

Strategic anarchy or unilateral control?

Pier Francesco Moretti – 21 November 2019

Climate change is a global challenge.

It is well-known that the increase in temperature and the other indirect consequences of the high concentration of greenhouse gases generated by human activities, will cause cascading changes on social, economic and in particular political systems: mainly linked to the probable redistribution of resources and territories.

The concerns about the negative impacts on environmental resources and populations has stressed policy makers and entrepreneurs to take different paths towards the development of renewable energies, environmental alert systems, looking for new adaptation and mitigation solutions.

Are they effective enough to avoid a point of no return?

In principle, several innovations can introduce drastic long-term mitigation measures, such as the artificial photosynthesis, and others in the short term, such as the sequestration of carbon dioxide or the reduction of its emissions. These options are matter of discussion of the well-known intergovernmental agreements (Kyoto, Paris, etc.) and the IPCC, the interdisciplinary scientific committee, which is addressed to predict future scenarios and possible intervention measures. Consensus at political level and effective measures are still lacking.

Indeed, a particular reflection has to be devoted to the fact that the IPCC was recently asked to include extreme measures for temperature mitigation, such as the so-called Solar Radiation Management (SRM).

It is known that the energy balance of our planet is regulated by the source of energy coming from sunlight. By shielding the solar radiation entering the atmosphere, the temperature decreases as it did in the past due to natural events, such as volcanic eruptions, that introduced a considerable amount of reflective particles into the atmosphere. The same thing happened after the experiments of explosions of atomic bombs during the cold war, which likewise introduced particles into the high atmosphere.

Solutions based on the input of particles in the high atmosphere are relatively inexpensive, and they can also be developed by a single country. Nevertheless, their consequences are extremely uncertain because, being the Earth a complex system involving interactions between different variables, the sudden decrease of temperature could trigger mechanisms that are little known and certainly not uniform at the global level. The induced decrease in temperature would have at least a positive effect on reducing the melting of ice and the level of the sea (which is also linked to thermal expansion). Despite some positive effects, it is clear that the introduction of aerosols to shield the solar radiation is would have no effects on the concentration of greenhouse gases, which instead would continue to increase if there were no other mitigation measures.

Regardless of these considerations, which at least are based on scientific reflections, the fact that policy makers asked to start evaluating the possibility of using SRM...is worrying. It is in fact an indicator of perception, if not a certainty, that the “responsible authorities” will not be able to manage the climate change as addressed in international agreements, and it will go into the management of an unprecedented emergency.

The challenge, at the moment, seems to be the planet's management structure, or so-called global governance, which is now inadequate in addressing the characteristics of complexity and dynamics of the system, which is not just limited to the natural environment but in turn includes finance, large industrial monopolies, systems information and social influence. In identifying the extremes of some governance models for complex systems, we found the total bottom-up self-organization or a very strong hierarchical form. Could a centralized control of internet coupled with the use of artificial intelligence and brain-computer interfaces, designed to simulate a widespread democracy, be considered another option?.