

Global Warming, Climate Change and Aquatic Biodiversity

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Global warming and climate change show their effect on the environment and the living things living in that environment, as it is known. In particular, extreme changes in the climate causes many negative effects on the environment and deterioration of the ecological balance. Global warming, in addition to climate change and temperature increases, causes regional storms, hurricanes, changes in precipitation regimes, floods, and forest fires, and affects all living things, including humans. At least, it causes these disasters, which were less common in the past, to occur more and to become widespread throughout the world by increasing their size. These extreme climatic events occurring all over the world show their devastating effects primarily on the environment. Afterward, it threatens the life of the living things that come to life in that environment and disrupts the biological diversity and ecological balance. Although the effect of global warming manifests itself primarily with climatic change and extreme meteorological activities, unfortunately, the most important destruction of its manifests itself in the aquatic ecosystem, and it's invisible but very important effects emerge on these areas.

The warming in the waters due to global climate change causes aquatic creatures to change their population and habitats. This situation is forcing aquatic creatures to leave their habitats through migration, primarily due to the warming of the water in wetlands. Some species that find a habitat in a region in large water bodies can leave their area and find a habitat for themselves in other suitable areas. However, creatures living in smaller water areas may not be so lucky in relocation. This unbalanced warming limits the life of aquatic creatures that cannot find the opportunity to relocate in the aquatic environment, especially those living in smaller inland waters or swamp areas, and does not allow them to move from their already limited habitats and prevent their escape. Especially in regions that are under the influence of more severe global warming and climate change, these wetland and marshy areas reach the point of complete drying, and in this case, many aquatic organisms lose their habitat and eventually die.

The situation in glaciers, the world's water reservoirs, presents a similar picture. With the effect of global warming, the glaciers began to melt. Accordingly, with the rise of water in many regions, terrestrial areas have come under the threat of water. From another point of view, the melting of the glaciers will lead to the emergence and discovery of many new species that have not been known until now, have found life in the aquatic environment and have been preserved by hiding under the glaciers. Likewise, these creatures will be able to show themselves in the world once and then disappear. Maybe some aquatic creatures will disappear from the world before they can even be named or identified. Global warming and climate change may also cause the emergence of some pathogenic microorganisms (such as viruses, bacteria, fungi, and parasites) that have been preserved in the glaciers and have not come to light until today. This way it may pave the way for the emergence of many new aquatic disease agents in the future. As the currently existing virus, bacteria, fungus, and parasite species adapt to this change, the emergence of new disease agents in the world and the increase in diseases will also have important effects. In this context, global warming and climate change may cause the change of some known diseases on aquatic organisms and the activity of many unknown new diseases agents in the waters.

As there are many pressure factors on living things in the aquatic environment due to pollutants based on human activities, global warming, and climate change also increase these effects negatively. People have an important responsibility for global warming and

climate change. Because people around the world increase carbon emissions for their own well-being and happiness, affecting the ozone layer, making the sun's rays more effective, and causing a chain domino effect such as trapping more heat in the atmosphere. This situation adversely affects first the climate and then the living creatures in the more disadvantaged natural environments. It should not be forgotten that aquatic organisms constitute the gene sources of the food chain and that people meet their nutritional needs through aquaculture by using these creatures. It is clear that the deterioration or destruction of biodiversity due to global warming and climate change will adversely affect the production of aquatic organisms in the service of humans in the future. Because it is a fact that it will cause the extinction of many aquatic creatures. It is probable that especially endangered aquatic organisms may become extinct in natural environments in a short time. It will cause future generations not to be able to meet these creatures. Just as we recognized dinosaurs from pictures or fossils, it seems likely that our future generations will recognize the pictures or fossils of many living things as inanimate in museums due to global warming, climate change, and our devastating effects on the environment.

Mankind should protect their climate by protecting their environment, and protect their biological diversity by protecting their climate. Thus, it may be possible to transfer biodiversity to future generations together with a healthy and safe environment.

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