

HOW TO REVERSE GLOBAL WARMING

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Global warming is an observable fact; it does not depend on the opinion of scientists or politicians. Just look at the dynamics of the average annual temperature on the planet.

Over the past hundreds of years, the temperature on the planet has risen by only 1°C. It seems to us that this is quite a bit. This causes public concern and force the governments of developed countries to impose restrictions on dirty industries.

From year to year, the climate on Earth is changing for the worse and this is

becoming a problem for mankind (An Information Statement of the American Meteorological Society, 2019). The change in the global climate is proved by various scientific works. There are constant discussions and disputes around this phenomenon. Many scientists call this process "global warming". Others think it will lead to global cooling.

The evidence for climate change is there and familiar to most of us: an increase in the amount of water in the ocean, which is associated with the melting of glaciers that release huge amounts of water, floods in Eurasia and droughts in Africa.

Global warming is already affecting most of the animal species that live on our planet. Polar bears and penguins will move away from their habitats to a colder place. A lot of species of animals, insects, and plants will disappear altogether. Hundreds of millions of years ago, warming destroyed almost the entire globe.

According to the forecasts of a large number of scientists, global warming can provoke a cooling all over the planet. In the 19th century, volcanic eruptions were the cause of the cooling, but now this can provoke the melting of glaciers and an increase in the level of the world ocean (Climate Change (2014) Synthesis Report Summary for Policymakers, 2014).

The initiative to create a new research center is coordinated by Professor David King, a former scientific adviser to the British government. Scientists proceed from the fact that the measures proposed now will not be able to prevent dangerous and irreversible climate change on the planet.

One of the most promising ideas is a project to increase the reflectivity of clouds over the poles of the planet. To this end, it is proposed to spray seawater with powerful hydrants installed on automatic vessels in polar waters. Thus, micro droplets of saline solution will appear in the air, which will form a cloud with a higher albedo or reflectivity, and thus cool the water and air in its shadow.

Another new approach is a variant of the well-known concept of carbon dioxide extraction or sequestration from the atmosphere. It involves intercepting carbon dioxide emissions from coal or gas thermal power plants or steel mills and burying them underground.

Another proposal that the new center will consider is seeding the oceans with live algae in order to increase the absorption of carbon dioxide. Such a scheme involves spraying powdered iron over the ocean, which stimulates the growth of phytoplankton. Previous experiments have shown that the growth of algae does not lead to a sufficient increase in the amount of CO₂ absorbed and may even lead to disturbances in the ecosystem.

In conclusion, I believe that if we simply reduce the level of greenhouse gas emissions into the atmosphere, we will only achieve that global warming will slow down. And this is bad, because now the average temperature of the planet is too high and we already have too much carbon dioxide in the atmosphere. Therefore, I think that geoengineering projects can lead to more active removal of greenhouse gases from the atmosphere. People are able to reduce CO₂ levels below what exists now and cool the climate to the level that existed before the industrial era.

References:

1. An Information Statement of the American Meteorological Society (2019) *American Meteorological Society*. Retrieved from <https://www.ametsoc.org>
2. Climate Change (2014) Synthesis Report Summary for Policymakers. *The Intergovernmental Panel on Climate Change*. Retrieved from <https://www.ipcc.ch>