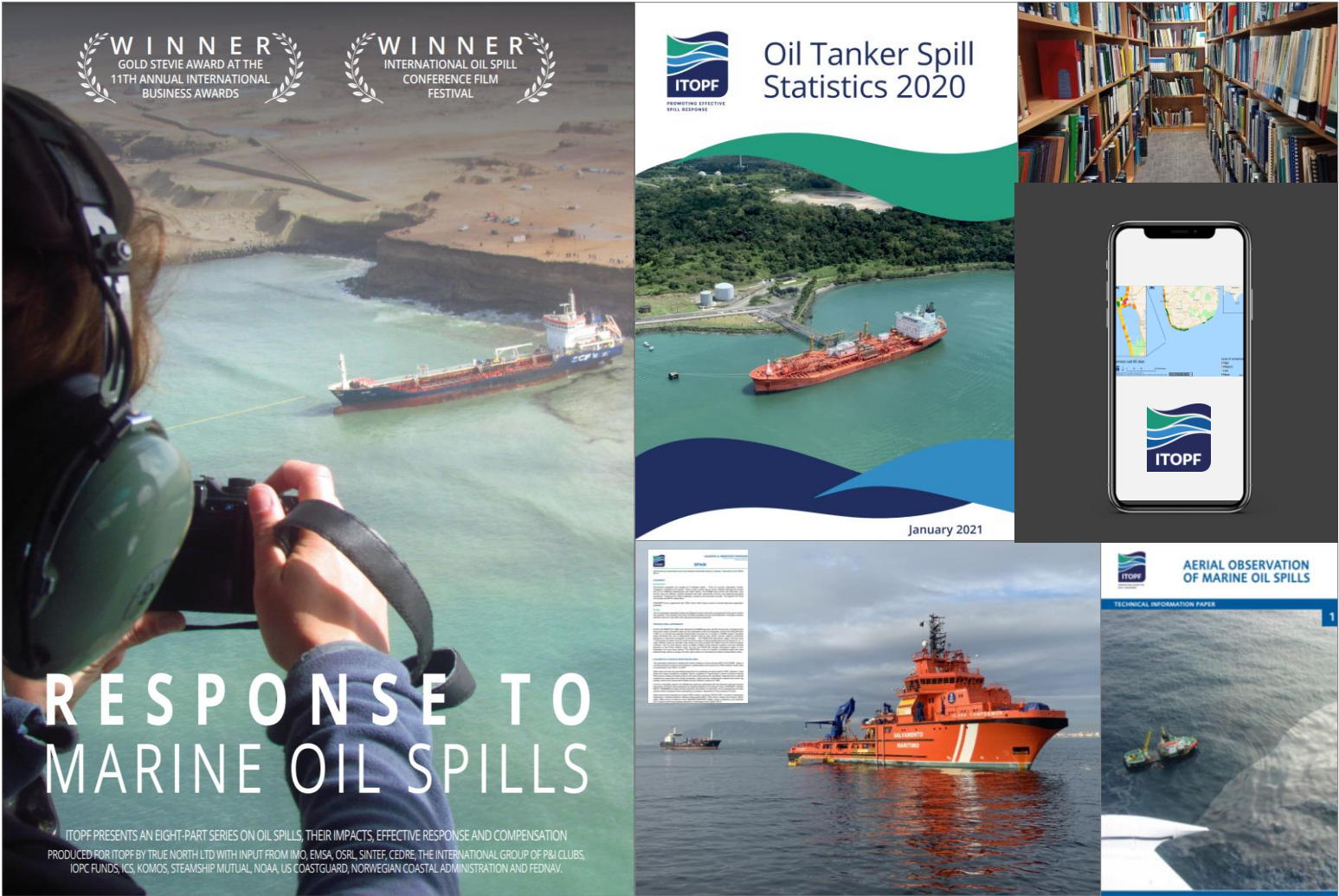
Training events
since 2015



We organise and participate in training courses, workshops and seminars for government & industry around the world.




We are a primary and trusted source of information on accidental ship-source pollution.



www.itopf.org

Richard Johnson – Technical Director

INFORMATION SERVICES

50 
Years of
tanker spill
statistics


Resources in
multiple
languages





Thank you

Richard H. Johnson Technical Director

MARINE POLLUTION INCIDENTS &
THE ROLE OF ITOPF

