

A WORLD WE'RE

On April 2, 2017, crowds of tourists moving slowly through the Chocholowska Valley. Everyone wants to see a miracle of nature. A short lived but beautiful spectacle of nature has begun – the Tatra Mountains' slopes are covered by thousands of blooming crocuses. It's a comforting thought that Poles love nature so much. But will our children and grandchildren still be able to admire this miraculous spectacle in the future? Today's mass tourist traffic threatens to degrade some of the most popular places. However, this is not the main threat to the future of the biosphere. Main threat is uncontrolled human expansion. So aggressive that we can not see all its effects. Some of the damage, however, is already visible. The data is alarming.

Chocolate greed

When you sit down comfortably in a chair and you eat a delicious chocolate you probably do not think much about Ivory Coast. This state, located in the tropical zone of Africa, was once covered almost entirely by the equatorial forests. In 1990, they covered still 25 percent of the country. In 2015 it's only 4 percent. How has this happened since the state has been independent for over half a century? Why its inhabitants do not protect the surrounding nature? The answer is simple – they want to survive, and for a rapidly growing population

the most profitable activity is cocoa cultivation. The consumption of chocolate in the rich countries of the North is still growing and chocolate is becoming popular in China, hence huge food companies are willing to pay for cocoa beans. And the damage it's done not only by farmers who live on 54 cents a day, but above all, by officials who in return for bribes turn a blind eye to those who infringe bans and laws protecting nature. The area of cocoa crops is still widened, but it has just reached the limit. The soil devoid of dense vegetation quickly becomes sterilized, the living conditions deteriorate rapidly. What will the farmers do when the cocoa plants can no longer be cultivated? How can forests protect us from global warming, since trees that bind CO2 from the atmosphere are covering now only 4% of the country?

The dying microcosm

Probably most of us can recall a picture of a meadow from childhood: a lot of sunshine, buzzing insects and butterflies are bustling among colorful flowers. Indeed it used to be like this. But it is not anymore. Since 1989, German scientists have carried out very meticulous studies of the biomass of flying insects in 63 protected areas in Germany. In a nutshell – each year in the same locations they catch and weigh the number of insects appearing at selected times of the year. The data they col-

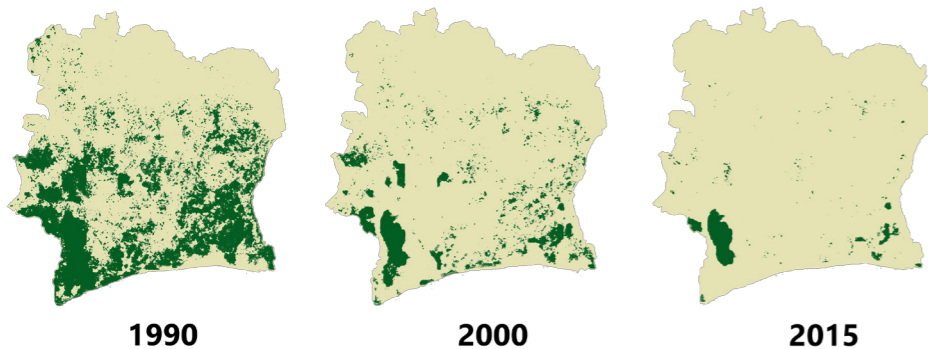


25 years ago there was around 1 billion of monarch butterflies. Today their number is estimated at only 33 millions.

lected is far worse than disturbing – by 2016, the total mass of insects decreased by 77–82 percent. What is worse – it is not entirely clear why this is happening. The research covered protected areas, where the habitat conditions should be reasonably stable. Yet, dramatic declines were recorded everywhere. Besides, the problem concerns not only Europe. For example, the number of famous, wandering monarchs butterflies in North America in the last 25 years has decreased by 97 percent! Probably responsible for this are climate change, fragmentation of habitats and intensification of agriculture. It would seem that it is nothing, in the end insects are not very "useful" to man. Nothing more wrong. The vast majority of all animal species are insects. They are food for 60 percent of all birds and they are responsible for pollinating 80 percent of plants. Their absence may lead to disturbance of entire ecosystems and also threaten food production. Damage can be irreversible.

Ocean of plastic

When you throw another plastic bag into the basket you probably do not hear the sound of sea waves. And yet, even a million animals a year – birds, mammals, reptiles or fish are killed because of the tons of plastic waste that goes into the seas and oce-



Forest cover in Ivory Coast 1990-2015.
Source: www.mightyearth.org

NOT SAVING

ans. Animals are choking, strangling or getting entangled in plastic nets and other rubbish. And this is only the largest waste visible to the naked eye. No one yet knows what effect micro pieces of plastic that float in the waters around the world would have on the environment. Annually, the average inhabitant of Europe and North America produces more than 100 kg of plastic waste. A significant part of it goes to the environment and eventually flows into the oceans. In Poland, only 14 percent of waste is recycled. The average for the EU is 38 percent. The shredded plastic micro particles are found in algae, are eaten by plankton, and then by larger animals. In this way, they also reach our plates and poison us. It is estimated that in 20–30 years the weight of plastic floating in the seas will outweigh the mass of all fish. The number of latter is rapidly decreasing, we have already eaten 70% schools of fishes of the world, further fishing will be smaller and smaller. The ocean is threatened by emptiness, and human race by hunger.



Kanapou Bay, Hawaii, USA.
Photo: NOAA's National Ocean Service

The power of the asteroid

The rate of extinction of species of animals and plants on Earth has already reached the scale of the one that affected the world of dinosaurs 65 million years ago. Their extinction was caused by the hit of an asteroid, which resulted in a rapid change of climate: our planet was enveloped in the dust of a dark winter. We create the current extinction ourselves and in all corners of the world. The polar ecosystem is threatened by global warming, the scale of which has been unheard of for hundreds of thousands of years. Similarly, coral reefs are being destroyed by increasingly warmer and more acidic ocean. Large expanses of land are becoming deserts and forests are turned into species-poor plantations lacking diversity. We are trying to protect the great and beautiful species of vertebrates, because public opinion is keen on them, but we are really delaying their fate, keeping the decreasing populations alive but incapable of natural reproduction. Their habitats are almost gone, as well as chances for them to come back – the population is growing so rapidly

that there will be no place for them. Life on Earth has entered its sixth great extinction in history of the planet.

SOS for Humanity

But not only the biosphere is threatened. Our further existence on the planet is also questionable. Because we are part of nature, without it we will not be able to survive. In 1992, 1700 scientists have signed the "Warning of scientists of the world for humanity" petition, in which the main threats were diagnosed. 25 years have passed since then.

It turns out that only one of the threats has been resolved – it is an ozone hole that has significantly decreased after the use of destructive chemical compounds has been banned. This is the only positive message. All other indicators have deteriorated significantly. Threats are coming, that is why the latest appeal has already been signed by 15 thousand scientists from 184 countries around the world. In the appeal, they pay attention primarily to the risks associated with uncontrolled consumption of limited resources. In comparison to the situation from a quarter of a century ago the amount of accessible drinking water per one inhabitant dropped by 26 percent.

The number of vertebrates on the planet has decreased by 29%, and in the same time the population of people has increased by 35%. Dead zones in the oceans have increased by 75 percent. 300 million acres of forests have disappeared. To this must be added a continuous increase in carbon dioxide emissions (in the years 1990–2014 by 57%), and hence, an increase in average temperatures. In the matter of reducing emissions, it was possible to sign an agreement in Paris, but today it seems to be not ambitious enough to stop global warming. In addition, President Trump announced the withdrawal of the US from the agreement – country which ranks second in terms of CO2 emissions. So, what else can save us? Probably only one thing – change in the behavior of people around the world. Change is needed in our daily choices as consumers and once in a few years as voters – during political elections. Regardless of how trivial or pretentious it sounds.

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