



Strategy and Preparedness in Spill Response

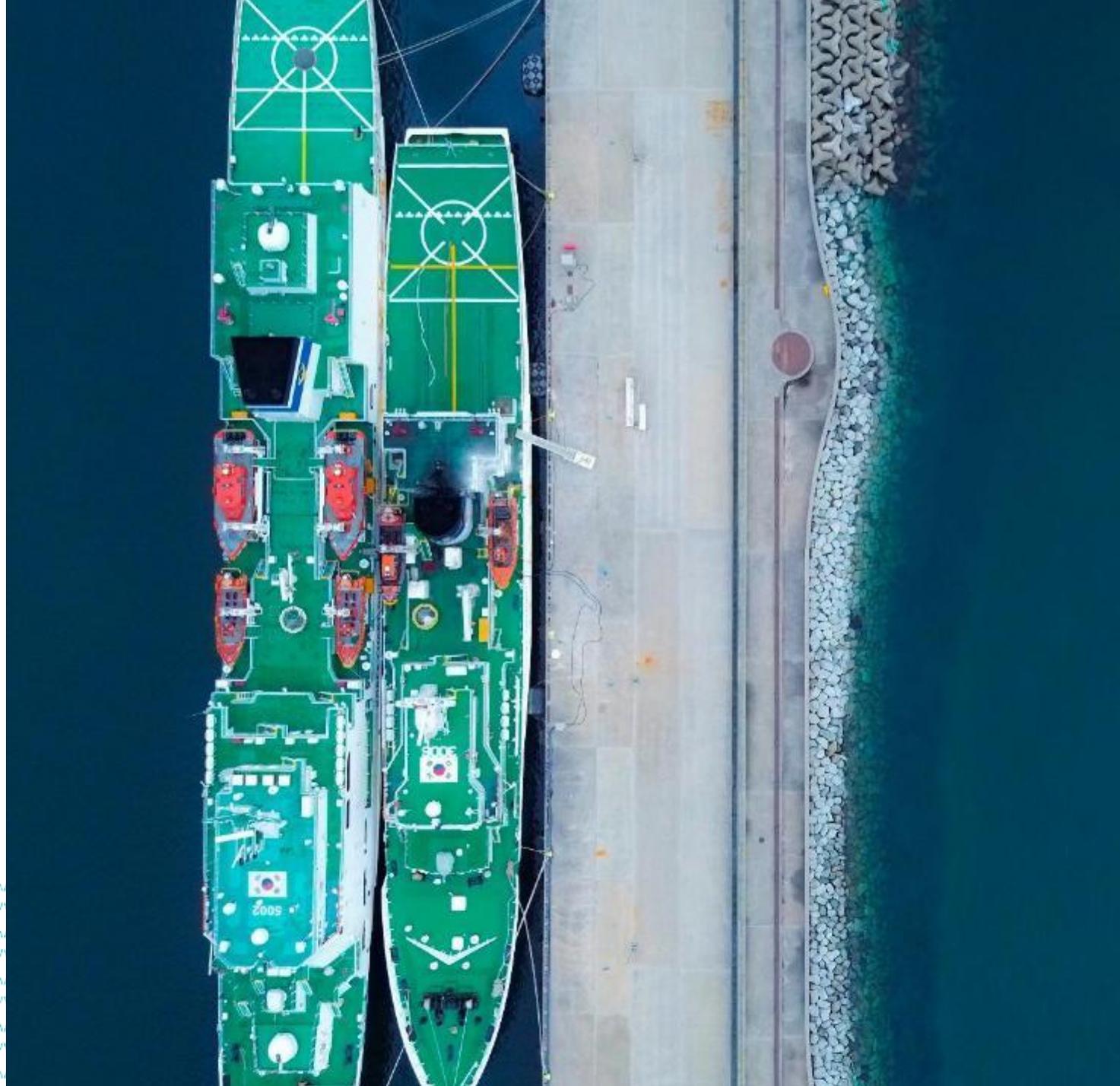
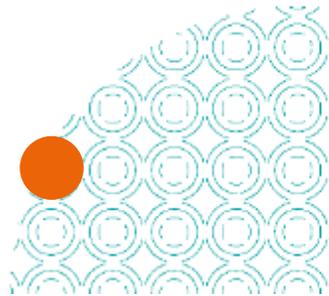
Minimizing Environmental Effects From Alternative Marine Fuel Spills

Why This Conversation Matters Now

Energy transition accelerating

Expectations rising

Consequences increasing

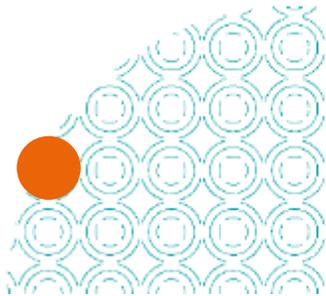


Spill Response at the Centre of Change

Traditional assumptions are being challenged

Get ahead of the curve

Risks changes its form

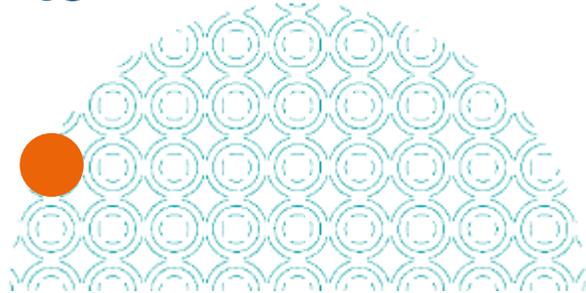


OSRL as a Cooperative

Member-owned,
response cooperative

Preparedness and
response focus

Adapting expertise to
decarbonization



Why the Cooperative Model Matters

Shared risk

Shared learning

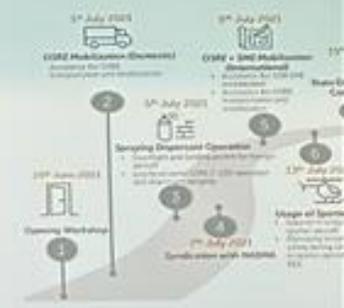
Shared confidence



Regional Case Studies: Malaysia Thailand

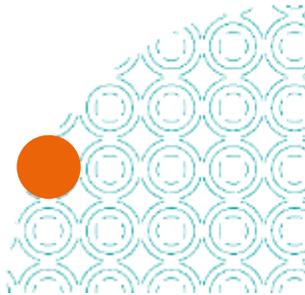
Malaysia

- Multi-stakeholder workshop involving key Malaysian government agencies, industry stakeholders and response organizations
- Led by PETRONAS
- Objective
 - Bridge the response between industry and government agencies for oil spill incidents in Malaysian waters
 - Identify government agencies' support required



OSRL Strategy – Three Pillars

Our strategy
Engage | Prepare | Respond

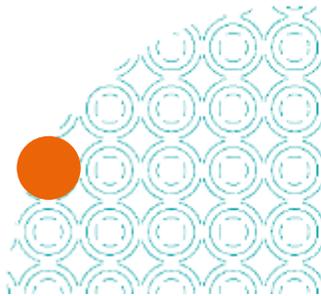


Parallel Fuels Are the New Reality

Conventional fuels

Low-sulphur fuels

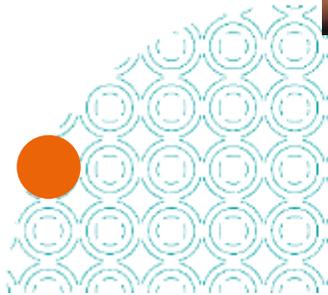
Alternative fuels



Complexity Is a Strategic Risk

Uncertainty increases

Quality decisions matter

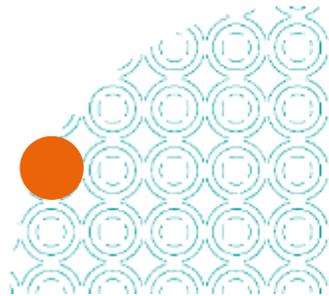


Decision-Making Under Uncertainty

Incomplete information

Time pressure

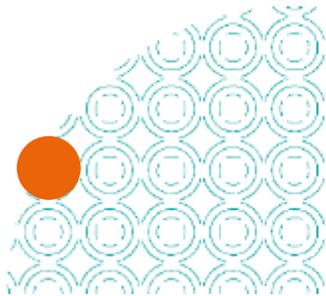
High consequence



Evidence from IMAROS

Fuel behaviour differs

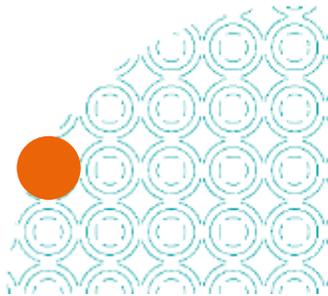
Legacy assumptions
challenged



Legacy Fuels Still Dominate

VLSFO / ULSFO remain central

Long-term impacts persist



Overlap Is the Real Challenge

Old risks and new uncertainties

Same people, same systems



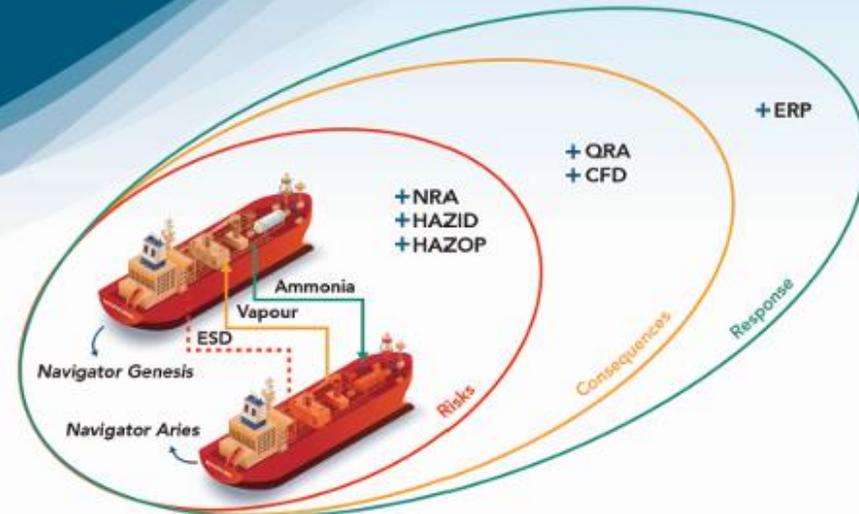
Evidence from GCMD Ammonia Work

Conditional safety

Preparedness enables
operations

Vessel-, location- and operations-specific safety assessments for a ship-to-ship ammonia transfer in Singapore's port waters

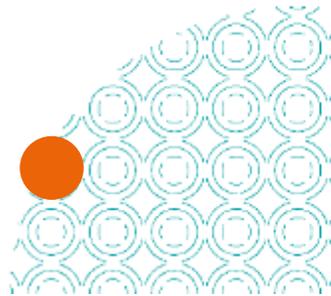
GCMD | reports



Regulatory Lag Is Normal

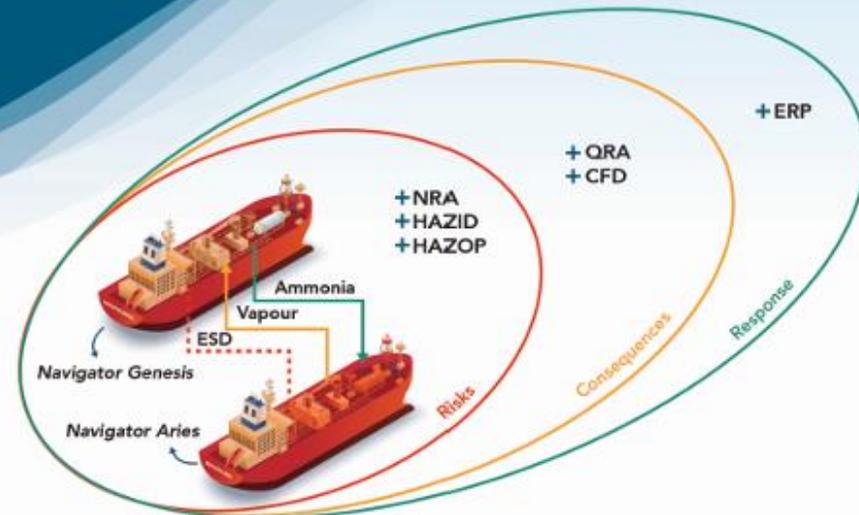
Innovation faster than regulation

Leadership fills the gap



Vessel-, location- and operations-specific safety assessments for a ship-to-ship ammonia transfer in Singapore's port waters

GCMD | reports

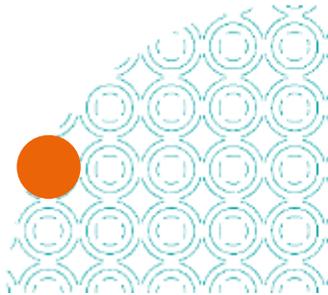


Collaboration Is the Enabler

Shared cost

Shared credibility

Shared resilience

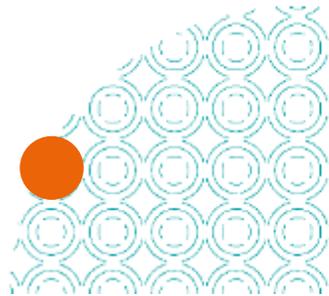


Leadership During Uncertainty

Proactive

Collaborative

Industry-led



Closing Message

Preparedness is not the opposite of
ambition.

Preparedness allows ambition to endure.