# Monthly Sustainability Newsletter

THE OIL AND GAS INDUSTRY AND ITS CONNECTIONS WITH UN SUSTAINABLE DEVELOPMENT GOAL 14

## Chairman's Message

Dear members, partners and friends,

Oceans are the oil and gas industry's final frontier. Onshore, there's very little left for the petroleum industry to explore or lay claim to. On the other hand, only 5% of the ocean-shelf has been surveyed and our oceans cover a massive 70% of the earth's surface. With advancements in deep-sea exploration and drilling technologies, the financial opportunities are immense. But, if Deepwater Horizon was an example, the potential environmental cost of oil exploration and drilling is exponentially higher.

The use of fossil fuels for energy has greatly enhanced human development and lifestyle. However, human survival is also closely linked to the health of the ocean. Close to half the population relies on it for food, livelihood and economic advancement. Oceans absorb 32% of the greenhouse gas emissions produced by human activity. Oceans don't just provide, they also restrain the progress of man-made climate change. Nevertheless, human development continues to contribute to increased pollution, acidification and degradation of the marine ecosystem. A safeguard is needed to protect our rainwater, weather, climate, coastlines, food and the air we breathe.

One of the UN Sustainable Development Goals (SDG14) presents a plan for sustainably achieving that goal. In this month's issue of the Al-Attiyah Monthly Sustainability Newsletter, we take a look at the oil and gas industry's connections with UN SDG14.

## UN Sustainable Development Goal 14

More than two-thirds of the earth's surface is covered by oceans, and there is a clear link between the integrity of marine ecosystems and human well-being. Oceans face the threats of marine and nutrient pollution, resource depletion and climate change, all of which are caused primarily by human actions. These threats place further pressure on environmental systems, like biodiversity and natural infrastructure, while creating global socio-economic problems, including health, safety and financial risks. In order to combat these issues and promote ocean sustainability, innovative solutions that prevent and mitigate detrimental impacts to marine environments are essential. Global Industries must also work to protect marine species and support the people who depend on oceans, whether it be for employment, resources, or leisure.

## Causes of Damage to Marine Habitats

The major causes of pollution and degradation of the marine ecosystem include:

**1) Noise Pollution:** One of the instruments used in surveying oil-reserves is known as Seismic Air Gun.

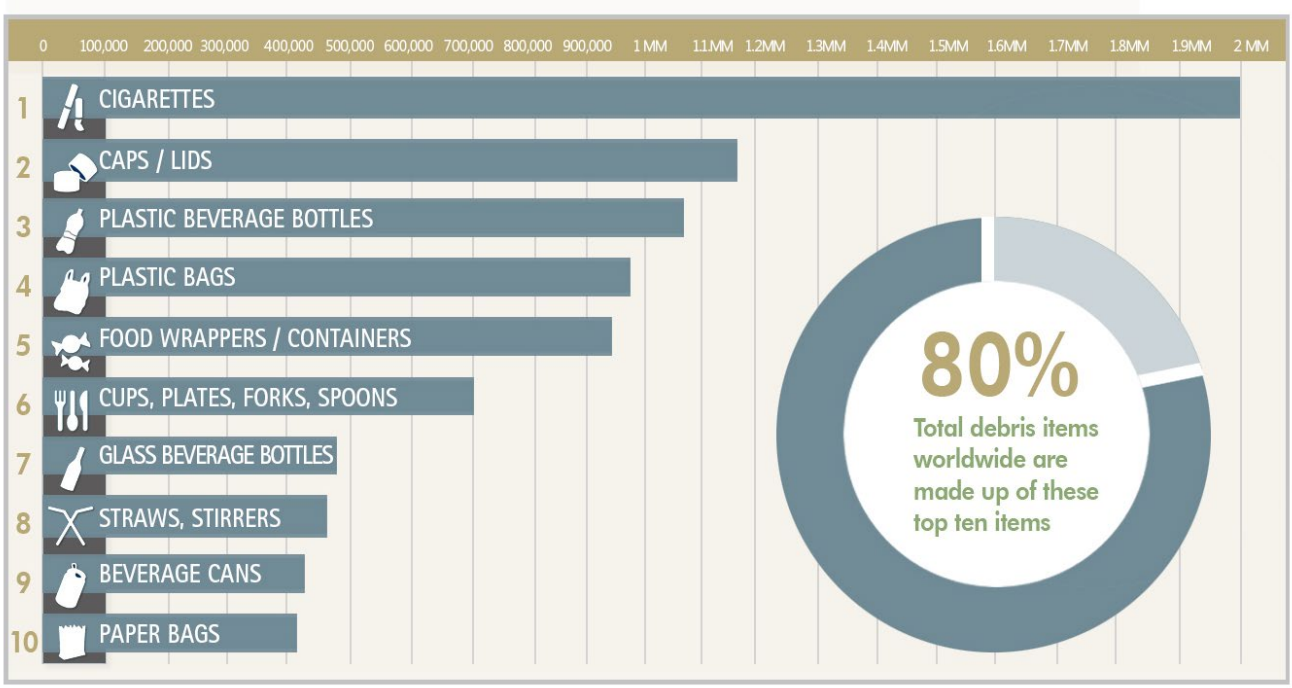
It is towed by ships and releases a huge blast. The reflecting shock-waves indicate if the site is fit for drilling an oil-well. The blasts are powerful enough to kill small crustaceans and fishes with sensitive sensory organs. Eggs and spawns along the blasts' path are obliterated, killing scores of the new generation. Mammals like whales and dolphins that rely on echo-location or sonar for travel, communication and hunting are left disoriented by the 220–250 decibel noise levels. In the vastness of the ocean, marine animals often resort to traditional migratory routes and locations for feeding, mating and child-rearing. Noise from drilling and blasts can scare off marine-life from these grounds, leaving entire populations at risk of extinction.

**2) Spills:** Crude-oil floats on water and is disastrous to furry and feathered animals that make a living close to the surface. Oil sticking to fur and feathers prevents animals from insulating themselves and repelling the cold-water away from their skin. Oil weighs down the body, making manoeuvring difficult and causes the animal to die of exhaustion. Animals with fur and feathers are regular self-cleaners and will ingest oil during the cleaning process.

Toxins in the crude oil that are ingested by filter feeders move up the food chain where they accumulate inside the organs of bigger aquatic animals at a larger rate. Sea turtles, dolphins and whales often ingest or have their airways blocked by oil when reaching the surface for air.

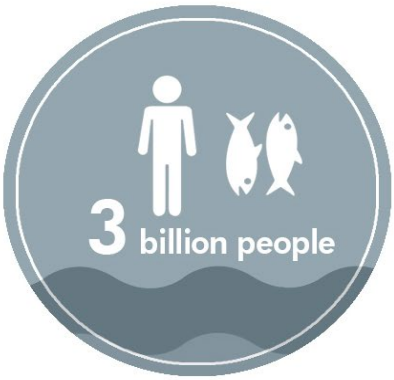
**3) Vessel Traffic:** Vessel strikes often result in the death of marine animals. Whales, dolphins, manatees, turtles and seals residing and migrating close to ports are at the gravest risk, as migratory routes often overlap with shipping lanes. Toxic discharges, water pollution and accidental spills can destroy habitats and pose health risks for marine life. Whale and dolphin calves that haven't learned the risks of avoiding ships and boats bear lifelong scars and injuries that affect growth and development.

**4) Plastic Waste:** Disposal of plastics and other waste materials into the oceans is a major cause of ocean pollution. Plastics being the major culprit, the remaining section of this newsletter is devoted to examining the impact of plastic disposal into the oceans.




It is estimated that at least 8 million tons of plastic end up in our oceans every year. Turtles mistake plastic for their food such as jellyfish. Birds that skim the surface for fish end up swallowing plastics along with it. Others find themselves entangled in plastic containers, nets and bags - struggling to breakout. Fishes are literally breathing in plastic molecules. Plastic bags take 20 years to breakdown, plastic bottles can take up to 400 years and fishing wires take more than 600 years. Plastics are also produced from chemicals sourced from crude oil.

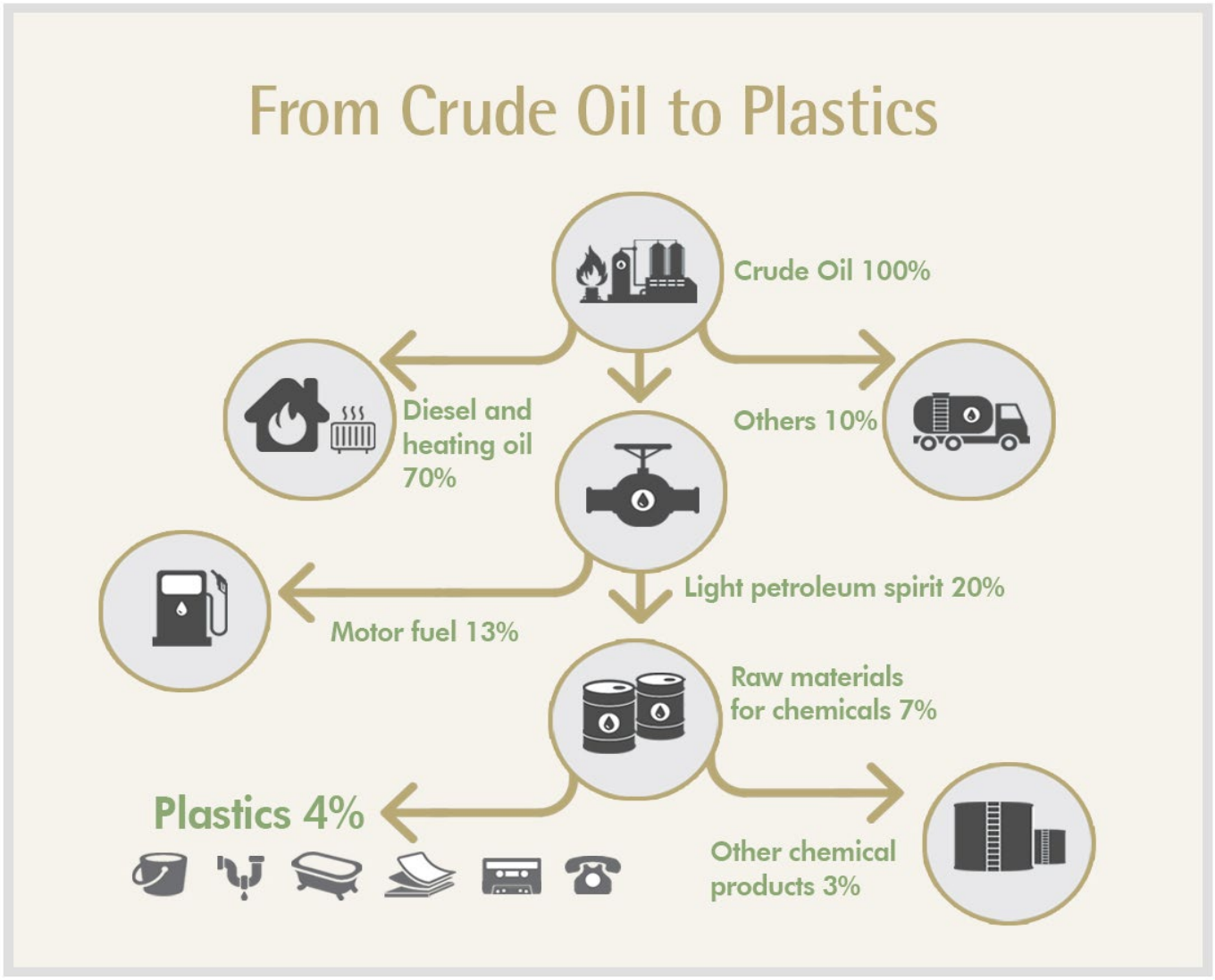

Some US$ 2.5 trillion per year of economic value is produced by oceans.



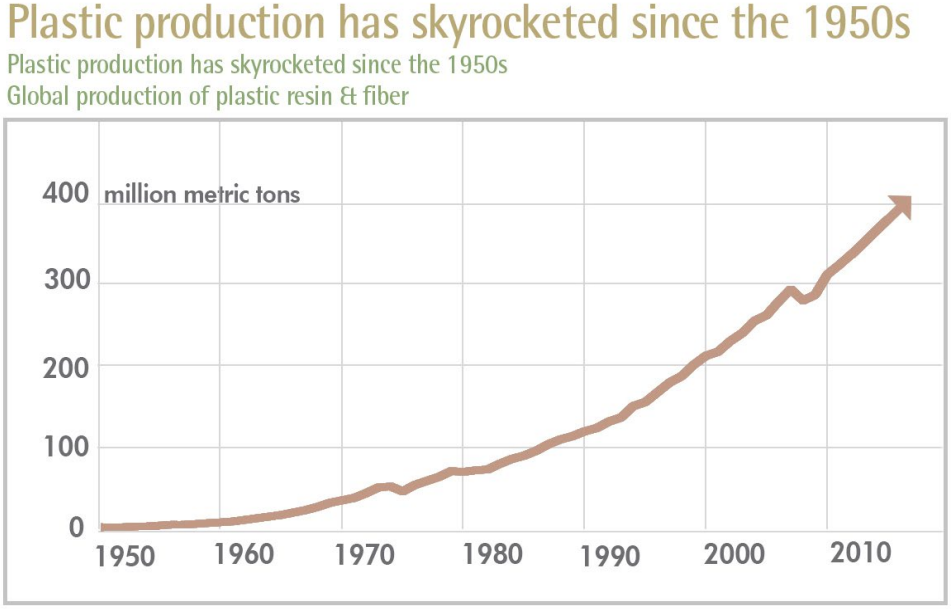

Three out of every seven people in the world depend on seafood as their main source of protein.


About 44 percent of the world's population lives within 150 kilometers (93 miles ) of the ocean.

The reason for the rising production volumes for crude oil isn't just correlated to the rising demand for energy. Since the boom in large scale plastic production in the 1950s, human beings have produced 8.3 billion tons of plastic and about 6.3 billion tons of that end up as wastes. Fossil fuels and plastics aren't just made from the same materials; they are often manufactured by the same companies - as an extension of their supply chain. A share of energy demand is now taken by renewables. This stagnation in demand caused by renewable energy lowers the price and creates an alternative demand from the petrochemical sector. For example, the shale boom in the USA has spurred a $164 billion investment in the plastics industry. The USA will be tripling its plastic exports by 2030.



## Plastic production has skyrocketed since the 1950s




Currently, only 9% of waste plastic is recycled. There's no correct estimate for the amount of plastic in the ocean, however, with garbage islands building up in the North Atlantic and North Pacific regions, the problem is very serious. The 3 billion people who rely on the ocean for food might very well be ingesting plastics and other toxic chemicals used to make them. Species yet undiscovered by man could be going extinct.

## Mitigation Measures by Oil Industry

UN's Goal 14 provides an elaborate strategy for the oil and gas industry to build sustainable business practices and contribute towards cleaning the oceans. Many companies are demonstrating commitment and support for the UN. For example, Royal Dutch Shell and Conoco Phillips have been recognized as being among the top ten companies, by revenue, with demonstrable support for SDG14.

Shell actively investigates the environmental impact of its projects and evaluates methods at reducing its environmental footprint. Pipes are diverted so as to not disturb deep-sea animals. In the Rig to Reef program, old oil rigs are sunk to create artificial reefs. Shell also funds research that tracks migratory routes of whales and designates areas for wildlife protection.

Before starting a project, Conoco Phillips evaluates Bio-Diversity "hot-spots" in the region and contributes to conservation efforts, protecting habitat, and finds solutions to reduce the carbon footprint in sensitive environments. It has funded land-acquisition projects for expanding natural parks and conservation areas in Australia, Canada and North America. Conoco Phillips also collaborates with local conservation organisations to support animal conservation goals and maintain biodiversity in the operational regions.

Human reliance on oceans points to how valuable it is as a resource. Oceans manage our climate, provide our food and minerals, and facilitate trade and economic growth. But, our thirst for petroleum products is causing large-scale damage that threatens human life. Like the fight against climate change, there's a window of opportunity to undo some of what we have caused. The push towards recycling, finding alternatives to plastics, and cleaning of our oceans, present a hopeful sign for effective and successful attainment of SDG14.

## References:

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