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Ocean Sustainability and Stakeholders: The Future of Oil and Gas Industry Operations in the Marine Environment

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Abstract

Oceans and coasts provide the majority of the world's ecosystem benefits. The marine environment is increasingly critical to the future of oil and gas resources as more exploration and production occurs there, and the maritime transport of industry products continues to grow. While the industry has been proactive in developing discreet projects to respond to perceived challenges, ocean management regimes, such as marine protected areas, are being determined by governments, intergovernmental bodies and NGOs in a variety of fora.

There is a need to develop integrated ocean strategies and partnerships to ensure that energy requirements are met without damage to important ocean ecosystems. In addition, the industry needs to engage on ocean sustainability issues with the other sectors of the ocean business community (shipping, fisheries, cruise ships, etc) - and with other stakeholders (government, intergovernmental, NGO). A multi-sectoral and multi-stakeholder approach can result in cost-savings (e.g. collaborative research to find science-based solutions to shared issues) and reduce the risk of costly, unplanned and unnecessary restrictions to operations in the marine environment.

This paper will provide a global overview of the issues, the stakeholders, actions to date, and legal context critical to industry operations potentially constrained by ocean environment concerns, and identify potential strategies, options and priorities for action.

Introduction: Global Ocean – Global Industries – Global Impacts

Recent studies show that almost no part of the global ocean is unaffected by human impacts (Halpern, et al., 2008). Marine biodiversity is being degraded, destroyed and overexploited at an ever increasing rate and global scale. This is affecting the coastal inhabitants and communities worldwide that depend on marine areas for food and livelihood. (Martínez, et al., 2007). Degradation of the natural functions of the ocean may also affect its critical role in regulating the climate. As the primary user of ocean space and resources, the private sector is key to the future of the ocean.

Oceans support a significant, unique component of the world's biological diversity in a dynamic, inter-connected, three-dimensional water world covering over 70% of the earth's surface. Due to the fluid, international nature of the ocean, its biological and ecological richness and resources often extend over vast geographic scales. The marine environment provides 59% of the world's ecosystem benefits, with the 5 % comprising the nearshore marine environment, i.e. estuaries, coastal wetlands, mangroves, coral reefs, and continental shelves, alone providing 38 % of the world's ecosystem goods and services (Costanza, et al., 1997).

A substantial proportion of business and industry is entirely dependent upon ocean resources, services and space, e.g. marine transport, offshore oil and gas, ports, fisheries, aquaculture, marine tourism, and seabed mining (Holthus, 1999). The worldwide economic value of ocean goods and services is estimated at USD 6-21 trillion.