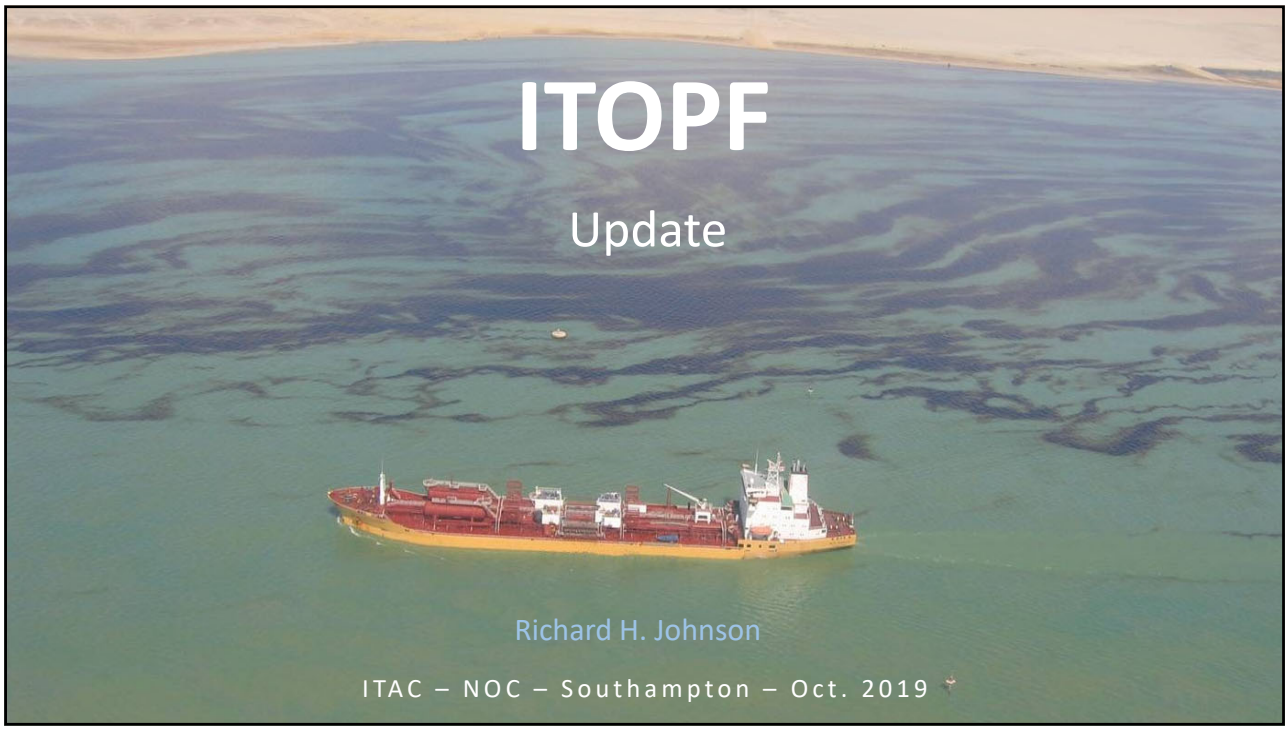


1

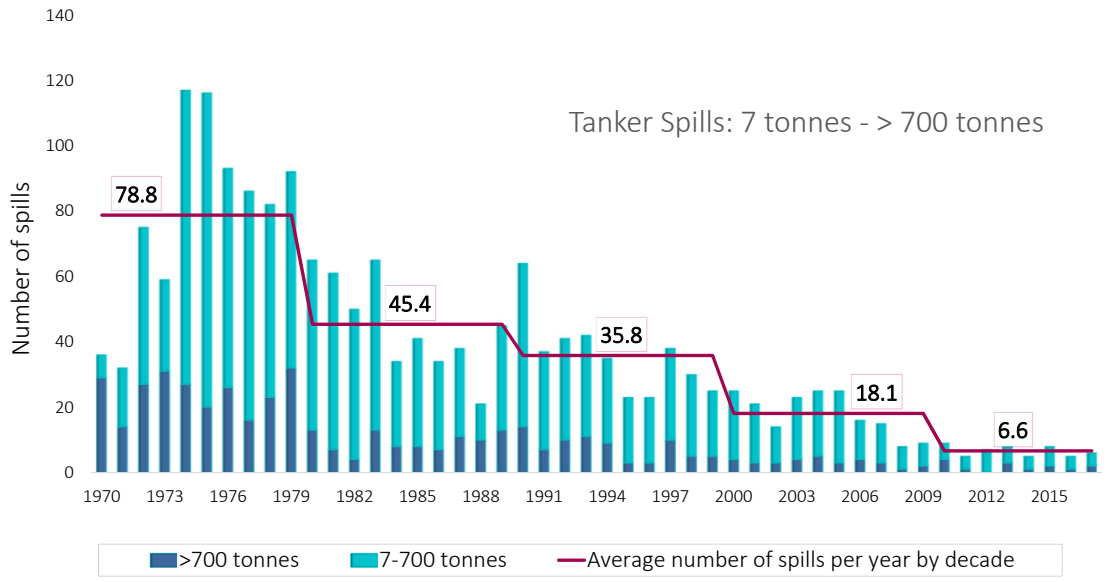
ITOPF
PROMOTING EFFECTIVE SPILL RESPONSE

Funded by Global Shipping Industry

To Promote Effective Response to Ship-Source Spills

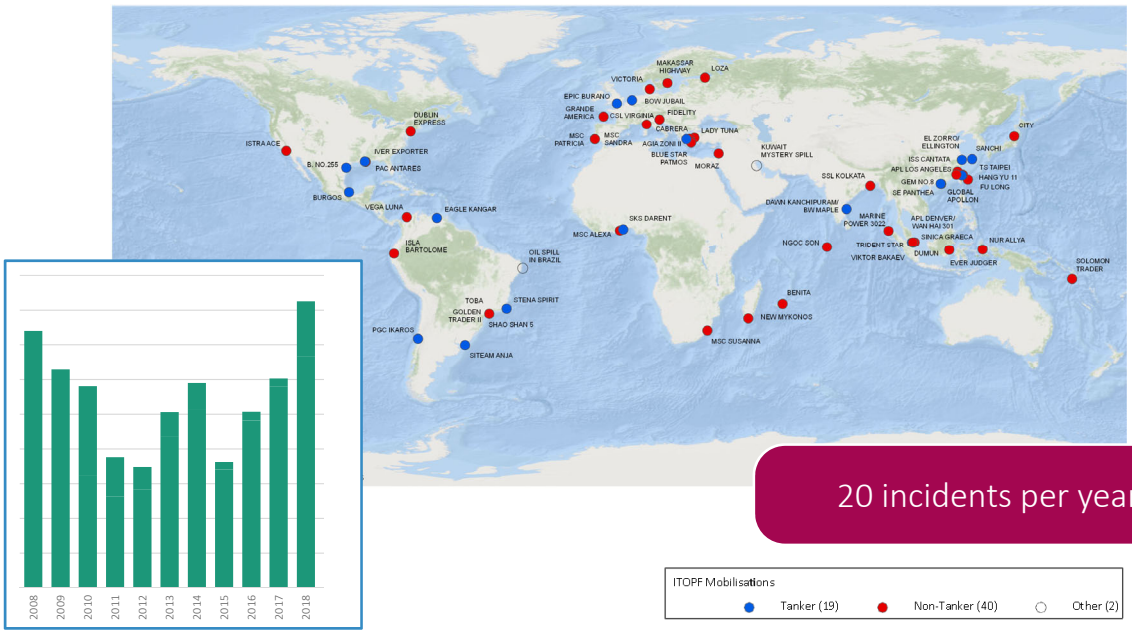
2

TANKER SPILLS



3

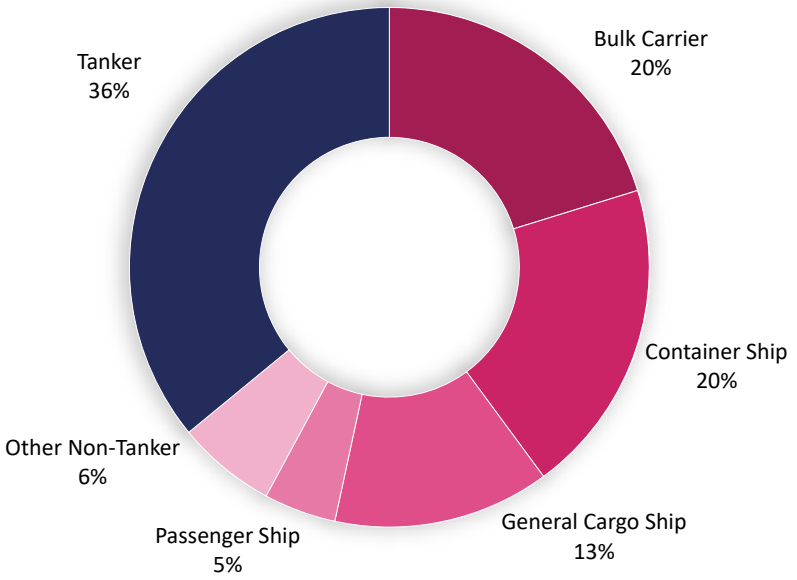
ITOPF Onsite Mobilisations (2016-2019)



20 incidents per year

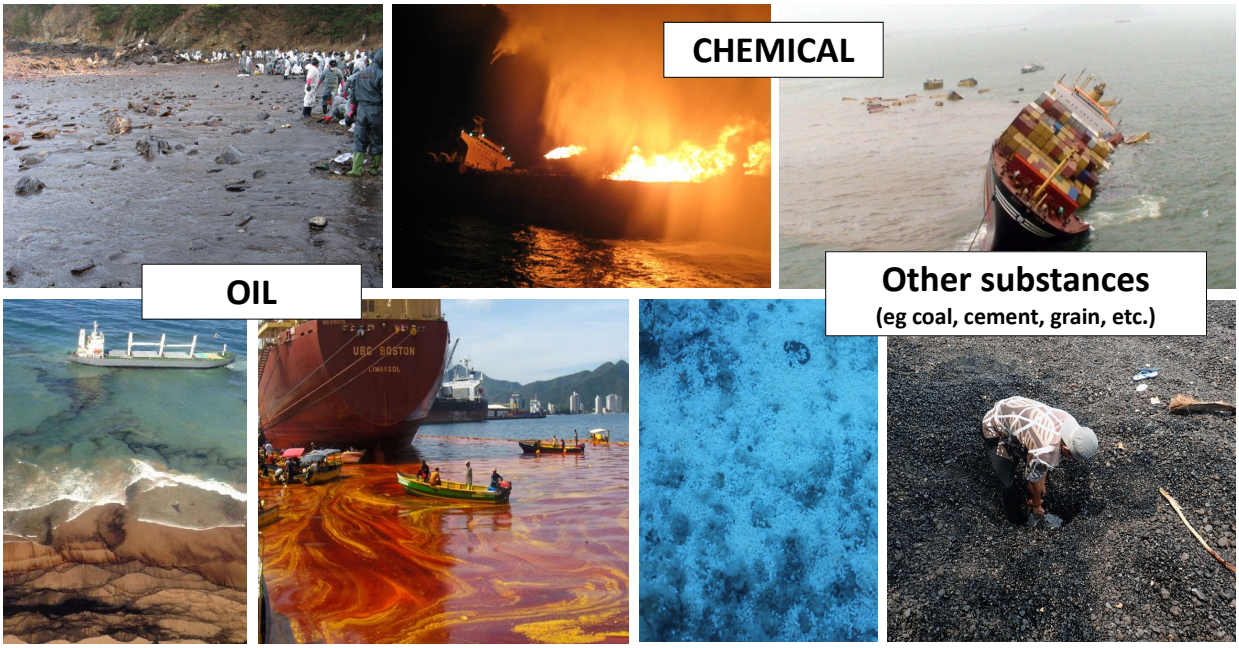
4

Vessel type (2010 - 2019)



5

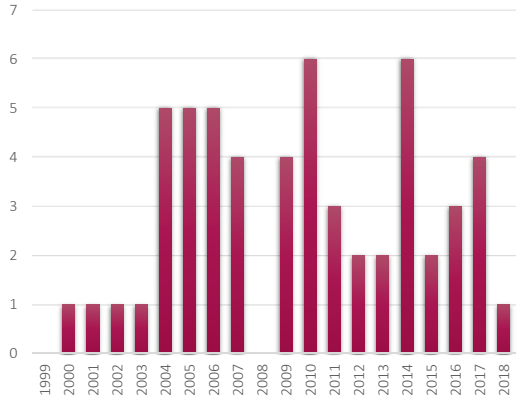
ITOPF Incident Attendance



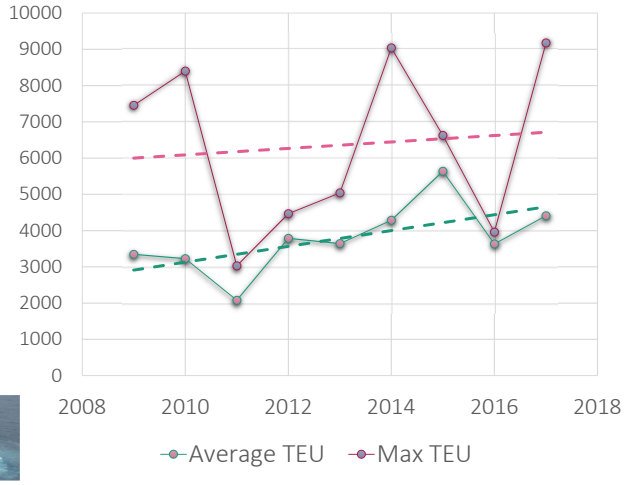
6

Containership Incidents: ITOPF Trends?

Number of containership incidents attended by ITOPF



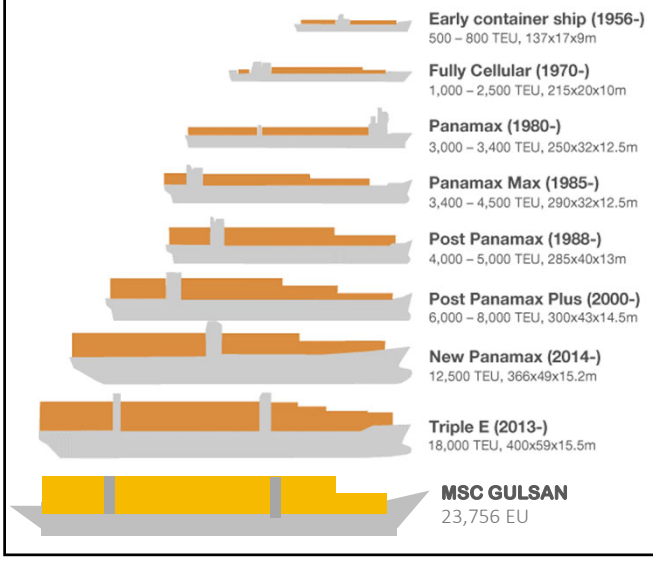
Average TEU capacity and highest TEU capacity for containership incident attended by ITOPF per year

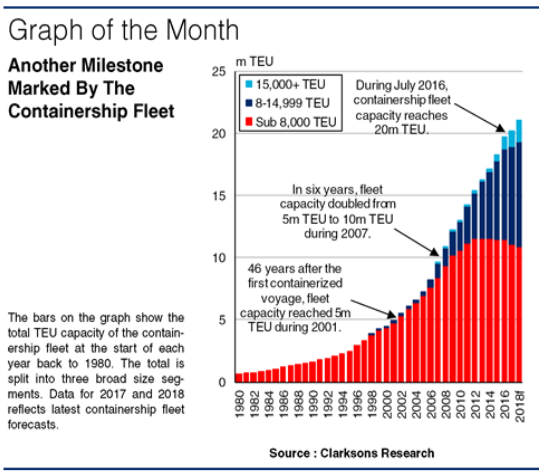


7

Growing Risks: Containership Complexity & Size

Container Ships





Lloyds: DG = 10-12% global container trade

8

Case Study – Nurdles in South Africa

9

Level of Contamination

10

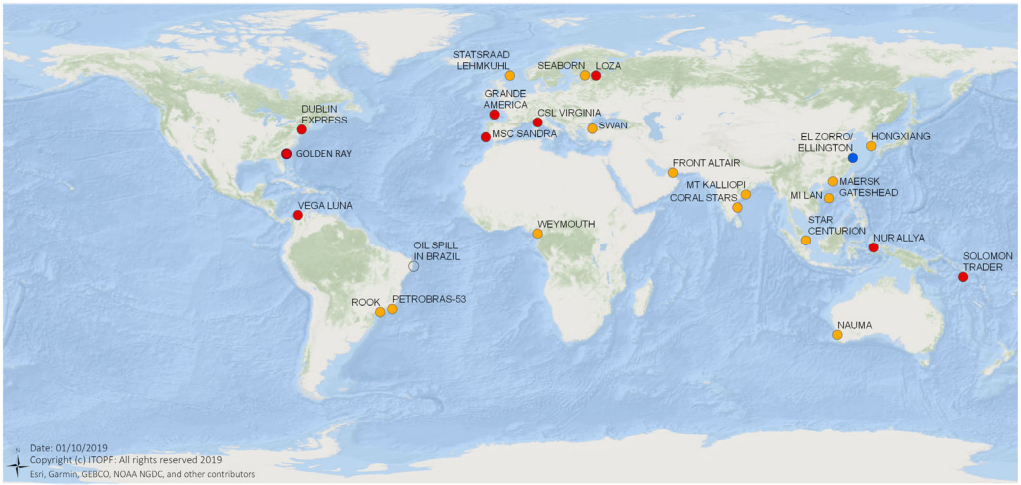
Shoreline Clean-up

11

ITOPF Onsite Mobilisations (Last 12 months)

12

ITOPF Mobilisations (Last 12 months)



13

STOLT GROENLAND - fire/explosion, Ulsan, South Korea 28/9/19

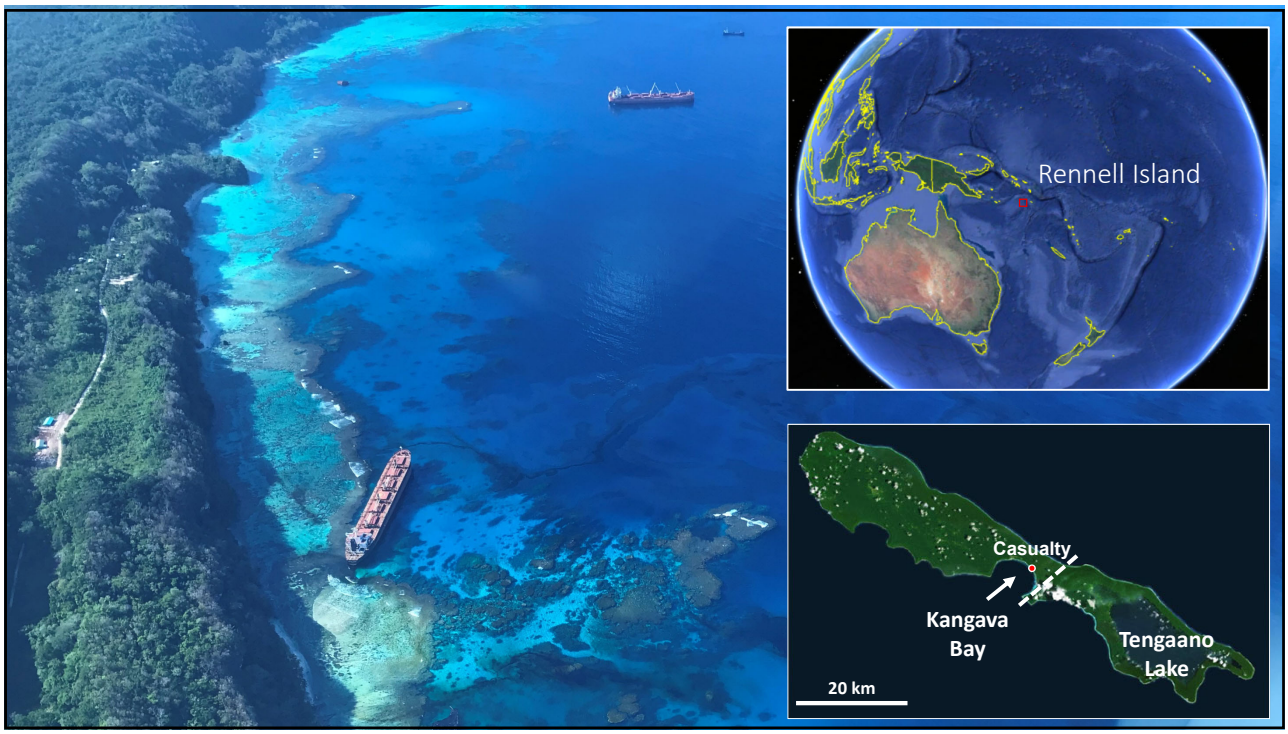
Reuters

- Remote advice
- Variety of chemical cargoes (12+)
  - Polymerising styrene
  - Acrylnitrile
- Fate and behaviour
- No pollution to date

14

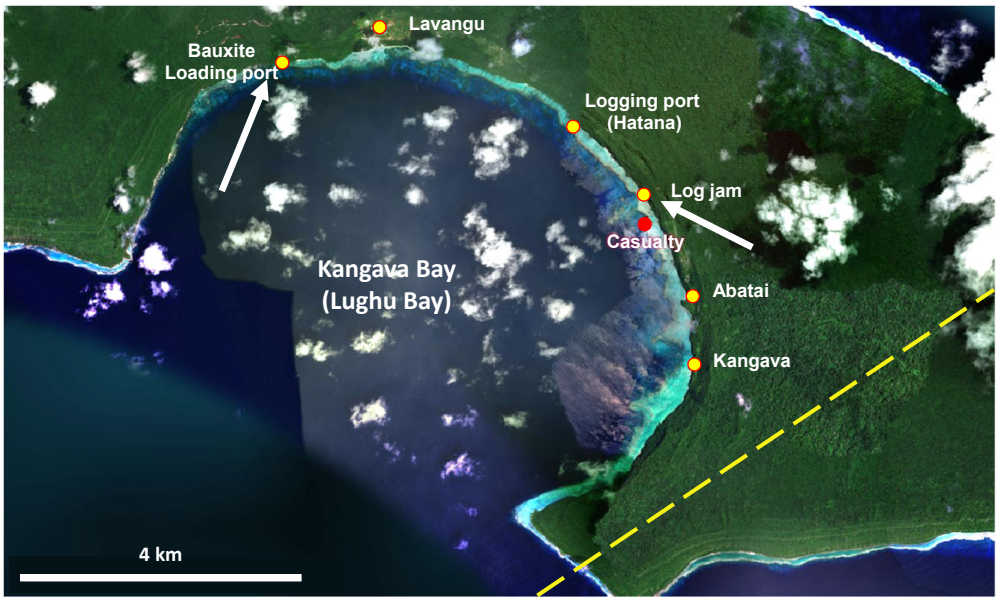
SOLOMON TRADER
05.02.2019

15


Rennell Island
Casualty
Kangava
Bay
Tengaano
Lake
20 km

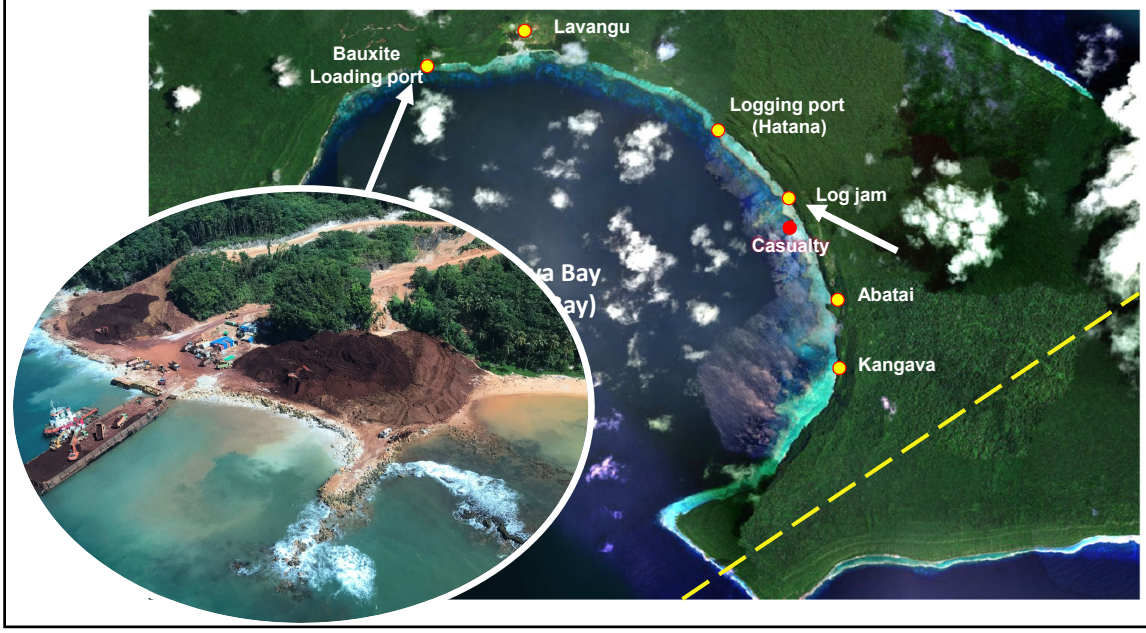
16

Location of the Incident – Kangava Bay



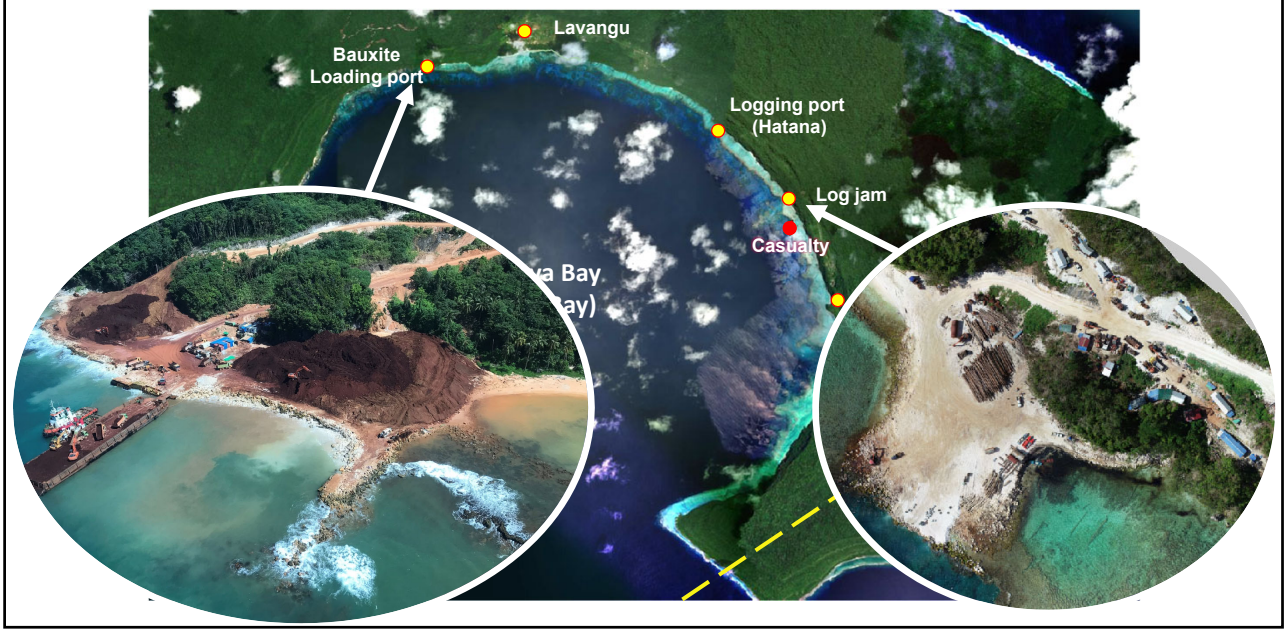
17

Location of the Incident – Kangava Bay



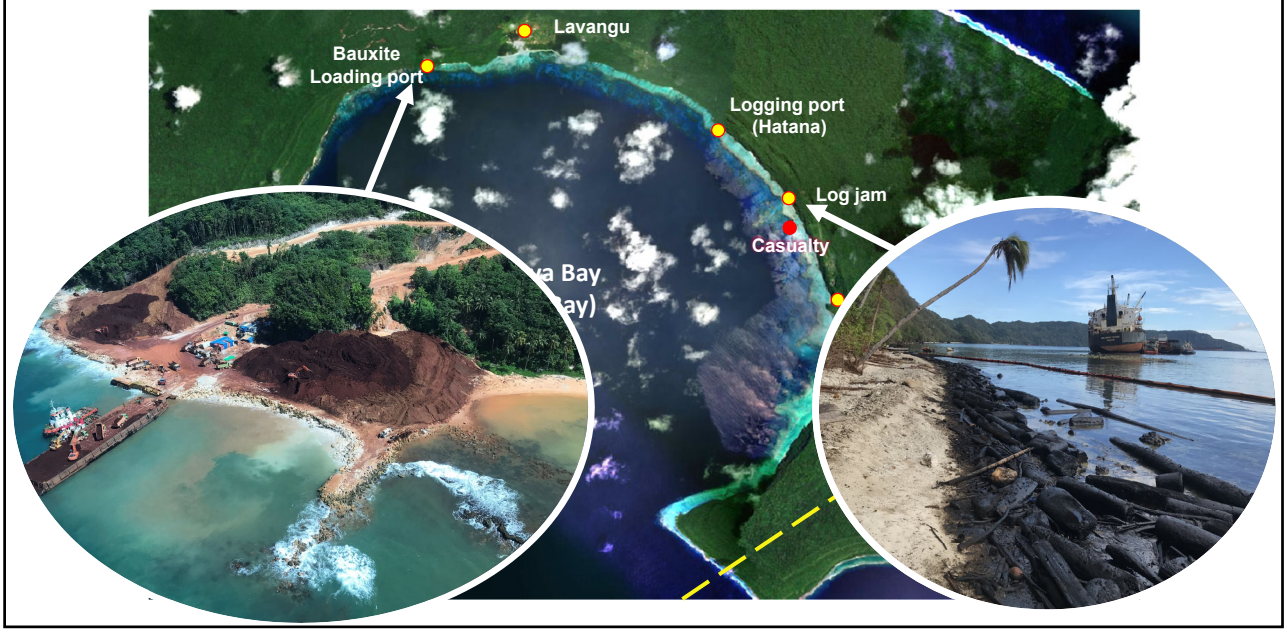
18

Location of the Incident – Kangava Bay



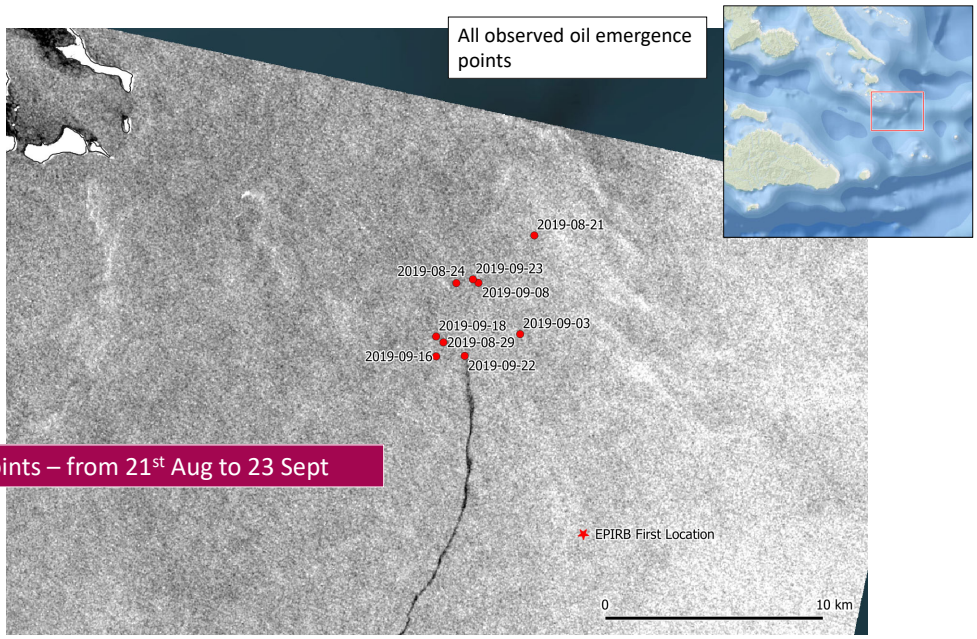
19

Location of the Incident – Kangava Bay



20

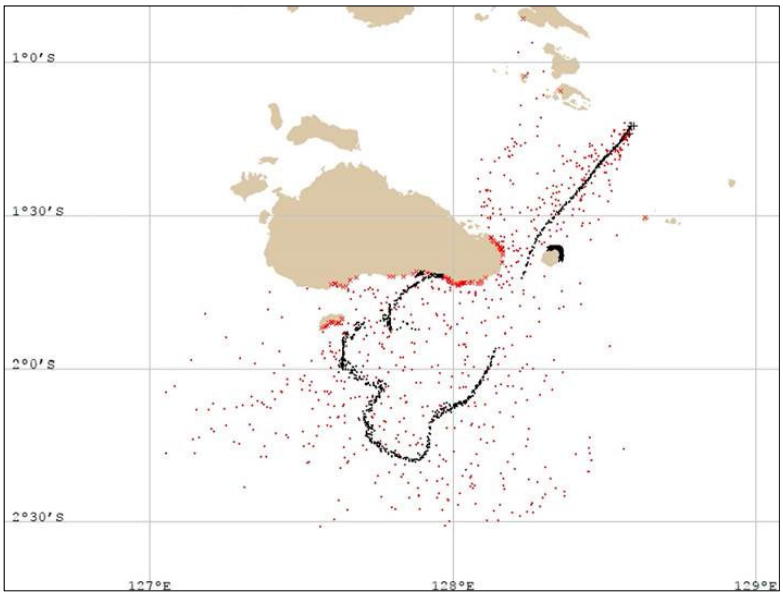
Incident in Indonesia – attendance Sept 2019



Emerging oil points – from 21st Aug to 23 Sept

21

Incident in Indonesia – attendance Sept 2019



22

Incident in Indonesia – attendance Sept 2019

23

Incident in Indonesia – attendance Sept 2019

24

CSL VIRGINA – Collision, North Corsica, 7th Oct. 2018

- Collison - CSL VIRGINIA and ULYSSE on 7th Oct. 2018
- CSL VIRGINIA was at anchor 15 NM off northern Corsica
- Passenger ferry lodged at 90° amidship CSL VIRGINIA after colliding at 19 knots
- Bunker tank # 3 breached
- 550 MT of bunker fuel (IFO 380) lost at sea

25

At-sea Response

- Joint response by Italian and French authorities
- Response lasted for 20 days
  - Emergency Tow Vessels and skimmers
  - Small vessels for nearshore recovery (trawl nets/scoops)
- 34 vessels and 11 aircraft used during the response
  - Including EMSA vessel BREZZAMARE
- Poor weather impeded at-sea operations

Plan RamogePol

26

At-sea Response

- Joint response by Italian and French authorities using Le Plan RamogePol
- Response lasted for 20 days
  - Emergency Tow Vessels and skimmers
  - Small vessels for nearshore recovery (trawl nets/scoops)
- 34 vessels and 11 aircraft used during the response
  - Including EMSA vessel BREZZAMARE
- Poor weather impeded at-sea operations

27

Extent of Contamination

- Oil stranded after 9 days
- ≈370 km coastline affected along the south of France
- Ranging from moderate to extensive contamination
- ~35 km of Gulf of St. Tropez severely impacted
- Sensitive coastline
- Amenity beaches, coastal infrastructure and rocky shores

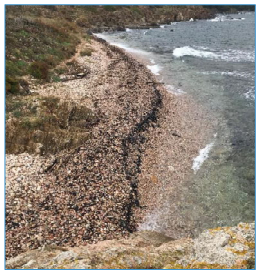
28

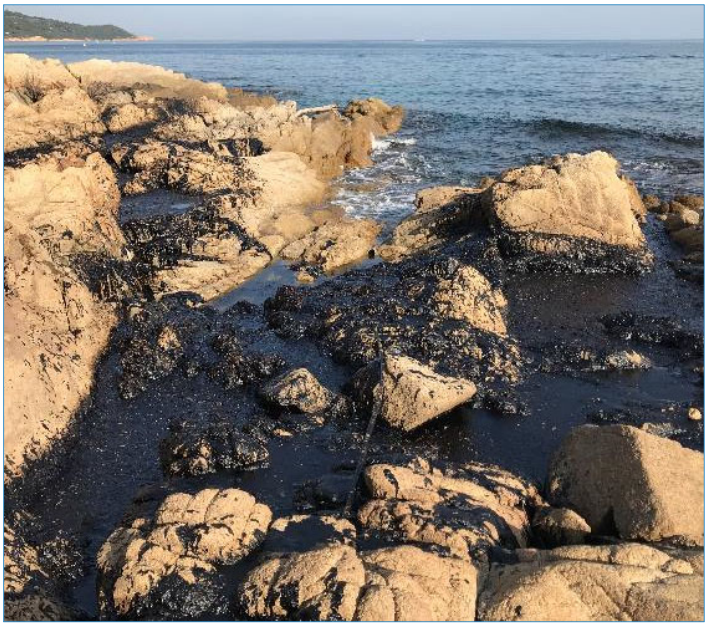
Shoreline Contamination – Beaches

- Highly dynamic sediment shores resulted in buried oil
- High density of drift wood and endemic sea grass species, *Posidonia oceanica*
- Large quantities of oiled waste

29

Shoreline Contamination – Rocky Shore





- Long lengths of rocky outcrops and rock pools
- Trapped oil at low tide, remobilised during high tides
- Eventually reaching sandy or pebble beaches, where is would be buried and mix with debris
- Limited accessibility to many contaminated areas

30

Shoreline Response Techniques

Beaches:

- Sounding for buried oil
- Manual and mechanical removal oil

Rocky Shore:

- Manual collection
- Scraping and brushing
- High pressure washing
- Flushing

31

Shoreline Response Techniques

Beaches:

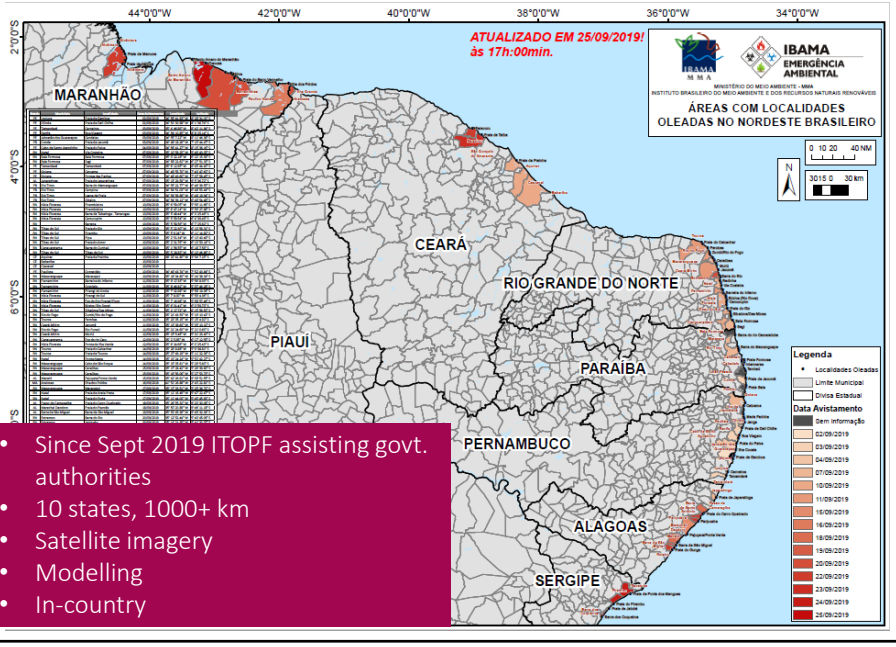
- Sounding for buried oil
- Manual and mechanical removal oil

Rocky Shore:

- Manual collection
- Scraping and brushing
- High pressure washing
- Flushing

32

Unattributable Spill in Brazil

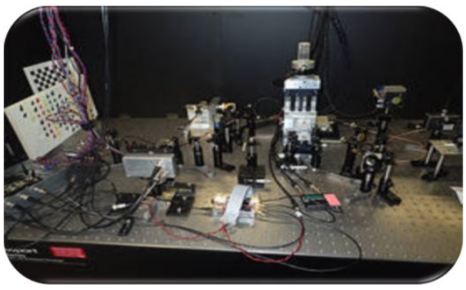


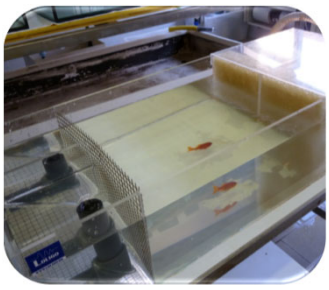
- Since Sept 2019 ITOPF assisting govt. authorities
- 10 states, 1000+ km
- Satellite imagery
- Modelling
- In-country

33

ITOPF R&D Award

A Shipping Industry Initiative to Support Research and Development





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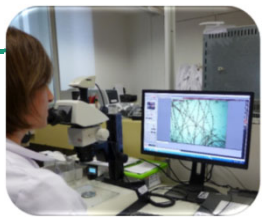
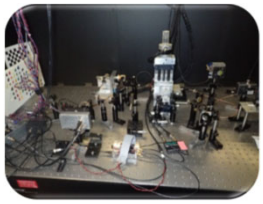
ITOPF R&D Award



To encourage organisations worldwide to provide innovative but realistic solutions to some of the challenges faced in spill response and environmental monitoring

- Each year up to £50K available to fund R&D projects
- Initiated in 2012. Eight successful winners
- To date £400K has been used to fund research
- Deadline for 2020 ITOPF R&D Award: 30th Nov. 2019



35

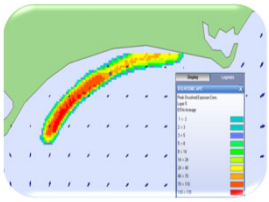
ITOPF R&D Award

WHO CAN QUALIFY?

Any R&D establishment or other organisation worldwide funding a candidate (individual or project team) to undertake research.

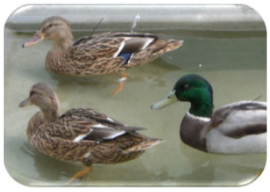
FIVE CRITERIA

- Relevance to the marine environment
- Relevance to shipping
- Amount of R&D within the project
- Originality
- Experience of the institution/Confidence that the project will be completed, on time

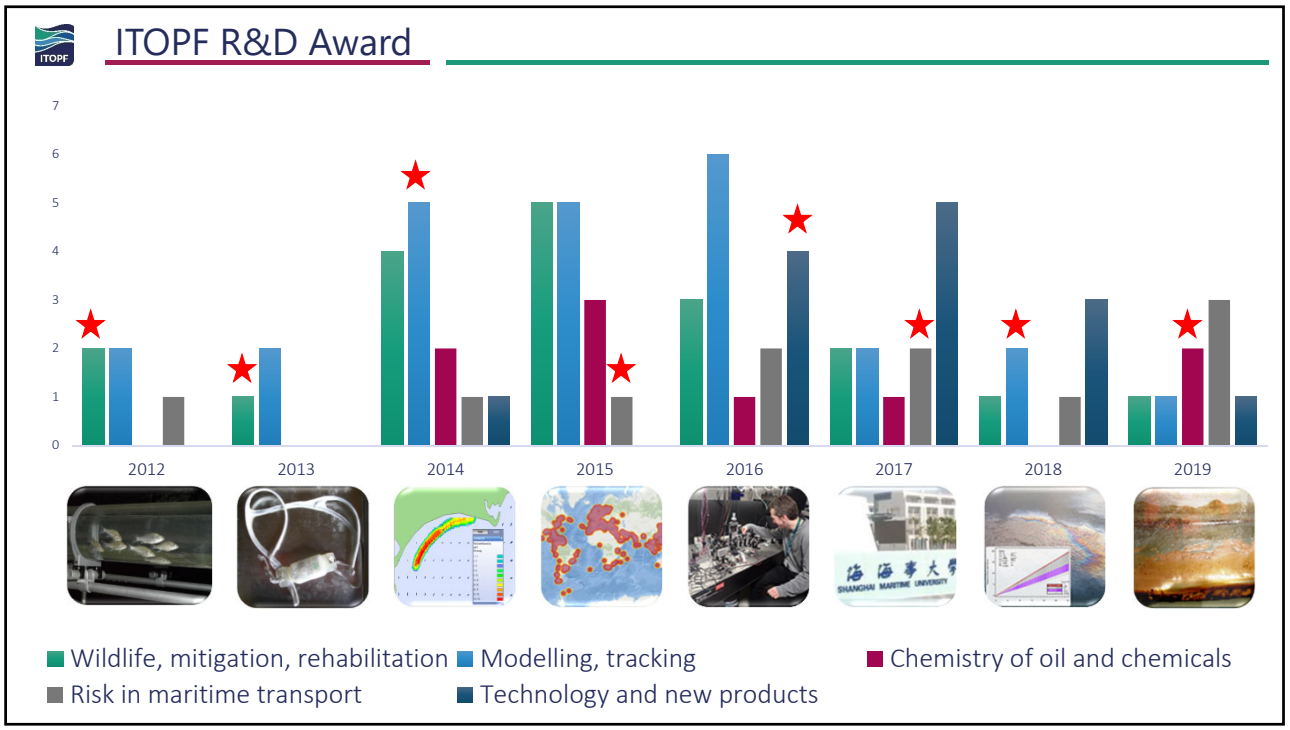


ITOPF R&D AWARD COMMITTEE

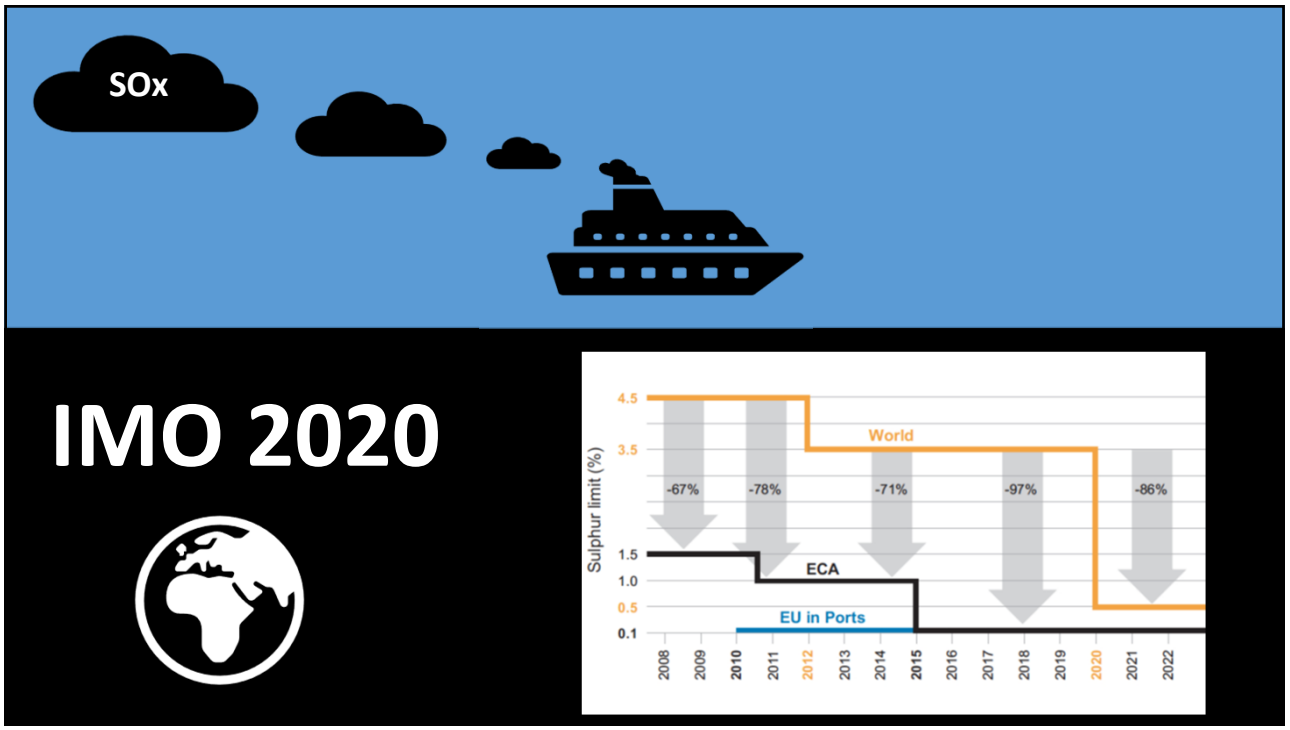
- Chair
- Two ITOPF staff
- Two well-respected external and independent members of the scientific community (IMO and EMSA)



36


ITOPF R&D Award
7
6
5
4
3
2
1
0
2012
2013
2014
2015
2016
2017
2018
2019
Wildlife, mitigation, rehabilitation
Modelling, tracking
Chemistry of oil and chemicals
Risk in maritime transport
Technology and new products

37


SOx
IMO 2020
Sulphur limit (%)
4.5
3.5
1.5
1.0
0.5
0.1
World
ECA
EU in Ports
-67%
-78%
-71%
-97%
-86%
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

38

IMO 2020

Location		Sulphur Limit	
Emission Control Area (ECA)	2015	0.1%	ULSFO
Global	2020	0.5%	VLSFO

39

2019 R&D AWARD WINNER - SINTEF

CHARACTERISATION OF LOW SULPHUR FUEL OILS (LSFO) – A NEW GENERATION OF MARINE FUEL OILS

- SINTEF is a private "non-profit" organisation, the Scandinavia's largest independent research organisation.
- Funded by ITOPF, the Canadian "Multi-Partner Oil Spill Research Initiative program" (MPRI) and the Norwegian Coastal Administration (NCA).

AIMS & OBJECTIVES

- New regulations for lower limits in sulphur-content in fuel oils
- New generation of LSFO marine fuels are now replacing the traditional bunker fuels
- Global and Sulphur Emission Control Areas (SECA) in Europe and North-America.
- NCA & SINTEF began investigating weathering properties of these fuel types in 2015.

CURRENT STATUS

The oil sample collection is ongoing.

- Chevron VLSFO 0.5% Singapore
  → received & tested
- Shell VLSFO 0.5% (Rotterdam)
  → offered
- BP VLSFO/ULSFO
  → not in production until Q3 2019
- Canadian Oil
  → pending

40

ITOPF

Richard H. Johnson
Technical Director

1. NOT FOR PROFIT
2. SHIPPING INDUSTRY FUNDED
3. PROMOTE EFFECTIVE SPILL RESPONSE
4. OBJECTIVE TECHNICAL ADVICE ON SITE
5. FIVE CORE SERVICES

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