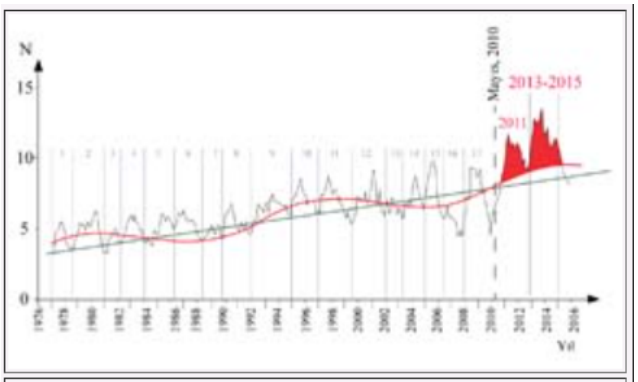
GLOBAL WARMING IS A GLOBAL WARNING !

In recent years, there has been an increase in natural disasters in the world. So what are the factors that cause these natural disasters to increase? With the melting of glaciers as a result of global warming, do passive faults become active? Are we doing our best to prevent global warming or are we just watching?

We are faced with many consequences of global warming that we see and realize. It is also possible that some of our actions may not have short term consequences. They may have serious consequences in long periods, such as earthquakes. Our students, who wanted to take action on this subject, created a roadmap by consulting experts in their research before taking action.

Climate Change Triggers Earthquakes

According to research, the presence of glaciers keeps the faults inactive. It is stated that the disappearance of the pressure created by the melting of the glaciers may lead to the movement of faults that have been inactive for a long time. Due to the melting of the glaciers and the displacement of the masses, the balance of the world is disturbed and the mobility under the ground increases. There is data showing that global warming caused an increase in the number of earthquakes above 6.5 intensity between 1976 and 2010.



Graf.84: 6,5 şiddetin üstündeki depremlerin 1976-2010 arasındaki sayıları ve 2010 sonrası oluşabilecek trend.

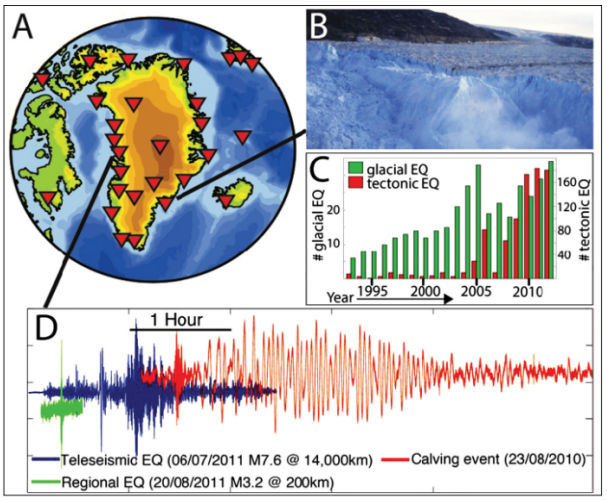


Fig. 1. (a) Locations of seismometers (red triangles) in the Greenland Ice Sheet Monitoring Network (GLISN). Contours indicate bathymetry and topography. (b) Detachment of a large iceberg from Helheim Glacier near GLISN station ANGG causes a glacial earthquake [after Nettles and Ekström, *2010]. (c) Number of recent glacial (green) and tectonic (red) earthquake detections in Greenland. The increase in glacial earthquake detections reflects the retreat of glacier margins around Greenland; the increase in tectonic earthquake detections results from better seismometer coverage. (d) Seismograms recorded at GLISN station NUUG [*Walter et al., *2013] (reprinted from* Journal of Glaciology *with permission of the International Glaciological Society).*

Photo 1 **Photo 2**

Report with Director of Kandilli Observatory and Earthquake Research Institute , Bogaziçi University

As a result of global warming, the impact of climate change on living things can be enormous. However, unless they are involved in the process, the magnitude of these disasters will not be realized. Over time, these effects will grow and worsen. With global warming, natural disasters will show their effects even more.

To get information about the relationship between the activation of passive fault lines and global warming and about the measures that can be taken to prevent global warming, we interviewed with Director of Boğaziçi Kandilli Observatory Prof. Dr. Haluk Özener.

Shedding Light on Our Research, Some Important Topics from Our Interview with Prof. Dr. Haluk Özener

There are findings, albeit partial, that there may be a relationship between geophysical disasters and climate change. The best example of this is the decrease in global temperature after major volcanic eruptions. Within the scope of the KUTUP (Arctic-Antarctic) Science Program called by TUBITAK, geophysical observations can be made depending on climate change.

We think that it will be a very positive breakthrough as there will be information and technology transfer to our country within the scope of EU projects to be created with the participation of researchers from universities, experts from relevant government institutions and scientists from abroad, with the coordination of AFAD (Disaster and Emergency). In this way, as young scientists, researchers and experts on the subject will be trained, we will become a society that is more resistant to disasters in the long run.

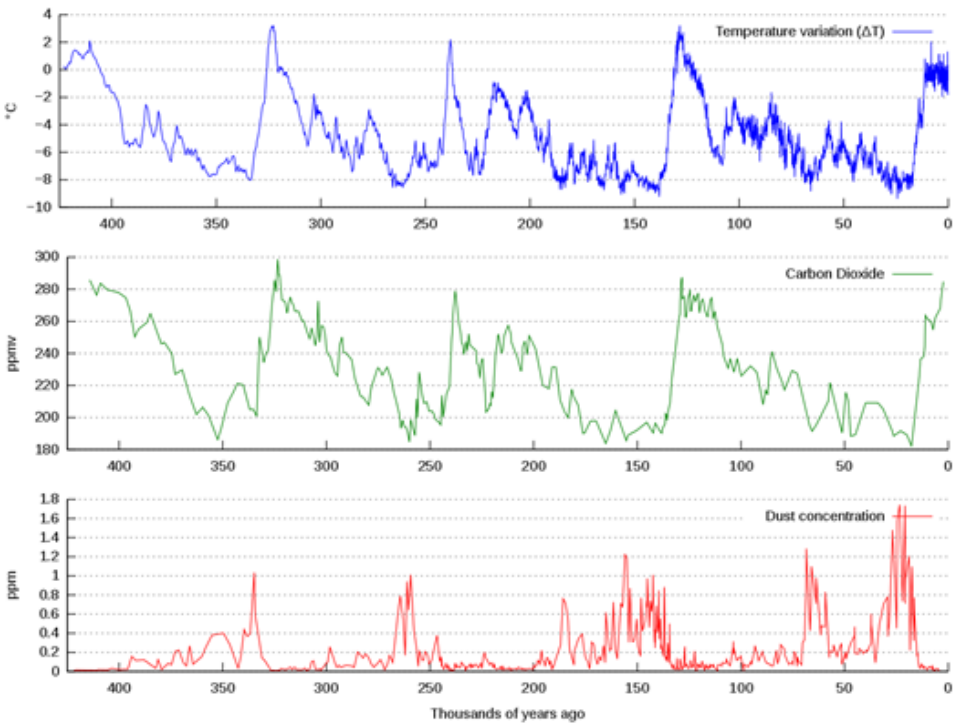
A new study conducted at the Ruhr University in Bochum, Germany, revealed that the consequences of global warming could be worse than expected. According to Andrea Hampel, who led the research, if the melting of glaciers continues at this rate, it should not surprise anyone that the earthquakes that occur are increasing day by day.

Putting a Stop to Global Climate Change

Scientists have reached a consensus that global warming is caused by humans. 97 percent of climate scientists support this conclusion. Studies that reveal the links with climate changes are increasing. In the report of Achim Steiner, Head of the United Nations Environment Programme, it is stated that global warming is more than 90 percent likely due to human activities.

“As a result of global climate change, very large earthquakes may occur in the north of the world due to the melting of glaciers.” Based on the main idea, we decided to start a campaign within the school to “Stop global climate change”.

There are simple but effective solutions that people can do to put a stop to global climate change. Stating that it would be extremely beneficial to take the necessary initiatives to minimize greenhouse gas emissions, Prof. Dr. Haluk Özener shared with us the graph showing the changes in temperature and the increase in CO2 emissions in the last 400 thousand years.



There are many things we can do to prevent global warming. Nature is calling us! While some listen to nature, others do not. If we do not quickly realize and raise awareness that future disasters may be huge, we will face huge consequences.

Small Steps for Us, Big Steps for Nature

We shared a short questionnaire with all our secondary school friends in order to determine the level of awareness about the subject in our school. According to the results of the survey, although the number of people who think that global climate change may be related to the causes, effects, consequences and natural disasters is high, we have seen that there are more people who have no idea that global climate change may be related to the earthquake.

Thereupon, an information campaign was launched under the leadership of Kiara Camciyan.

It's Not Enough to Watch, You Have to Take Action

Kiara gave an informative and awareness-raising speech in the classrooms with the posters and handbooks she received from Boğaziçi Kandilli Observatory Earthquake Research Institute.

He exchanged ideas with the classes about what we can do to put a stop to global climate change.

With the results, informative presentations were prepared to be watched on the school digital boards. Topics such as the effective use of recycling bins, the importance of recycling in our homes, and the efficient use of energy savings were mentioned.

As the Young Reporters for the Environment, in order to make a difference in our school and to make our voice heard in the society, “Change begins in the immediate environment.” We will follow the idea that we will adopt the idea and take our next steps accordingly.

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