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Why do We Pollute and Destroy the Earth's Ecosystem?

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The phenomenon known as a mass extinction occurred five times in the Earth's history. It is a widespread and rapid (in geological scale) decrease in the amount of life on earth as a result of the global response to environmental factors. Every time some 10 million years continued restoration of biodiversity on the planet. Currently, the Earth takes sixth mass extinction, called the Pleistocene-Holocene Event. For the first time it is caused by one of the living species – Homo sapiens [1].

Why do we destroy life on our planet? Is the present scale of biodiversity loss danger to humanity? In 2009, Johan Rockström (Stockholm Resilience Center) and a group of researchers from Europe, the U.S. and Australia, tried to identify the Earth-system processes and associated thresholds which, if crossed, could generate unacceptable environmental change [2]. They found nine such processes for which they believe it is necessary to define planetary boundaries. Their analysis suggested that three of the Earth-system processes — rate of biodiversity loss, climate change, interference with the nitrogen cycle have already transgressed their boundaries. With regard to the first of these processes, the situation looks alarmingly. The planetary boundary for biodiversity is crossed ten times. The authors claim that Earth cannot sustain the current rate of loss without significant erosion of ecosystem resilience. According to the data presented in the Millennium Ecosystem Assessment, today, the rate of extinction of species is estimated to be 1,000 times more than what could be considered natural [3]. A group of prominent ecologists in Science in 2004 wrote about the biodiversity crisis: "Our generation is the first to fully comprehend the thread of the biodiversity crisis and the last with the opportunity to explore and document the species diversity of our planet. Time is rapidly running out" [4]. The loss of biodiversity is now a key part of the debate on the welfare of people and the ability to maintain our way of life.

Biodiversity guarantees the effective functioning of ecosystems. In light of the Millennium Ecosystem Assessment (the biggest scientific project concerning the state of ecosystem services) 60% of the services provided by ecosystems have been destroyed by us or are used unsustainably. The authors underlined that everyone in the world depends on nature and ecosystem services to provide the conditions for a decent, healthy, and secure life [3]. Further spending of the Earth's natural capital means that ecosystems lose their ability to serve future generations. This trend can be reversed only if we make major changes in policy and practice that will halt the trend of further loss of biodiversity.

Watching carefully at our economy and other types of human activities, which lead to the destruction of the basis of human existence, the question arises: Why do why they behave in a unwise way? Why do we undercutting the branch on which we sit? The reasons for this could probably be seen in many aspects. For me, the most important factor, and certainly one of the key one, it is our lack of understanding of the functioning of nature. Environmental ignorance characterized most of our daily decisions but also it is observed in our scientific activity. What we need today is the need to understand the nature again. It seems necessary to better understand the functioning of the Earth's ecosystem and rethink our relationship with other forms of life.

The field of knowledge, whose aim is to understand the structure and functioning of biosphere and ecology. Ecology is trying to learn the secret of life on Earth. What's more, it allows understanding the scientific evidence to protect life on our planet. It combines all the areas of biological research and helps in making environmental decisions. Is there now a lot of research issues more important than understanding the functioning of our planet and the use of effective ways to protect it? Looking at what is happening in science, which of the biological disciplines are popular, a witness might come to the conclusion that ecology does not bring important information, or knowledge of the functioning of ecosystems is already full. Compared with their sister disciplines, ecology is still disadvantaged. Edward O. Wilson ("the father of biodiversity") underlined the crucial role of ecology: "As genomics and biomedicine are to human health, so ecology and conservation biology are to the planet's health" [5]. And some scientists, e.g. Robert D. Holt (Department of Biology, University of Florida) believe that in a decade's time, ecology will be viewed both as a core part of biology, and increasingly as an essential dimension of the Earth sciences [6].

Neil Everndon pointed out that the idea of interrelatedness goes beyond the usual scientific sense of causal connectedness; from an ecological standpoint there are no discrete entities [7]. Acceptance and fully understanding of this basic the basic assumption (everything is connected to everything else) is the "revolution", a complete change in the approach to nature and what we need most today.

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