Report reveals ocean oxygen levels drop endangering marine life



New York, December 8 (RHC)-- The loss of oxygen from the ocean due to climate change and nutrient pollution risks "dire effects" on sea life, fisheries and coastal communities, a global conservation body has warned. The International Union for the Conservation of Nature (IUCN) said on Saturday that about 700 sites had been identified globally with low oxygen levels - up from only 45 in the 1960s.

In the same period, the group warned in the largest peer-reviewed study to date that the volume of anoxic waters - areas totally devoid of oxygen - have quadrupled. "What we are seeing is a decline of 2 percent in the global oxygen level [in the oceans]. It doesn't sound like a lot but this small change will have enormous ramifications," Minna Epps, the IUCN's global marine and polar program director, told Al Jazeera.

"Deoxygenation will have an impact on biodiversity, on biomass of commercially important species and on vulnerable rare species. It will also have an impact on habitats. We are seeing species migrating because of this," she added.

The report found that the loss of oxygen is increasingly threatening fish species such as tuna, marlin and sharks, all particularly sensitive to low levels of the life-giving gas due to their large size and energy demands.

The ocean absorbs about a quarter of all fossil fuel emissions, but as global energy demand continues to grow there are fears that the world's seas will eventually reach saturation point. On current trends, oceans are expected to lose 3-4 percent of their oxygen globally by 2100.

However, most of that loss is predicted to be in the upper 1,000 metres (3,281 feet) - the richest part of the ocean for biodiversity. "With this report, the scale of damage climate change is wreaking upon the ocean comes into stark focus," Grethel Aguilar, the IUCN's acting director, said. "As the warming ocean loses oxygen, the delicate balance of marine life is thrown into disarray."

The report on ocean oxygen loss concluded that deoxygenation is already altering the balance of marine life to the detriment of species across the food chain. The biomes that support about a fifth of the world's current fish catch are formed by ocean currents that bring oxygen-poor water to coastlines.

These areas are especially vulnerable to even tiny variations in oxygen levels. "Impacts here will ultimately ripple out and affect hundreds of millions of people," the IUCN said.

The group this year issued a landmark assessment of the world's natural habitats, concluding that human activity was threatening up to one million species with extinction. Ocean life is already battling warmer temperatures, rampant overfishing and plastic pollution.

The World Meteorological Organization this week said that due to man-made emissions growth, the ocean is now 26 percent more acidic than before the Industrial Revolution. "Ocean oxygen depletion is menacing marine ecosystems already under stress from ocean warming and acidification," said Dan Laffoley, a senior marine science adviser at the IUCN.

"To stop the worrying expansion of oxygen-poor areas, we need to decisively curb greenhouse gas emissions as well as nutrient pollution from agriculture and other sources." The IUCN report also found that pollution around coastlines was having a significant effect on oxygen levels, with fertiliser and agricultural runoff promoting more algae growth, which in turn depletes oxygen as it decomposes.

World leaders will gather in Marseille in June for the IUCN's World Conservation Congress. Policymakers are currently in negotiations at the COP25 climate summit in Madrid charged with ratifying a comprehensive rulebook for the 2015 Paris accord.

"Decisions taken at the ongoing climate conference will determine whether our ocean continues to sustain a rich variety of life, or whether habitable, oxygen-rich marine areas are increasingly and irrevocably lost," Epps said from the Spanish capital.



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