CHAPTER 5

ONE OF THE ENVIRONMENTAL DISASTERS: WHAT IS SEA SNOT?

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INTRODUCTION

Climate change affects all life on earth, whether animal or human. While it affects the economy we have, the amount and quality of the food we obtain, the migration of living things in lakes and seas, the food they have to find every day, and the species diversity of these creatures are affected by changes caused by global warming. In addition to global warming, another important issue affecting life is pollution. For the last 3 centuries, while human beings have made progress in industrialization while developing their economies at an ever-increasing pace, they have not considered avoiding polluting nature as a priority for a long time. The ship opened great channels to shorten the sea routes and introduced living things that had not been together until that day (1). Some of them have chosen to destroy the native species in the places they came from, settle in new regions, multiply and consume the native species. We named these species invasive species. Be it climate change, pollution, migrations, and invasive species, all these changes in the ecosystem are caused by human beings and their decisions.

Excessive growth of algae in different colors seen from time to time in our seas, *Sargassum* growths observed from time to time in Dikili, excessive growth of sea lettuce in İzmir Bay, and red-tide of the sea detected from time to time in some coastal areas in the Gulf of İzmit and Marmara. Events such as these are cycles that have been running spontaneously for hundreds of thousands of years as a very natural process in nature. While such overgrowths and imbalances are not observed intensely in places where there is no pollution and the ecosystem is in balance, overgrowth, which has been observed frequently in the seas due to pollution, has been drawing attention for the last 30 years. Along with pollution, dead jellyfish, cyanobacteria-induced foaming, sea lettuce, seaweeds, dead fish, and finally mucilage, which are occasionally seen on our coasts, are observed in addition to these natural processes.

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The decrease in anchovy and sardines, which feed on large amounts of pelagic microplankton, jellyfish larvae, sea urchin larvae, and small invertebrates in the water, both in larval form and in adult form, filter the seawater, and clean the pelagic marine system in large flocks, disrupts the balance of the ecosystem. The formation of sea snot also reduces the producers, namely zooplankton, which is the primary food of these fish. In addition, industrial wastes, agricultural poisons and fertilizers, and domestic wastes, which have been poured into Marmara from our increasingly industrializing cities such as İstanbul, Bursa, and Kocaeli for the last 50 years, have affected all living things of this unique inland sea, decreased species diversity, and exceeded the load that the sea can carry. It has reached the limit of death with pollutants on it. This high degree of stress in the marine environment triggered the sea snot environmental disaster. This process, started by bacteria, will be finished by bacteria. Oxygen is all the bacteria need to break down and dissolve the sea snot calamity and prevent this environmental disaster from occurring. This oxygen is not oxygen that will be given by air hoses as it is given to the aquarium from outside. When overfishing becomes controllable, when predatory fish such as bluefish, sea bream, shark, the apex predator of our seas, are managed to be brought to adult sizes, these fish succeed in forming a healthy marine ecosystem. When the predation of fish such as anchovies and sardines is controlled, their huge swarms consume all the invertebrates and their larvae that deprive the marine ecosystem of oxygen. In addition to these, if we stop polluting the sea, establish treatment plants and inspect these facilities seriously, sea oxygen levels will begin to rise and the Sea of Marmara will begin to revive. Cleaning up long-lasting pollution requires cleaning and awareness at the same time. For this consciousness, public awareness should be raised, the municipalities in Marmara should cooperate and organize symposiums and conferences, establish treatment facilities and punish the industrial establishments that pollute nature with deterrent fines. We need to take precautions today to leave a clean sea teeming of tuna, swordfish, mackerels, turbot, lobsters, sea breams, sardines, anchovies, and bluefish for future generations.

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