The ocean is losing 'breath'

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To prevent this decline, the world needs to curb both climate change and nutritional pollution, a group of international scientists including Lisa Levin, a biographer at the Institute of Oceanography. Scripps of the University of California San Diego, confirmed in a new article published in the Journal of Science.

Denise Breitburg, lead author and marine ecologist at the Smithsonian Center for Environmental Research, said: *"Oxygen is the foundation of life in the oceans. Ocean oxygen depletion is among the most serious effects. of human activities to the environment on the earth "* .

Levin said: *"This is a huge loss for all sea-related support services, based on leisure and tourism activities, hotels, restaurants . The reactions of Unhealthy ecosystems in the ocean can be huge. "*

The study comes from a team of scientists from GO2NE, a new working group formed in 2016 by the Oceanic Commission of the United Nations Government. This assessment report is the first to look deeply at the causes, consequences and solutions for low oxygen levels worldwide, especially in both open waters and coastal waters. The article highlights the greatest dangers of the ocean to society.

Vladimir Ryabinin, executive secretary of the International Oceanographic Commission, founded the GO2NE group, saying, "About half the oxygen on the earth comes from the ocean. However, combining the effects of nutrient loading Nursing and climate change are increasing the number of 'dead zones' in the ocean and coastal waters, where oxygen is too low to support most marine life.

In traditional areas called "dead zones", like in Chesapeake Bay and the Gulf of Mexico, oxygen levels drop so low that many animals suffocate and die. When fish avoid these areas, their habitat will shrink and they become more vulnerable to other predators or fishing needs.

Even smaller hypoxia can affect animal growth, prevent reproduction and lead to disease or even death. It can also trigger the release of dangerous chemicals such as nitrous oxide, greenhouse gases up to 300 times stronger than toxic carbon dioxide and hydrogen sulfide. While some animals can thrive in dead zones, biodiversity will decline.

Climate change is the main culprit causing this problem in the ocean. Warming of surface water sources makes it more difficult for oxygen to exist in the ocean. Moreover, when the whole ocean becomes warmer, it will hold less oxygen. In coastal waters, excess nutrient pollution from the soil creates algal blooms, reduces the amount of oxygen when they die and decomposes.

To overcome low oxygen in the sea, scientists say the world needs to solve this problem from three angles:

Addressing the causes: nutritional pollution and climate change. Cutting fossil fuel emissions not only cuts greenhouse gases and combats climate change but also minimizes dangerous air pollutants such as mercury.

Protection of vulnerable marine organisms. With a low number of oxygen zones that are unavoidable, the GO2NE group advises that we need to create marine protected areas, relocate potentially at low oxygen areas. Increased surveillance, especially in developing countries, and ocean models will help identify the most at-risk locations and determine the most effective solutions to overcome the area of ??reduced oxygen.

"This is a problem we can solve," Breitburg said. "Terminating climate change requires a global effort, but even local actions can help reduce oxygen levels in the ocean."

Breitburg evidence shows the continuous recovery of the Chesapeake Bay, where nitrogen pollution has dropped 24% since the peak due to better wastewater treatment, better farming methods and successful laws like Clean Air Act.

She added: " *It is more difficult to solve the problem of climate change, but it is important to prevent oxygen depletion in our oceans* ."

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