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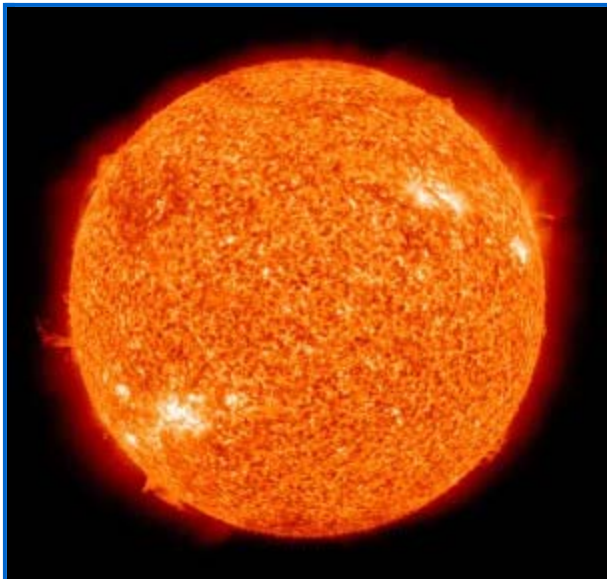
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Concept of Scientific Geo-engineering to artificially cool the Earth is discussed by the UN

December 4, 2011 [Natasha Kertesz](#)

At the U.N. COP17 climate conference in Durban, South Africa on Friday, a report was discussed which in effect promoted the theory that climate change could be combated by reflecting some of the Earth's sunlight back into space before it hits the Earth's surface. The discussion comprised scientists, philosophers and legal scholars. This so-called geo-engineering, or solar radiation management, could it was claimed have an "immediate and dramatic effect" leading within a few years to a return of global temperatures that were prevalent some 250 years ago before the industrial revolution.



The Sun photographed by the Atmospheric Imaging Assembly of NASA's Solar Dynamics Observatory Photo: NASA/SDO

The 65-page report which was released on Thursday for Friday's discussion following a year-long dialogue between experts in 22 countries, was intended to "start a conversation" said John Shepherd,

a British oceanographer from the University of Southampton who was the lead author of the report. But he stressed that geo-engineering is not meant as an alternative to taking action on climate.

‘Nobody thought this provides a justification for not reducing carbon emissions,’ he told AP.

‘We have to stick with Plan A for the time being, and that could be a very long time indeed,’ he said. ‘This would buy time for people to make the transition to a low-carbon economy.’

“Solar Radiation Management”

The [Solar Radiation Management Governance Initiative](#), a coalition of Britain’s Royal Society, the Washington based non-profit Environmental Defence Fund and the Italian-based academy of science for the developing world TWAS, emphasized that more dialogue and research is needed in relation to the risks and benefits. After all nobody really has any idea of what the unintentional side effects are likely to be.

When ecological concern first became a coherent political issue, environmentalists found it almost impossible to get the issues onto the political agenda. In the 1980s the green lobby would say: *this human activity is bad and must be stopped in order to preserve the precious environment and ecosystem on which we rely*. When there was some grudging response from the political mainstream, invariably it would be along the lines of: *don’t worry, science will come up with a solution one day*.

Perhaps this is one of the finest examples of the logic of this line of reasoning. After decades of economic growth being pursued as the be-all and end-all of national policies, climate change and the question of human induced carbon dioxide emissions became embedded in the global political consciousness and showed just how hard it is for disparate nation states, at different stages of development, to act in concert for the common global good.

Failure of UN negotiating process

To be a little more blunt: the 20-year U.N. negotiating process to take decisive action to curb greenhouse gas emissions, which are mainly derived from burning fossil fuels and which is responsible for climate change, has failed.

‘The slow progress of international climate negotiations has led to increased concerns that sufficient cuts in greenhouse gas emissions may not be achieved in time to avoid unacceptable levels of climate change,’ said the report.

Indeed [2010 saw the highest levels of carbon emissions in history](#) and show that the goal of keeping temperature rises to no more than 2°C to prevent the threshold for potentially “dangerous climate change” from being exceeded, is now just “a nice Utopia”.

The Intergovernmental Panel on Climate Change predicts that temperatures will rise by as much as 6.4 degrees Celsius by 2100 which is far and beyond the 2 degrees “safe” threshold.

Plan B?

The Solar Radiation Management Governance Initiative says geo-engineering could be ‘plan B’ for climate change. Its co-chair, Steven Hamburg, the chief scientist for the Environmental Defence Fund, said:

“Solar radiation management might sound, at first, like something from science fiction – but it’s not. There are already serious discussions beginning about it, and that’s why we felt it was urgent to create this governance initiative. Solar radiation management could be a Plan B to address climate change, but first we must figure out how to research it safely. Only then should we even consider any other steps.”

So what exactly would this Plan B potentially comprise of? Various techniques have been suggested such as placing huge space reflectors in orbit to reflect the sun’s energy, releasing stratospheric aerosols into the upper atmosphere, and brightening clouds with seawater.

Shepherd, the other co-chair of the SRMGI said: “Unless the apparent lack of political will to significantly reduce greenhouse gas emissions changes soon, geoengineering may be needed and SRM methods could be used in unregulated and possibly reckless ways by individuals, corporations or individual countries.”

Playing God

Those who tend to be in the scientists shouldn’t “play God” school of thought are simply aghast that anybody could even seriously consider such a possibility for more than a split second. Their argument is that the unforeseen results could be utterly catastrophic, and that the report’s acknowledgement that deliberately attempting to pervert the course of the weather is fraught with danger is an understatement. The divine creation is magnificent and far more complex than humans could ever understand, so just let God, or nature if you prefer, get on with it, they say.

Silvia Ribeiro, the Latin American director of the ETC Group, which campaigns against geoengineering, said:

“This report is dominated by scientists engaged in geoengineering research in the UK, US and Canada. They are advocates for more research, several of them have claimed patents and have significant financial, institutional and professional interests in the field of geoengineering research. There are the same familiar names that we have seen in a whole series of recent reports: John Shepherd or David Keith.

“Solar radiation management technologies are high-risk and extremely dangerous and they should be treated under international law like nuclear weapons – except, unlike nuclear weapons, we have an opportunity to ban their testing and their proliferation them before the technology is fully developed, rather than trying to prevent their proliferation after the fact. This is where we should be looking to for guidance on governance. We need to ban these technologies, not facilitate their development.”

The SRMGI’s report does not believe that a ban on geoengineering could work

Era of climate manipulation?

Are we about to enter an age of climate alteration?

The political implications are almost too big to grasp. Who has the mandate to take these decisions upon themselves? Would any such Plan B action make some countries take a relaxed view of implementing any of Plan A? What if some countries went off on a frolic of their own without international agreement?

The legal arguments on tortious liability would certainly be interesting and incredibly difficult to prove.

Decades of global inactivity and denial of climate issues have now caused the stark possibility of climate manipulation from the fringe to the mainstream of scientific discussion.

[Academy of Science for the Developing World](#), [climate alteration](#), [climate change](#), [COP17](#), [carbon emissions](#), [Durban](#), [environment](#), [Environmental Defence Fund](#), [ETC Group](#), [geo-engineering](#), [Royal Society](#), [Science](#), [solar radiation management](#), [Solar Radiation Management Governance Initiative](#), [SRMGI](#), [TWAS](#), [UN Ecology](#), [Science & Technology](#)

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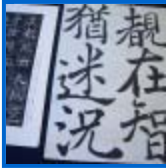
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