



Towards a Sustainable Energy Era

International Challenges in Preparedness and
Response to Oil and Chemical Spill Incidents

Petroleum Association of Japan
Tokyo, 21-22 February 2008

IPIECA



- The single global association representing both the upstream and downstream oil and gas industry on key environmental and social issues
- Founded in 1974 following the establishment of the United Nations Environment Programme (UNEP), IPIECA provides a principal channel of communication with the UN

Industry trends



- Access to business opportunities
 - Increasing government control, private companies and NOC's
 - Sensitive environments
- Energy Challenge
 - Sustainable energy era
- Perception of a 'sunset' industry
 - Ageing workforce
 - Ageing infrastructure



Where – Vision



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



How – Mission



- IPIECA operates globally and seeks to achieve its Vision by:
 - Developing, sharing and promoting sound practices and solutions
 - Enhancing and communicating knowledge and understanding
 - Engaging members and others in the industry
 - Working in partnership with key stakeholders



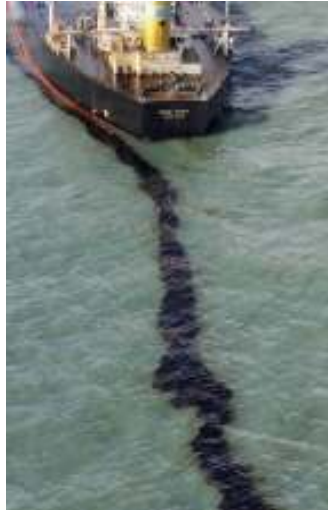
Working Groups



- Biodiversity
- Climate Change
- Health
- **Oil Spill Preparedness and Response**
- Operations, Fuels and Products
- Social Responsibility



South Korea oil spill incident



Oil spill response: the IPIECA approach



- Implementation of international conventions
- Cooperation between industry and government
- Application of the tiered response concept
- Application of a scientifically-based risk analysis



Oil Spill Report Series



- High quality technical information on:
 - Contingency planning
 - Biological impacts
 - International compensation regime
 - International oil spill resources
- Global reference point
- Translated into various languages



Global Initiative



- Partnership between IPIECA and IMO
- Aims to improve and sustain the capacity of developing countries to protect their marine and coastal resources at risk from an oil spill incident
- Methodology
 - Dedicated focal points
 - Leverage policy makers and managers in government and industry
 - IPIECA Report Series
 - Joint workshops and training sessions

GI regional collaborations



- Mediterranean
- West and Central Africa
- Black Sea and Caspian
- Caribbean
- East Asia

Marine issues



- Decommissioning
- Access – marine protected areas
- Marine mammals – JIP
- Ballast water
- Alien invasive species
- Shipping emissions (MARPOL)



Towards a sustainable energy era



- What is the current state of the world?
- What do we mean by sustainable energy?
- How will we get to a sustainable energy era?



Our changing world...



- Population has more than doubled to 6 billion
- Greenhouse gas emissions have increased 5-fold to 7 billion tonnes of carbon
- Annual water use has tripled
- The annual fish catch has increased 5 times to 100 million tonnes
- The world has lost one third of its tropical rainforest cover



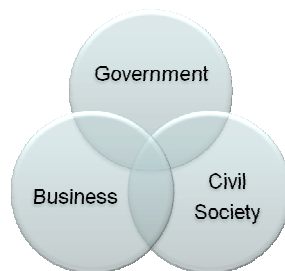
...and the world in 2050



- 9 billion people
- 4-5 times richer
- Using double the energy, twice as efficiently
- Using 10x more renewable energy



A connected world



People



Planet



Profit

- Governments set the rules
- Civil society reflects environmental and social concerns
- Business must comply with the rules, respond to societies' concerns and meet customers' needs for energy products

**For leading companies,
Sustainable Development means...**



- **Integration** of environmental and social considerations into business planning
- **Balance** between short and long term priorities
- **Inclusivity**. Engaging stakeholders and seeking a diversity of opinion
- **Accountability**. Openness and transparency through public reporting



**Potential benefits from a Sustainable
Development mindset include...**



- Reducing costs
- Identifying new business opportunities. Developing innovative products
- Reducing project delivery risk
- Enhancing reputation with governments, potential employees and civil society – becoming a partner of choice



Energy and transportation eras



The Sustainable Development journey



- Values and Principles
 - Leaders must say what they stand for and do what they say they will do
- Operational excellence
 - Field Development
 - Asses Integrity
 - End of life issues
 - Responding to climate change



The Sustainable Development journey



- **Social Responsibility**
 - Relations with local communities, human rights, social investment
- **Access new hydrocarbon resources**
 - Deepwater oil and gas; operating in remote and sensitive environments; expanding the use of natural gas; oil sands and oil shales



The Sustainable Development journey



- **Developing alternative energy resources**
 - Biofuels and hydrogen for transportation
 - Wind and solar for electricity generation
- **Working in partnership with others**
 - Global Gas Flaring Reduction Initiative
 - Shell's biodiversity partnership with the World Conservation Union (IUCN)
 - IPIECA and UNEP phasing out lead in fuels



What is needed to move towards a sustainable energy era?



- Meet growing energy demand
- Address energy security
- Reduce environmental and social impacts



Conclusions



- All energy sources will have to be used
- Choices will have to be made
 - Climate change vs. air quality vs. poverty alleviation
 - Food vs. fuel
 - Nuclear – safety vs. CO₂
 - Lifestyles in a low carbon world
- Governments need to cooperate

Evolution not revolution
Transitions and trade offs
We will 'muddle through' as we usually do

