Will science rescue the planet from climate change? 8

The climate crisis has become an increasingly challenging issue for the world, urging climate scientists to develop a new science, called geoengineering - in other words climate-modifying technologies - to fight against global warming. This topic is addressed by a set of three articles including a Washington Post editorial from 2015 (doc 1) and two articles both released in 2018 in the Guardian (doc 4) and Inside Climate News (doc 3) , which try to weigh/assess the advantages and downsides of this technology which is also illustrated by a drawing published/issued in the Guardian in 2019. They raise the following question: should we rely on geoengineering to solve the climate change issue? Despite the risks and limits it involves, the technology might help reverse global warming. // This technology might help reverse global warming, however it involves significant risks and limits. 115

Scientific communities now unanimously acknowledge that the world is highly unlikely to cut CO2 emissions fast and significantly enough to meet the 1.5C warming target set in the 2015 Paris agreement, and however reluctantly admitted by the experts mentioned in all three articles, it will be inevitable~~/ there may be no other option but~~ to consider resorting to direct ~~man-made~~ intervention on the climate aiming to redesign it. This idea is illustrated in the drawing showing a doctor-scientist holding the earth in his/her hand while injecting it a cure supposed to heal it from the damage ~~inflicted on it~~ done by humans. 92

Three main forms of geoengineering are introduced in the documents. One of those technologies would consist in fertilizing oceans with iron particles to have phytoplankton absorb more CO2 (doc 1&4), while two other potentially promising forms coined “negative emissions” ~~by scientists and~~ outlined in the three articles could remove CO2 from the air - carbon capture - or inject Sulphur dioxide into the atmosphere as a way to reflect sunrays back into space, thus reducing earth’s temperature. 72

However, as suggested in the cartoon, such intervention on the climate looks like ~~dangerously~~ playing the sorcerer’s apprentice since all the scientists quoted insist on the downsides that come with geoengineering. Indeed they explain that not only are these technologies still extremely costly but they are not yet implementable at the scale needed for them to be timely efficient.

Moreover, while geoengineering would not reverse ocean acidification, scientists fear it could affect the planet in unknown ways such as disruption of ~~ocean ecosystems and~~ rain cycles or depletion of the ozone layer, hence endangering human health. In addition, the risk is high that policy-makers could hijack the technique as an excuse for not tackling the priority task of curbing emissions to reach a zero-emission goal (doc 3&4), which they deem would be catastrophic. 127

Therefore geoengineering should not be regarded as a miracle solution / a silver bullet but certainly as a backup to the highly indispensable and urgent mitigation efforts that need to be relentlessly pursued. 29

*443 mots*