

GLOBAL WARMING

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Global warming is a progressive increase in the temperature of the Earth's surface, which is associated with the greenhouse effect and leads to climate change on a global scale.

Over the past 4.5 billion years, astronomical and geophysical factors have been the main culprits for climate change. However, according to scientists The Anthropocene Review, the last 60 years have shown that human activity has led to incredibly rapid changes in the Earth's system and initiated the anthropocaltic period.

According to the results of the World Climate Summit in Paris, 194 member countries of the UN Framework Convention on Climate Change, including Ukraine, signed the Paris Agreement in early 2016. States have pledged to "dampen" the pace of global warming by starting to regulate CO₂ emissions.

Scientists believe that there are several gases that cause the greenhouse effect. They are formed as a result of combustion of fossil fuels with cars, metallurgical plants and energy companies. The main thing is CO₂. Its concentration in the atmosphere is also increasing due to the deforestation.

However, some scientists also call the methane CH₄ gas, which is released from garbage dumps and as a result of agricultural activity (especially after grazing of herbivores), and H₂O is formed from fertilizers. Also, the gases used for refrigeration units have a negative impact on the atmosphere.

Global warming can lead to the spread of diseases and damage to the crop. The World Bank also notes that the poorest people are already suffering from its consequences, namely droughts and floods, since the poorest sections of the population are dependent on agriculture.

Also, the oceans become warmer: they absorb heat that accumulates as a result of the greenhouse effect. This leads to faster melting of glaciers in the Arctic and Antarctica.

Today, the Earth's surface temperature is rising twice as fast as it was 50 years ago. So 2016 becomes the third consecutive year, which sets a new record for temperature. All this leads to the melting of glaciers in the Arctic. At present, the thickness of ice in the Arctic rarely exceeds 2-3 meters. The catastrophic reduction of ice cover in the Arctic is confirmed by the NSIDC data.

The ice sheet in the Arctic has increased this year, very little ice in the corresponding season, this figure claims to be the lowest in the history of observing with satellites. According to the mission of NASA's GRACE the ice sheet of

Greenland dropped by 150-250 km³ per year from 2002 to 2006 [1]. The Antarctic ice sheet decreased by 152 km³ between 2002 and 2005.

The data from NASA's GRACE satellites show that ice cover in Antarctica and in Greenland is losing weight. Since 2002, Antarctica loses about 118 gigatons of ice each year, while the icebergs of Arctic Greenland loses about 281 gigatons annually. Recent data from American satellites has shown that the ice cover around Antarctica has fallen to the smallest in the history of observation since 1979. The area of the ice in Antarctica decreased to 2.28 million km² as of February 13, according to the NSIDC. This figure was only 27 February 1997 – 2.29 million km² [2].

A NASA 2013 study has shown that the main reason for melting ice in Antarctica is to cover the Antarctic Ocean. The melting of basal ice from water immersion was 55% of the total loss of ice cover during 2003-2008. Also, know about cracks in glaciers caused by global warming. Last year, the world shook the message of a sharp increase in the shelf glacier Larsen C, which in Antarctica, and without that tremendous crack. Today the length of the crack reaches 175 km

One of the possible destructive factors is the rise of the glacier with the warm waters of the Antarctic Sea and the effects of warm air, which is a consequence of global warming. A Project team of MEDAS states that this destruction is not a direct result of climate change caused by human activity. Other hoaxes which should be mentioned are the loss of sea ice poses a serious threat to the Arctic species – seals, fish, wolves, foxes and bears. The Arctic food chain relies on a steady platform of sea ice, which hunts bears and foxes; wolves create flocks. The destruction of ice will strike across the entire Arctic ecosystem, as the ice provides the basis for growth for algae (the initial component of the food chain) as zooplankton feeds on algae. They eat fish, then seals and bears. So the reduction in the number of algae shakes the entire chain.

Global warming affects not only the lives of the inhabitants of the North Pole, but also the flora and fauna of the entire planet. Half of all mammals (47%) and about a quarter of all birds (24.4%) listed on the IUCN Red List suffer from adverse climatic changes. There are about 700 species.

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