Ecology in Lithuania: Old habits replaced by new ones Vlada Novickaja (Mykolas Romeris University, Lithuania¹)

The forest like a living creature breathes Antanas Baranauskas

February has great significance for Lithuanians because this is the month when we celebrate our Independence Day. This day is very important for our nation, but for the people, it is also impossible to be independent of nature. Nowadays, climate change is relevant not just for one nation or people but for the whole world: various artists and public figures talk about this issue and try to motivate us to live in a different way in order to help our planet's climate. Educational programs, recycling systems, publicity campaigns–including flash mob events–are some examples of the ways we try to respond to climate change. The question, however, is if this is really enough.

Lithuania is located next to the Baltic Sea and is famous for its numerous rivers and lakes, its many ancient hillforts, and vast forests. I live in the beautiful port city of Klaipeda, which is surrounded by forests and the astonishing Baltic Sea. Unfortunately, global warming has also touched our countryside: every year brings higher temperatures. Plants and animals are on the edge of extinction.

The quotation above is from the poem by Antanas Baranauskas, "The Forest of Anykščiai." This poem is full of charm and its descriptions of nature are without equal. Its main theme is the spiritual connection between humans and nature and the fate of the forest which is closely connected with the fate of our homeland. The author reveals not only beautiful views but also Lithuanians' love of nature. Our nation is very proud of our country's wildlife. Sad to say but sorrowful news about nature is reaching us with each passing day.

Perhaps the most serious problem concerns the Baltic, which has come to be known as the most heavily polluted sea in the world. The formerly clear water of the Baltic Sea has become heavily eutrophic over the last century. The sea is overflowing with nutrients, upsetting the balance between plant and animal life in the sea. As the plants decompose, they deplete the ocean of oxygen. This is a serious problem not only for the marine ecosystem but also for the people of the Baltic nations.

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Unfortunately, it is not the only problem. As a result of global warming, in the 110 years between 1901 and 2010, the average sea level worldwide rose by 10 centimeters. As the sea-level rises, the possibility of floods in the low-lying coastal regions is growing. For example, recently there was a flood in Šilutė, which is located near a water-meadow and between two rivers. As a result, people were left without electricity, property was damaged, and in several districts people lost their homes to flooding. Moreover, the oceans are becoming warmer and warmer; for the past 40 years they have absorbed about 90% of the additional heat released into the atmosphere as a result of human activity. Marine life has been forced to migrate to polar regions in search of cooler water. Moreover, the oceans as a whole are becoming increasingly acidic, which is detrimental to marine animals. The oceans and seas absorb about a quarter of our annual carbon dioxide emissions, and as CO₂ increases, so does the amount of the gas dissolved in seawater. It does help to regulate climate, but on the other hand, it changes the chemical balance of the oceans and seas.

Another big issue is rising temperatures. In Lithuania the start of air temperature observations dates back to 1770 in Vilnius. Measurements going back more than 250 years allow us to see natural and man-made climate variability. Sadly, a very sharp rise in the annual average temperature can be observed over the last 30 years. Although Lithuania is located in an area of extensive irrigation, summer droughts are becoming more frequent. Moreover, there is a tendency for precipitation to increase in the cold periods of the year and to decrease during hot months.

As a young person, I can say that a lot of changes have taken place since my childhood years. In my opinion, the most notable change has been the rise in summer temperatures. With every year the number of "hot and sunny" days is increasing, which causes wildfires: animals are losing their habitats, plants are vanishing. Also, extremely hot weather causes health problems. On the other hand, our way of life has changed too. In order to withstand climate change, Lithuanians have been introduced to the idea of bottle recycling, and to the phasing out of free plastic shopping bags. Many people have begun to use walking apps with various bonuses and rewards, and to ride bicycles on new dedicated cycle paths. Lithuanians are also recycling garbage, and taking free public transport to festivals and events.

Speaking about recycling, the most notable change in my opinion has been the bottle recycling system. In today's Lithuania, virtually everyone is recycling plastic bottles because when you buy anything in any sort of container, be it plastic, glass, or can, you are required to pay a 10-cent deposit which is returned in the form of a coupon when the bottle or other container is deposited in a recycling machine. Moreover, grocery shops and bakeries encourage customers to use reusable bags. Some bakeries provide paper bags for free. Also, almost every shop packages its products using recycled materials and invites people to use recycled products too. Shopping centers have eliminated mixed trash bins replacing them with recycling bins. In apartment blocks improved recycling trash bins are being introduced to citizens. Now old trash bins are being replaced by modern and bigger recycling bins.

Concerning transport, Lithuania provides more and more cycling roads both in the city and in different parks. Moreover, Lithuanians are being motivated to use public transport thanks to the

introduction of buses with free public Wi-Fi and air conditioning. Also, for big events, such as the Sea Festival or the Lights Festival, cities provide free public transport for citizens.

Ecology has come to be an accepted part of educational curriculum at every level. Children take part in lessons in the open air. As I am a graduate of an arts gymnasium, I can bravely say that almost every year no matter whether we were asked to design a poster or produce a sculpture, the composition theme was in some way related to ecology. Moreover, we had plenty of different lectures and seminars about this topic, and were encouraged to engage in activities such as "Ecology Day" and to take part in flash mobs. For example, every year we were collecting old batteries or bottle caps. At university, we have recycling bins all around the campus, and we do our writing assignments entirely digitally, refraining from printing out our work. Also, students are warned to save energy and water in different places by reminders posted on the wall.

As for different apps and other social activities, today Lithuanians are being introduced to the app "#walk15". The main idea of this app is to count how many steps a person takes per day and to show how by doing so, the walker has performed the function of "Virtual Trees." It is well known that every kilometer that a car travels, it produces 180 grams of carbon dioxide. For each kilometer the app displays 5 trees, since that is the number required to absorb 180 grams of carbon dioxide. App users who accumulate large numbers of steps can earn different kinds of bonuses. For example, the "IKI" chain of grocery shops provides a 20% discount for fruits and vegetables in return for 20,000 steps. This same app encourages users to take various hiking trails to historic sites throughout Lithuania.

Climate change can have harsh consequences, that's why measures to adapt to climate change are necessary. In order to reduce the negative effects of extreme weather events and to warn the population about possible dangers, forecasting meteorological and hydrological phenomena and daily observations should be very important. Social and environmental monitoring should go hand in hand with technical adaptation measures so that our society can adapt and take responsibility for the changes.

In conclusion, I would like to say, that there is a way to save our planet from climate change and it is not required to be a scientist or ecologist. Nature is not only a gorgeous landscape for "Instagram" photos but also our main life resource.