



# Re-imagining Oil Spill Response post 2020: new challenges will require new thinking for the next decade

14<sup>th</sup> February 2020



Advancing environmental  
and social performance  
across oil and gas

[www.ipieca.org](http://www.ipieca.org)

# IPIECA

The global oil and gas association for advancing environmental and social performance

Only global association involving both upstream and downstream

45 years of collaboration contributing to sustainable development



Our membership employs

**1.1**  
MILLION  
PEOPLE

Our member network represents

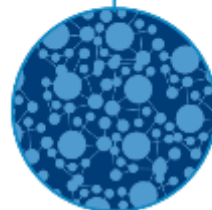
**1885**  
OIL & GAS  
COMPANIES

Our membership operates in

**180**  
COUNTRIES



Our  
membership



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# IPIECA Members

## CORPORATE MEMBERS



## ASSOCIATE MEMBERS



## ASSOCIATION MEMBERS





# Advancing a shared industry response

to environmental and social issues

- Developing, sharing and promoting good practices and solutions
- Enhancing and sharing knowledge and awareness
- Engaging the industry as a whole
- Partnering with key stakeholders
- Pooling expertise across breadth of environmental and social issues



# Principal channel of communication with the UN



United Nations  
Framework Convention on  
Climate Change



UNECE



International  
Finance Corporation  
WORLD BANK GROUP



Programmed lives.  
Resilient nations.



Convention on  
Biological Diversity



INTERNATIONAL  
MARITIME  
ORGANIZATION



Principles for  
Responsible  
Investment



ICAO

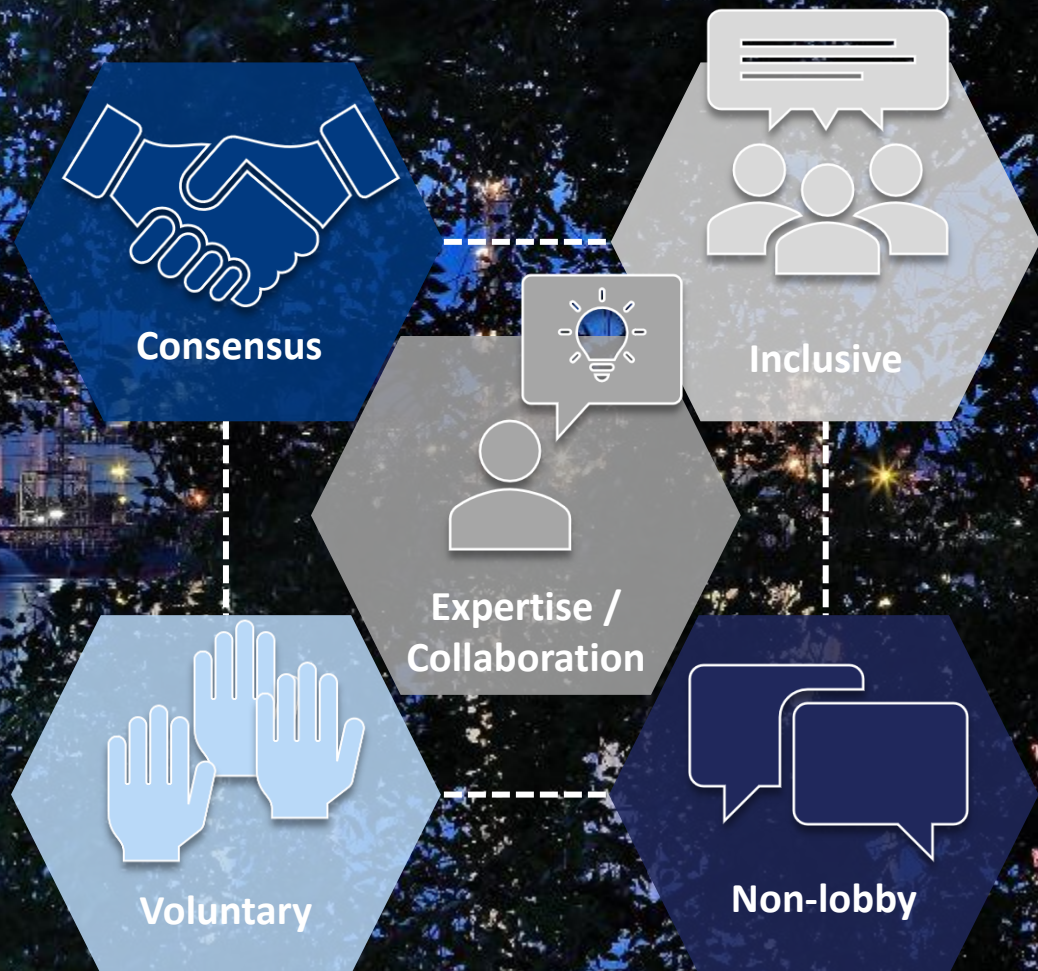


United Nations  
Global Compact



# Vision and principles

An oil and gas industry that successfully improves its operations and products to meet society's expectations for environmental and social performance





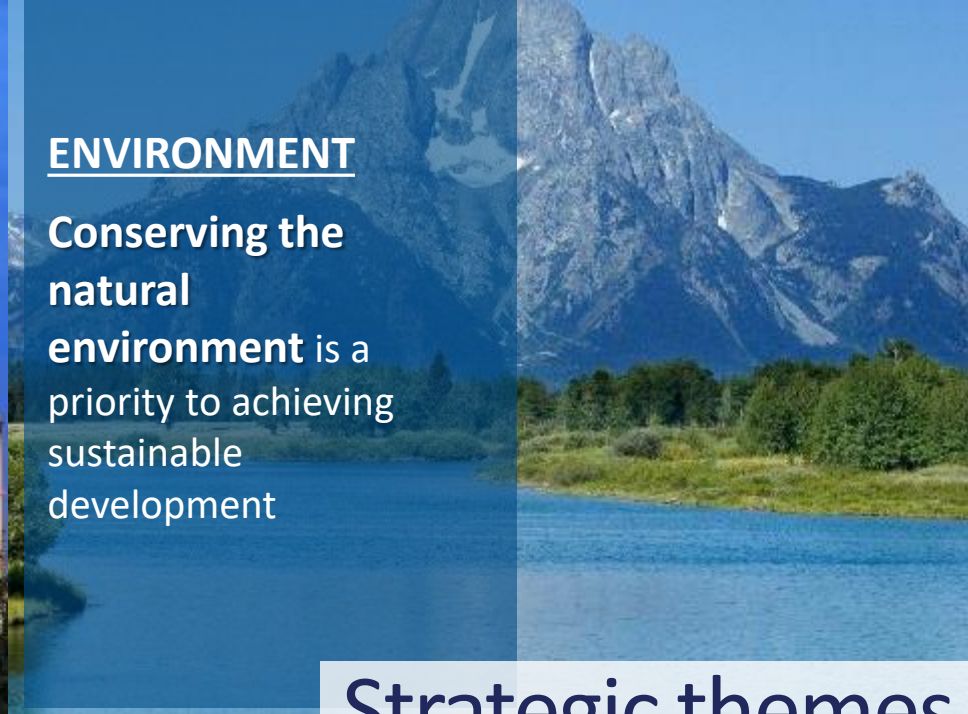
## CLIMATE & ENERGY

Addressing climate-related risk whilst meeting the world's growing energy needs is key to supporting **sustainable development**



## ENVIRONMENT

Conserving the **natural environment** is a priority to achieving sustainable development



# Strategic themes

## OIL SPILL

Preparedness and response for oil spills is key to **minimizing impacts** on the environment and society



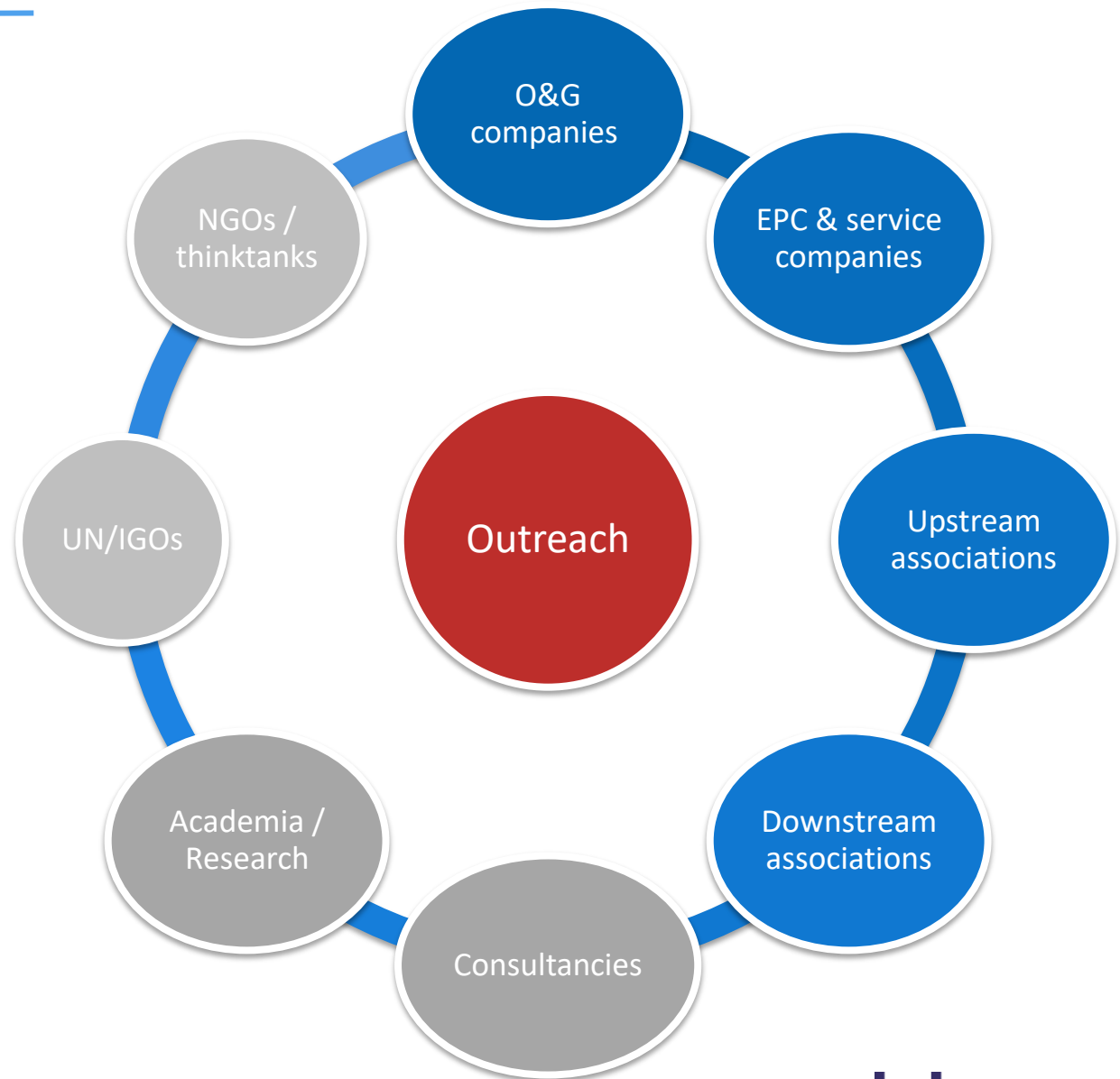
## SOCIAL RESPONSIBILITY

Improving **social performance** can have a positive impact on oil and gas operations as well as the communities in which they operate



# IPIECA's work

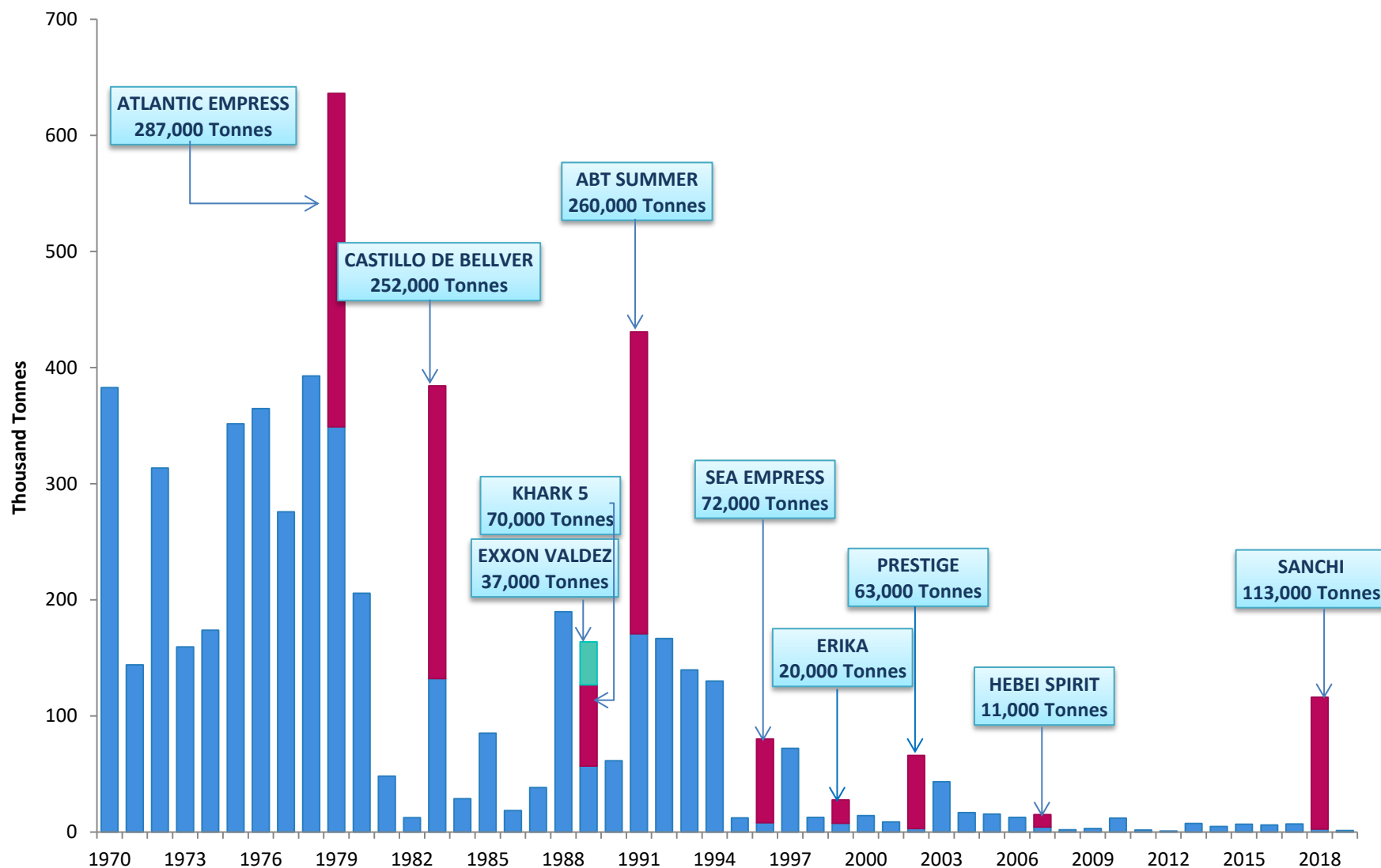
makes a global difference





# There will always be unexpected challenges...

ITOPF Oil Tanker Spill Statistics Figures 2019



# 2020: a good time to revisit the past...

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## Early events defined the actions needed for improvement:

- Torrey Canyon 1967
- Amoco Cadiz 1978
- Exxon Valdez 1989
- Gulf War Oil Spill 1991
- Nakhodka 1997
- Erika 1999
- Prestige 2002

## The outcomes of these spills lead to:

- An incremental improvement in international cooperation through IMO/OPRC
- Additional legislation e.g. OPA 90
- Better ships with better trained crews
- A ground-breaking liability and compensation regime
- The start of a consistent decade on decade drop in spill frequency and volume



# 2020: a good time to revisit the past...

Sometimes it takes a seminal event to galvanize world opinion, whether it is the effects of Global Climate Change.....

.....or an oil spill

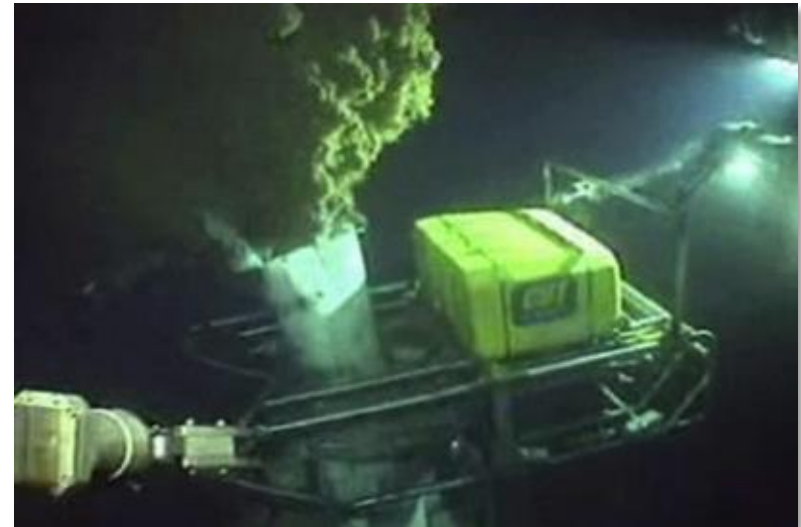
- Adequate Risk Assessment
- Capping & Containment
- Well intervention
- Incident Management Systems
- Tiered mobilisation....



The impact of the Macondo and Montara incidents precipitated a thorough re-evaluation of our capabilities and an understanding of the need to (re) learn what we **thought** we knew



Many new techniques were developed for Macondo – the response was huge & technically difficult





# Sub-sea intervention & dispersant systems are now available around the world ...



# IPIECA and IOGP: Global Industry Response Group

## Prevention

Better capabilities and practice in well engineering design and well operations management

IOGP Wells Expert Committee  
International Association  
of Oil & Gas Producers



## Intervention

Improved capping response in the event of an incident and to study further the need for – and feasibility of – global containment solutions

SUBSEA WELL RESPONSE PROJECT  
Oil Spill Response



## Response

Effective and fit-for-purpose oil spill response preparedness and capability

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*IOGP & IPIECA members invested millions of dollars to build new equipment and make the new techniques available to all*

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# Oil Spill Response – Joint Industry Project (OSR-JIP)

## 5-year project (2012 – 2016):

- Lead by IPIECA
- 19 oil spill related recommendations
- 19 participants

## Key areas:

- Oil spill preparedness & response framework
- Response techniques
- Stakeholder engagement and communications



# Six Key Learnings you should test your plans against

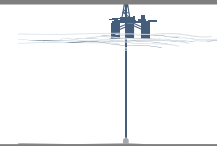
1. Start with  
*risk*  
*assessment* to  
develop *plan*  
*scenarios*

## Example scenarios:

**OFFSHORE RELEASE**  
TANKER SPILL



**OFFSHORE RELEASE**  
SUBSEA SPILL



**OFFSHORE RELEASE**  
SPILL FLOWING  
TOWARDS POPULATED AREA



**NEAR SHORE RELEASE**  
SPAWNING SEASON










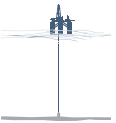
















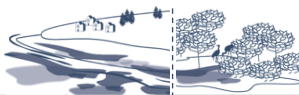




**ONSHORE OR NEAR SHORE RELEASE**  
NEAR MARSH  
OR SAND BEACH



# Six Key Learnings you should test your plans against

1. Start with *risk assessment* to develop *plan scenarios*

2. Develop response strategies using Spill Impact Mitigation Assessment (SIMA)

EXAMPLE SCENARIOS	POSSIBLE RESPONSE TOOLS					
<b>OFFSHORE RELEASE</b> TANKER SPILL 	SOURCE CONTROL 	DISPERSANTS 	MECHANICAL RECOVERY 	IN-SITU BURNING 	SHORELINE CLEAN UP 	NATURAL PROCESSES 
<b>OFFSHORE RELEASE</b> SUBSEA SPILL 						
<b>OFFSHORE RELEASE</b> SPILL FLOWING TOWARDS POPULATED AREA 						
<b>NEAR SHORE RELEASE</b> SPAWNING SEASON 						
<b>ONSHORE OR NEAR SHORE RELEASE</b> NEAR MARSH OR SAND BEACH 						

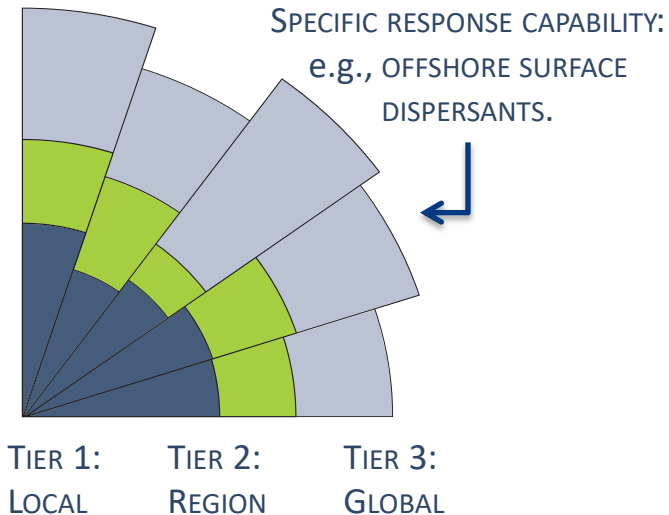


# Six Key Learnings you should test your plans against

1. Start with **risk assessment** to develop **plan scenarios**

2. Develop response strategies using Spill Impact Mitigation Assessment (SIMA)

3. Work out what resources will be **local, regional, global (Tiered Response)**



- Decide optimal resource location in advance:
  - Local
  - Regional
  - Global
- Avoid unnecessary duplication

# Six Key Learnings you should test your plans against

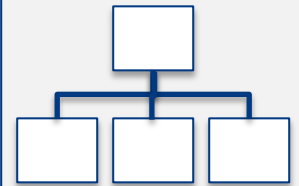
1. Start with *risk assessment* to develop *plan scenarios*

2. Develop response strategies using Spill Impact Mitigation Assessment (SIMA)

3. Work out what resources will be *local, regional, global (Tiered Response)*

4. Train everyone in a single *Incident Management System (IMS)*

***Incident Management System***



## ***“Incident Management System for the Oil and Gas Industry”***

- Based on Incident Command System (ICS) – with common:
  - Organizational groups
  - Management structure
  - Documents & terminology
  - Operating procedures
- Response scale-up & integration into a single unified structure

# Six Key Learnings you should test your plans against

1. Start with **risk assessment** to develop **plan scenarios**

2. Develop response strategies using Spill Impact Mitigation Assessment (SIMA)

3. Work out what resources will be **local, regional, global (Tiered Response)**

4. Train everyone in a single **Incident Management System (IMS)**

5. Use the Guidance we have produced for you

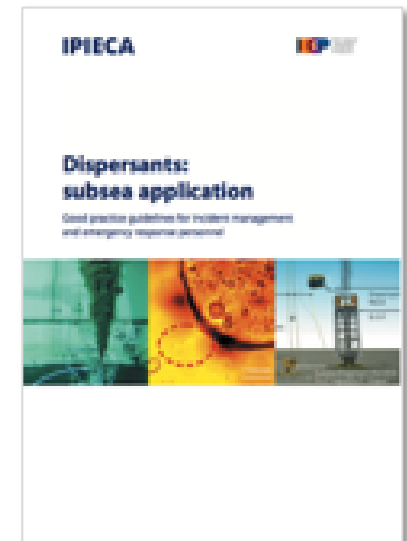
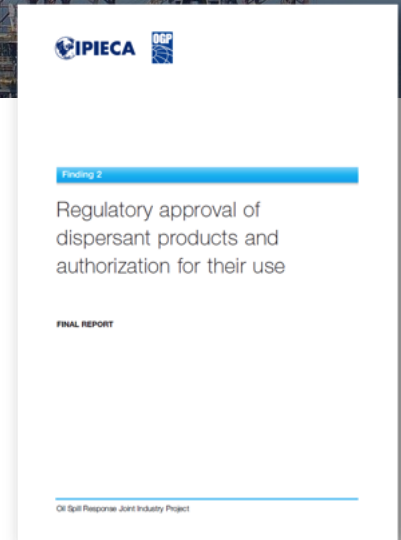
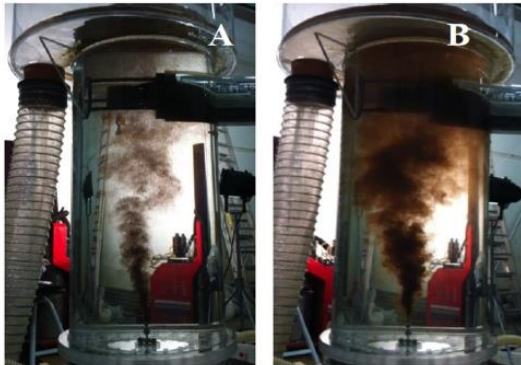




# Use the new guidance on oil spill response tools

## Dispersants

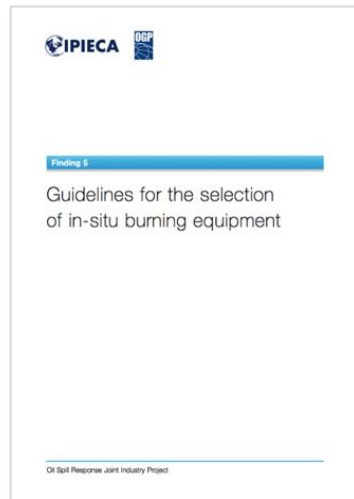
- ***Dispersants*** allow ***rapid response offshore***, to protect important coastal areas
- ***Sub-sea dispersant*** injection proved highly effective in the Macondo incident
- ***Selection, testing, supply, & fate/effects*** of dispersants are detailed in new guidance
- ***Regulatory*** approval & authorisation guide



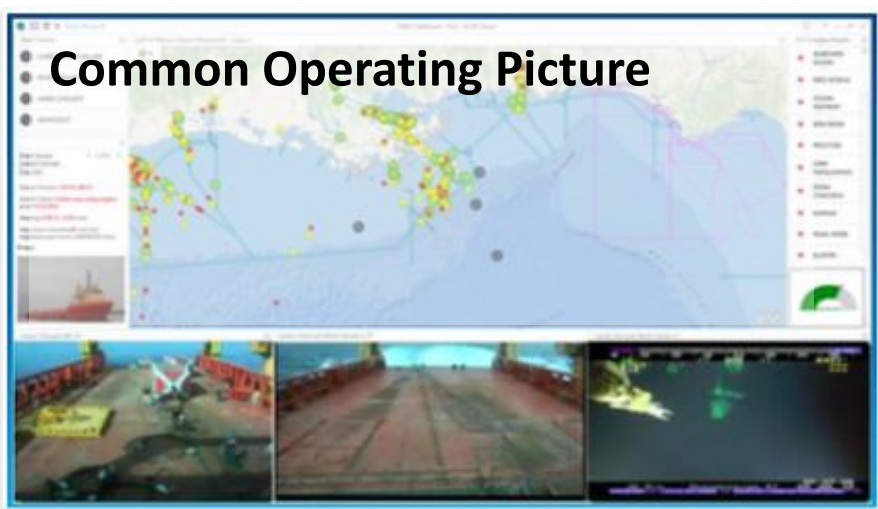
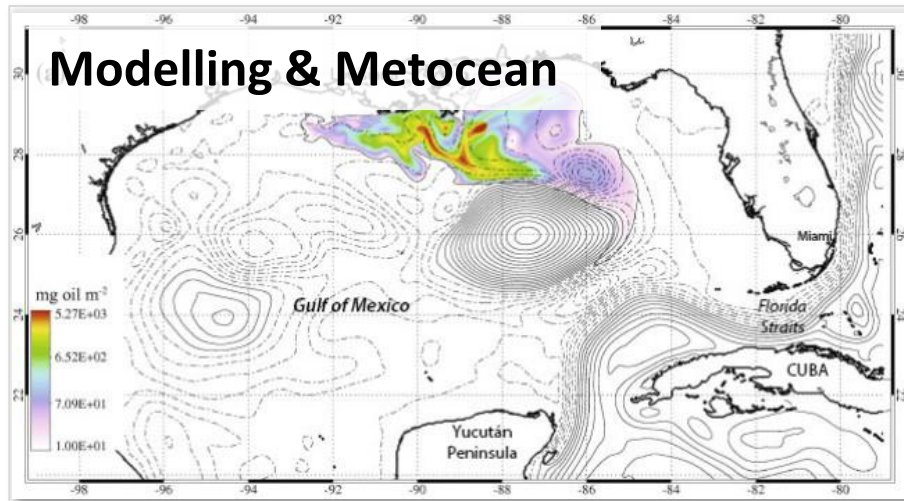
# Use the new guidance on oil spill response tools

## In-situ burning

- When & how to apply?
- Equipment design & selection:
  - Fire resistant boom
  - Ignition systems
- Operating considerations
- Monitoring



# Use the new guidance on oil spill response tools: 10 Technical Support Documents supplement the 24 Good Practice Guidance publications





# Looking back: the lessons we've learned over the last two decades

1. **Think** risk-based scenarios: they are the starting point
2. **Use** NEBA/SIMA based response strategies
3. **Plan** using tiered response – local, regional, global
4. **Align** on a single common Incident Management System
5. **Know** and use the latest oil spill response tools

**Looking forward:** the 6<sup>th</sup> lesson:

6. Involve ***Stakeholders*** from the beginning (regulators, community)



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# 2020: new challenges ahead

## Volunteer Management Challenges

- Communities increasingly “in touch” with local environment
- Expectation that they will be consulted and participate in clean-up
- “Volunteers of Opportunity” can be useful, but require training
- If badly handled, reputational damage will likely result

IPIECA has produced a Volunteer Management Technical Support Document with two case studies



*M.V. Cosco Busan, California, 2007*



*M.V. Rena, New Zealand, 2011*

# 2020: new challenges ahead

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## Social Media/reputational challenges

- Reputation management is important
- Social media can shape and control a company's message during a crisis and needs to be handled well through active management
- If messages are not “on-point” and practiced other stakeholders will supply the message and this can damage reputation and affect stock price and brand value
- Regulators are a stakeholder too! During an oil spill, the public demands to know not only what the **company** is doing to clean up an oil spill but also the regulator.
- Macondo showed that joint efforts to provide information can help both parties demonstrate a collaborative effort to minimize environmental damage



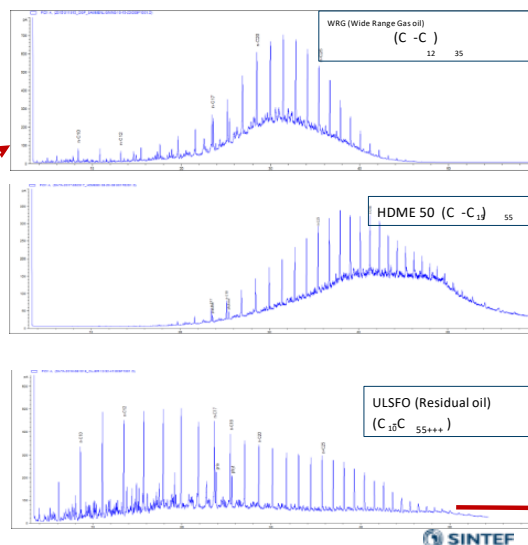
# 2020: new challenges ahead

## Technical Challenges

- The imposition of the new Bunker Sulphur rule at IMO has led to widespread re-formulation bunker fuels; the types of oil that can be spilled is changing:

"New generation" of low sulphur marine fuel oils (heavy distillates and residual fuels)

- WRG (Wide Range Gas oil)
- HDME 50 (Heavy Distillate Marine ECA 50)
- ULSFO (Ultra-Low Sulfur Fuel Oil, Residual oil)



- Expected to be more paraffinic/waxy with higher pour points
- This will likely affect clean-up strategies

# IPIECA Oil Spill 2020 work programme

Build & share knowledge 		Good practices & tools 		Engagements & dialogues 	
Shoreline response programme	Oil spill response to low-Sulphur marine fuels	Response infrastructure in remote areas	Situational awareness strategic guide	Dispersants communication	International Oil Spill Conference
Interspill 2021 planning	Global Initiative in new region	Review & update existing good practice guides	'Oil spill preparedness and response: An introduction' translations	Promotion of industry good practices	Technical advocacy
Managing social issues during crisis response				Global Initiative	

# Technical stewardship: developing good practice



## Resources

- <http://www.ipieca.org/resources/>
- <https://www.iogp.org/bookstore/>



## Oil spill preparedness and response: An introduction

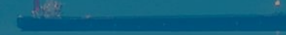
Guidance document for the oil and gas industry





# Comms & outreach: triennial conference series

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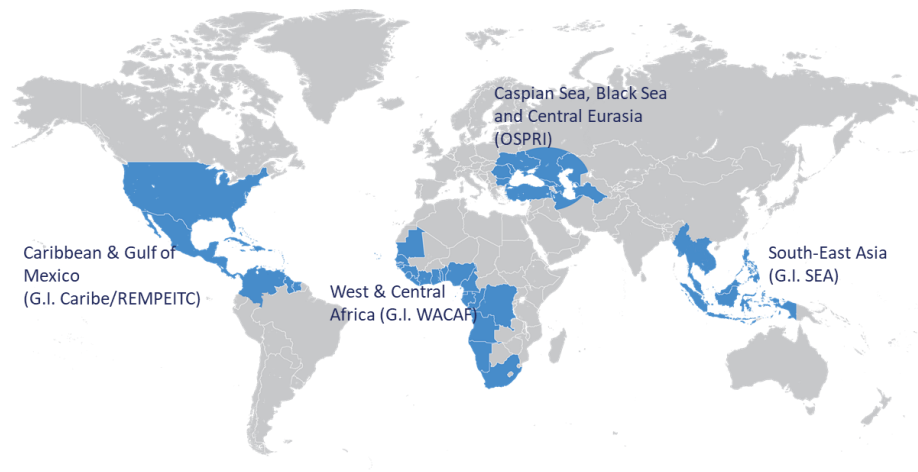
## Outreach: Support the triennial oil spill conference series

- **Spillcon**, Perth Australia, 2019
- **International Oil Spill Conference**, New Orleans, USA, 2020
- **Interspill**, Amsterdam, Netherlands, 2021



# Working in Partnership: The Global Initiative

- Extraordinary success – working together to improve oil spill preparedness and response in many regions of the world
- In excess of **200 workshops** over a combined **35 years** of experience of building capacity in **43 countries** since **1996**
- **One third** of all maritime states covered by an IMO/IPIECA regional programme



# Conclusion: Getting information and support: IPIECA can help

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- The South East Asia G.I. program provides a platform for stakeholders to come together and assist ASEAN Member States and industry build OSR capacity
- GISEA has played a significant role in enabling the adoption of the ASEAN MoU and more recently, the Regional Oil Spill Contingency Plan (ROSCP) which provides the mechanism for regional cooperation and mutual assistance including support for the ratification of OPRC across ASEAN

## 2019 activities:

- 1 Regional Workshop on regional Oil Spill Contingency Planning
- 1 Sub-regional 'Train-the-Trainer' Workshop on OPRC Model Courses
- 3 National Workshops on Oil Spill Contingency Planning in various countries



# For more information



**Website:** [www.ipieca.org](http://www.ipieca.org)

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**LinkedIn:** IPIECA

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