



Science Reporter

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DEFENDING OUR OCEANS

Life evolved in the oceans. And even today oceans continue to drive life systems. The oceans are a vital source of proteins and minerals and, of course, water. They are a source of energy too. Ocean currents drive weather systems round the world. The oceans of the world are also gateways to trade and tourism.

But recent reports suggest that human activities over the past few decades have damaged oceans to a point where they are fast approaching irreversible, catastrophic change. A report by the International Union for Conservation of Nature has found that marine "degradation is now happening at a faster rate than predicted." The ocean waters are warming up. The oceans are absorbing more human-generated carbon dioxide from the atmosphere turning the water acidic. Agricultural run-off and polluting effluents are robbing the ocean waters of their oxygen.

Damaged habitats are causing extinction of aquatic species. According to the IUCN, seven commercially important species, including marlin, mackerel and three tuna species were either vulnerable to extinction, endangered or critically endangered. "Ocean grabbing", a new term applied to the action of large-scale industrial fishing fleets, is draining the oceans of its fishery resources leading to depleted fish stocks.

Human actions are seriously compromising the natural resilience of the oceans. And we are going to pay a heavy price for this indiscretion. In fact, marine experts led by the Stockholm Environment Institute (SEI) have calculated that the cost of damage to the world's oceans from climate change alone could reach \$2 trillion a year by 2100 if measures to cut greenhouse gas emissions are not stepped up. The study, Valuing the Ocean, found that at the present rate of rising greenhouse gas emissions, "the global average temperature could rise by 4 degrees Celsius by the end of the century causing ocean acidification, sea level rise, marine pollution, species migration and more intense tropical cyclones. It would also threaten coral reefs, disrupt fisheries and deplete fish stocks."

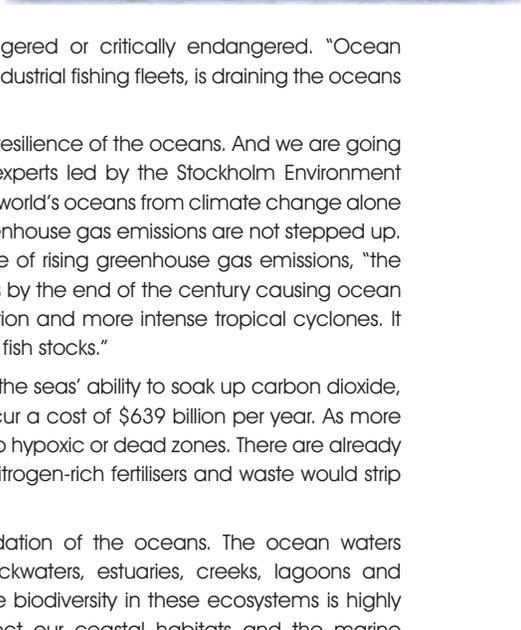
The study estimates that loss of the ocean carbon sink, the seas' ability to soak up carbon dioxide, would cost almost \$458 billion, and loss of tourism would incur a cost of \$639 billion per year. As more and more of oxygen is ripped off the ocean waters, it leads to hypoxic or dead zones. There are already 500 such zones around the world. According to the study, nitrogen-rich fertilisers and waste would strip more ocean areas of oxygen in the coming future.

India too will bear the consequences of the degradation of the oceans. The ocean waters surrounding India are blessed with a vast network of backwaters, estuaries, creeks, lagoons and specialized ecosystems like mangroves and coral reefs. The biodiversity in these ecosystems is highly varied. There is, therefore, a need to preserve and protect our coastal habitats and the marine environment.

With the potential effects of global warming expected to worsen in the days to come the oceans of the world are precariously placed. They need to be defended. Actions being envisaged to preserve the sanctity of the oceans need to be fast-tracked.

Life started from the oceans – life systems will continue to remain healthy as long as our oceans stay healthy.

Hasan Jawaid Khan



Printed and published by Deeksha Bist on behalf of the National Institute of Science Communication And Information Resources (NISCAIR), CSIR, Dr K S Krishnan Marg, New Delhi-110 012 and printed at Brijbasi Art Press Ltd., A-81, Sector-5, Noida-201 203.

Science Reporter is published monthly by the National Institute of Science Communication And Information Resources (NISCAIR), CSIR, Dr K S Krishnan Marg, New Delhi-110 012. NISCAIR assumes no responsibility for statements and opinions advanced by the authors or for any claims made in the advertisements published in Science Reporter.

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Subscription: Inland: 1 yr: Rs 200/-; 2 yrs: Rs 380/-; 3 yrs: Rs 540/- Foreign: 1 yr (Air Mail): US \$ 65

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