

Reflection on students' knowledge of the causes and impacts of global warming

Global warming is the incidence of increasing temperatures globally due to an increase in greenhouse gas (GHG) emissions in the atmosphere. This warming is based on the process called the greenhouse effect. In this process, sun rays are reflected by gas molecules in the atmosphere which enables an appropriately warm climate for life to exist. Although this is a crucial part of a liveable planet, the increase in the concentration of GHG emissions since the 1950s can make it unlivable through global warming. This poses several threats to social, ecological, and economic conditions. Therefore, this paper will examine and reflect on what students consider the most threatening impacts of global warming and the leading causes of it.

When asked about the impacts of global warming in the next 100 years, student 1 mentioned the increasing altitudes of hot climates and the risks associated with that. By referring to statistics from Statista, he voiced his concern about the shifts in the temperatures occurring in Northern European cities already by 2020. He mentioned that Stockholm will be as hot as Budapest today and London as Rome. As seen, this is already 27 years ahead, meaning several years before the 100 years initially asked about. When further elaborating on the effects of this shift, a concern raised was the increase in vector-borne diseases. As the temperatures rise, suitable conditions for mosquitos that carry diseases and pass them over to humans will spread. As an example of this, he mentioned the increased risk of malaria and dengue fever in Europe, which has already started to occur. In addition, he mentioned a global North-South inequality concerning vaccination and access to medicines. He meant that for instance malaria could have been eradicated several years ago, but due to the low risk of incidents in the Northern countries with the highest financial means and research capacity, the spread and ambition to make it extinct has not been prevalent. This pattern of global inequality in adaptation, mitigation, and good health in the world was a great concern for him.

Student 2 took a rather pessimistic view and related it more to her own experience of what causes global warming. When first met with the question, her answer was: "We will all die and it is a catastrophe", demonstrating the low hope she has for the world's inhabitants to manage the pressing climate issues. To explain her pessimism, she mentioned the imprinted systems, behaviors, and norms in our society that undermine the advances we make. For

example, when working in a food store she noticed the tendency of consumers to buy “grotesque amounts of food” and the low efforts by the managers to decrease food waste. Since these essentially are effects of our norms, behaviors, and growth-focused economic systems, she feared that if not dealt with, global warming and other impacts on the climate would continue to accelerate in a manner. Thus, our current consumption economies with unsustainable norms are what student 2 brought up as one of the main causes of global warming and an eminently difficult system to solve.

Instead of focusing on the causes of global warming, student 3 considered the large impacts on glaciers and the increase in water levels as two of the most worrisome impacts of global warming. She stated that the decrease in the levels of glaciers has been envisioned for her by both being in the Alps and by watching film footage of the areas of glaciers that have disappeared. Concerning this, she voiced concern for both the animals and ecosystems that rely on these glaciers (e.g. polar bears) and the existence of sports that are dependent on snow. She meant that the first concern was more alarming since this also would affect millions of people that live in areas affected by rising sea levels and rely on the ecosystems too. However, the second concern was mentioned since she thought that this example illustrated how even organizations and people who are largely affected and have financial means to impact a large mass of people still devote low efforts to change it.

What is notable from these interviews is that people are prone to relate the impacts of global warming and its causes to their own experiences. If the interviews would have been conducted with students from countries in even hotter climates, e.g. India or Kenya, the questions would most likely have differed. My reflection on the issue is the need for highlighting the global health effects that global warming incurs. Not only will vector-borne diseases spread worldwide, but high temperatures will also lead to high incidents of deaths due to cardiovascular and malfunctioning of otherwise normal bodily functions. Furthermore, continuing on the aspects of the melting of glaciers - emphasizing the non-reversible effects of global warming is a crucial aspect. As numerous planetary boundaries are being transcended and more tipping points are reached, possible scenarios to reverse the trends are decreasing. It is therefore crucial for people to understand the urgency and the high risks that prevail if no action is taken. And in terms of action, what can be retrieved from these interviews is that people are prone to relate to first-hand experiences and events that evoke emotions. Thus, transforming the climate change issues from global and abstract to local and

concrete could possibly affect people to take further action and pressure stakeholders to do the same.

In conclusion, the students interviewed voiced concerns about warmer temperatures in higher altitudes and the spread of diseases following it, melting of glaciers, and our destructive consumption economies as impacts and causes of global warming. What is notable is that although the students had an adequate understanding of the issue, their greatest concerns were related to their own experiences of it, and other issues, e.g. desertification, were not mentioned. However, knowledge about climate change amongst students can be further enhanced to elevate climate action.

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