Learning the lessons from Macondo & Montara
East Asian Seas Congress 2018
Iloilo, Philippines
What is IPIECA?

- Global oil and gas association for environmental and social issues
- Formed in 1974 following the launch of UN Environment
- Only global association involving both upstream and downstream

<table>
<thead>
<tr>
<th>Total output of hydrocarbons</th>
<th>Our membership operates in</th>
<th>Our membership employs</th>
<th>Our association member network represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.2 million boe/day</td>
<td>180 countries</td>
<td>1.3 million people</td>
<td>500 oil &amp; gas companies</td>
</tr>
</tbody>
</table>
## IPIECA Members

### Corporate members

- Apache
- BHP
- bp
- Chevron
- ConocoPhillips
- CNCC
- equinor
- ExxonMobil
- HESS
- Husky Energy
- INPEX

- KOSMOS Energy
- LUSA NOC
- MERSK
- Marathon Oil
- Neptune Energy
- Noble Energy
- Oil Search
- OMV
- OXY
- PEMEX
- PTT
- PETRONAS

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### Associate members

- Baker Hughes
- Schlumberger

### Association members

- AiP
- AMEXHI
- API
- apcea
- arcelor
- Arper
- Boreas
- CAPP
- concawe
- FuelEurope
- ibp

- IPCC
- JPEC
- Norge Oil & Gas
- OIL&GAS UK
- OIL&GAS Danmark
- PAJ
- PEPA
- SAPIA
- UK Oil & Gas
- VNPI
- World Petroleum Council
What does IPIECA do?

IPIECA helps the oil and gas industry improve its environmental and social performance by:

- Developing, sharing and promoting good practices and solutions
- Enhancing and communicating knowledge and understanding
- Engaging members and others in the industry
- Working in partnership with key stakeholders
- Pooling expertise across the range of environmental and social issues

IPIECA is the industry’s principal channel of communication with the United Nations.
IPIECA’s role in the industry

- Sustainable Development and Climate change are challenges that can only be solved through partnership and collaboration.
- IPIECA’s unique status creates value through convening power both within and beyond the industry, building trust and partnerships.
- IPIECA’s work supports improvements in environmental and social performance and understanding of the role of the industry in support of sustainable development.
Eight Years on from Deep Water Horizon: The Impact of the Macondo Incident
Macondo & Montara changed how the industry prevents and prepares for blow-outs & spills...

Macondo, GoM
20 April 2010

Montara, Australia
21 August 2009
Many new techniques were developed for Macondo – the response was huge and technically difficult.
Global Industry Response Group (GIRG)

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

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

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

IOGP & IPIECA members have invested millions of dollars to build new equipment and make the new techniques available to all
Sub-sea Well Response Project
Sub-sea intervention & dispersant systems are now available around the world*…

- Debris Clearance
- Dispersant Application
- BOP Intervention

- 15K p.s.i Capping Stack Kits
- Complete Subsea Response Kits

- 10K p.s.i. Capping Stack Kits

*NB: There are currently around 27 unique capping systems for emergency response available around the world
Oil Spill Response – Joint Industry Project (OSR-JIP)

• 5–year project (2012 – 2016):
  − 19 oil spill related GIRG recommendations
  − 19 participants

• Key areas:
  − Oil spill preparedness & response framework
  − Response techniques
  − Stakeholder engagement and communications
Five Key Learnings to 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
Five Key Learnings to test your plans against ...

1. Start with risk assessment to develop plan scenarios

2. Develop response strategies using *Net Environment-al Benefit Analysis (NEBA)*

<table>
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<th>Example Scenarios</th>
<th>Possible Response Tools</th>
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<tbody>
<tr>
<td>Offshore Release Tanker Spill</td>
<td>Source Control</td>
</tr>
<tr>
<td>Offshore Release Subsea Spill</td>
<td>Dispersants, Mechanical Recovery</td>
</tr>
<tr>
<td>Offshore Release Spill Flowing</td>
<td>In-situ Burning</td>
</tr>
<tr>
<td>Near Shore Release Spawning Season</td>
<td>Shoreline Clean Up</td>
</tr>
<tr>
<td>Onshore or Near Shore Release</td>
<td>Natural Processes</td>
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</tbody>
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* NB: Spill Impact Mitigation Assessment (“SIMA”) is a methodology to implement NEBA
Five Key Learnings to test your plans against ...

1. Start with risk assessment to develop plan scenarios
2. Develop response strategies using Net Environment-al Benefit Analysis (NEBA)
3. Work out what resources will be local, regional, global (Tiered Response)

- Decide optimal resource location in advance:
  - Local
  - Regional
  - Global

- Avoid unnecessary duplication
Five Key Learnings to test your plans against ... 

1. Start with **risk assessment** to develop plan scenarios
2. Develop response strategies using **Net Environment-al Benefit Analysis** (NEBA)
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 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
Five Key Learnings you should test your plans against ...

1. Start with **risk assessment** to develop **plan scenarios**
2. Develop response strategies using **Net Environment-al Benefit Analysis (NEBA)**
3. Work out what resources will be **local, regional, global (Tiered Response)**
4. Train everyone in a single **Incident Management System (IMS)**
5. Involve **Stakeholders** from the beginning (regulators, community)

There is lots of free guidance on the IOGP/IPIECA Web-sites
Use the new guidance on oil spill response tools: Dispersants...

- **Dispersants break oil slicks into tiny drops**, allowing rapid natural bio-degradation in the water
- They allow **rapid response offshore**, to protect important coastal areas
- **Sub-sea dispersant** injection proved highly effective in the GoM
- **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: For example ...

Satellite surveillance

In-water surveillance

Modelling & Metocean

Common Operating Picture
Summary: Applying the Gulf of Mexico Learning from the Response...

1. Risk based scenarios are the starting point
2. Response strategies using NEBA
3. Tiered response – local, regional, global
4. Common Incident Management System
5. Know the latest oil-spill response tools
6. Engage Stakeholders

IOGP/IIPIECA Joint Industry Project:  
www.ipieca.org/resources