CLIMATE CHANGE OR THE DISAGREEMENT BETWEEN POLITICS AND SCIENCE

The scientific knowledge of climate change produced by human activities was not an immediate discovery, multiple and varied investigations were necessary. Three decades passed between Charles Keeling's work on measuring the CO_2 content in the atmosphere, which started in 1957, and the records of atmospheric CO_2 in the remote past made in Antarctica by Claude Lorius. These discoveries demonstrated the link between the state of the climate and the carbon cycle and made evident the influence of man on the climate. During that period, scientists also found traces of the climatic past in cave stalagmites, ocean and lake sediments, tree growth rings, and fossil corals. This accumulation of knowledge produced a clear warning sign about the potential and devastating ecological and social consequences of global warming.

Since then, the Intergovernmental Panel on Climate Change, created in 1988 under the auspices of the United Nations, has been providing country governments with a critical analysis of the state of knowledge about climate change. Their reports constitute the common scientific basis of knowledge from which countries negotiate global climate change mitigation and adaptation policies under a Framework Convention established in 1992. However, the agreements reached so far have been insufficient to reduce CO_2 in the atmosphere to acceptable levels.

The solution to the problem is now well known, it consists of an energy transition that must replace the use of fossil fuels with renewable sources of energy, increase energy efficiency, stop deforestation, and develop and use technologies for carbon capture and underground storage. Adaptation to adverse impacts on populations, especially the most vulnerable, is also needed.

From the beginning of the negotiations, industry lobbies, political leaders and various pressure groups tried to undermine the foundations of the scientific approach to climate change. The opponents, called climate skeptics, were particularly caustic in denying the scientific evidence because it directly affects not only the interests of large corporations but also our lifestyle, and our way of eating, moving, and consuming. The skeptics had some success creating doubts in public opinion that delayed policy decisions, but science managed to overcome the attacks by generating a wealth of new data, information, and knowledge, particularly through satellite and oceanographic monitoring.

It is now tough not to admit that human activities are responsible for greenhouse gas emissions, that the climate is warming, or that current climate change is not due to natural causes. However, this does not mean that all obstacles to the implementation of the solutions have been overcome, geopolitical interests persist that are put first by governments, mainly in the countries that emit the most greenhouse gases. This is the case of China and India, which, although they have made significant investments in renewable sources, their status as overpopulated countries and their economic growth increase their energy demand in such a way that they consume any energy within their reach, whether renewable or fossil, their own or imported and the balance is leaning towards fossil energy. The United States, for its part, is confronted with the fact that it does not possess the mineral resources for the metals and rare earths necessary to manufacture the technologies for harnessing wind and solar energy and batteries, nor the facilities for their processing. These resources and facilities are mostly found in China, and depending on supplies from China represents a situation of unwanted vulnerability. Therefore, if this situation cannot be overcome, the acceleration of the energy transition will not be a priority for the United States. Russia, for its part, does not have a strategy for developing renewable sources and says it will reduce its emissions by resorting to energy efficiency and nuclear energy, but the details are unknown.

It is necessary and urgent to mitigate all these geopolitical dissonances and to make a greater effort of convergence and international cooperation on climate matters. The current confrontations and mistrust will have to be reversed, allowing fair competition to emerge regarding technology, talents, supplies, markets, and regulations in which scientific knowledge will be fundamental.

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