

SAHARA COMING SOON

The climate changes are just beginning

We have not expected for the dramatic sights of Australia blaze to appear in Poland so soon. The largest fire in the history of Biebrza National Park destroyed six thousands hectares – over 10 per cent of its area. Exceptionally low ground humidity causes the forests to be closed to the public. The level of water in many rivers is the lowest in a hundred years of records. We see dust storms, which have always been associated with Africa. Polish farmers are facing a huge challenge and the consequences of crop failure will be felt by all in high food prices.

Unfortunately, everything indicates that this is only the beginning, and what we now consider to be an extreme draught, will soon become a norm. In the 30 years between 1951 and 1981, we had 6 draughts in Poland, on average one in 5 years. In the years between 1982 and 2011 there were 18 episodes of the draught, on average one every two years. Climatic conditions in Poland will soon be comparable to those of Spain today, while Spain will turn into a desert.

Despite the fact that the Polish government persistently negates climate changes, even its own 'Economic Policy 2030' informs that: *In the coming years the effects of the climate change will be increasingly felt (...), more frequent draughts and losses associated with farming and forestry, limited access to water for human consumption and increased risk of forest fires.*

Why this is happening?

Burning of fire, oil and gas causes increased density of carbon dioxide in the air, this is now 45% higher than at the time before industrialisation. Carbon dioxide is a greenhouse gas, so the Earth gets warmer and this process accelerates. In the first

quarter of this year, it was 5°C warmer than average in the years before.

The ground dries up in the higher temperature. In order to retain its required humidity, we need more precipitation. For every degree of increased warmth, 15% more rain is needed. Presently, precipitation in Poland decreases and will decrease further. Moreover, when it rains, it is a torrential rain after which the water, instead of getting soaked in the dry ground, streams into rivers and subsequently to the sea.

Climate changes disturb the work of two powerful global phenomena. One of them being the so called Hadley cell. Big masses of air travel at great altitudes from the equator in the direction of the tropics where they descend, completely devoid of humidity. In the regions of the world where this dry air falls, we have the deserts and the steppes. The alterations in the range of the Hadley cell, causes that dry air falls increasingly closer to the poles. The steppes and the deserts gradually move in the direction of Poland.

The second phenomenon is the stream current running from the west to the east between polar region and warmer zone of lower geographical latitudes. The changes associated with global warming result in the influx of warm, dry air from the south to stay longer over Poland. Then rainless periods last for months instead of weeks.

Snowless winters are also a problem, closely linked with the increasing temperature. Snow means water, which usually lays in the fields providing moisture to the plants. For nature and farming, it is optimal when water accumulates in the winter and it is released when it is really needed, i.e. at the time of dynamic growth. Winter rain does not have

this effect – before the plants spring up, the rainwater has already gone to the sea.

What can we do?

In order to adjust to the changes already happening, we should invest in water retention. At the moment, we accumulate water and keep it over long time in just 6.5% of the average annual river water tide. We should increase this indicator twice over. We have to increase the level of ground water, return the flood lands and swamps formed by rivers and streams, build dykes and bring back natural ecosystems, protect woodlands and plant trees.

Draughts are the effect of climate changes caused by greenhouse gases, mainly carbon dioxide. They will not stop by themselves. If we do nothing, they will be expand faster. In order to slow them down, we must quickly limit CO₂ emission by moving away from burning fossil fuel. In place of carbon-powered electricity generating plants, we should build photovoltaic generators, wind farms, and biogas generators. We should also limit our use of energy. It is also important to warm our homes with more efficient sources of warmth, like air pumps.

These big system changes are in the hands of governments and international organisations. A growing number of organisations and public initiatives demand a swift government action against climatic catastrophe. In the last year, The Young People's Climatic Strike and Extinction Rebellion became active in Poland, focussing on climate changes.

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