



Transforming the world's perception of rapid global climate change: A 12-year deadline posed here and now

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The report of the United Nations (UN) released in October 2018 posed a 12-year deadline to limit climate change to a global temperature rise of 1.5-2 °C by the end of the 21st century. If we choose to ignore this call, we risk, in the most probable scenario, ending up with a ~3-5 °C increase in global average temperature in the course of one century only. Reconstructions of past climates show that such a strong change in average global temperature is comparable to, or even more pronounced than, that which occurred during the transition from the last ice age to the pre-industrial period, but with a 1000-fold increase in rate. It has been suggested that the changes we are observing today may lead to a sixth mass extinction, since literally half of Earth's wild life is already on the move towards higher latitudes and higher altitudes (e.g., Pecl et al., 2017), coral reefs and trees are dying, and phytoplankton, which is responsible for 50% of the oxygen on Earth, is endangered by climate change. These responses of the biosphere to ongoing warming occur in tandem with more frequent extreme weather events, diminishing glaciers, and higher sea levels. Such transformations have happened before: a recent study has shown that the Permian mass extinction (~250 million years ago) was related to a rapid rise in global temperatures that ultimately killed 96% of all marine species and ~70% of terrestrial life. Thus, if the perception of the world's majority does not change drastically, meeting the conditions that caused the Permian mass extinction could be a matter of time, perhaps only decades from now. The situation calls for action, rapid and unceasing. However, such action would require a financial commitment as well as time investment that are outside the priorities of most countries.

This study presents a new, multifaceted educational program that builds upon an extensive use of mass communication and a simplification (reduction of complexity) of scientific findings to inform citizens about the impacts of observed climate change, upcoming dangers, and actions to take. The aim of this program is to educate and change the perception of citizens, thus promoting action by decision makers. As part of it we propose to target television (advertisement time and shows), cinemas, radio, street panels, internet resources, virtual reality, computer games, and apps as media through which the message about the ongoing climate change can be delivered to every country, every street and every home, letting people experience it from different angles. Through the years our team has tested and developed an efficient program for an international funding acquisition, and with this abstract we invite partners from all over the world and from all branches of science, art, and technology to join us and expand this educational effort to the global scale.

Pecl, et. al. (2017). Biodiversity redistribution under climate change: impacts on ecosystems and human well-being. *Science*. 355:6332.