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TIMES ONLINE



This can be said with certainty.
Politics has changed for ever. Daniel Finkelstein

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From Times Online

May 8, 2010

Bill Gates pays for 'artificial' clouds to beat greenhouse gases

Ben Webster, Environment Editor

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The first trials of controversial sunshielding technology are being planned after the United Nations failed to secure agreement on cutting greenhouse gases.

Bill Gates, the Microsoft billionaire, is funding research into machines to suck up ten tonnes of seawater every second and spray it upwards. This would seed vast banks of white clouds to reflect the Sun's rays away from Earth.

The British and American scientists involved do not intend to wait for international rules on technology that deliberately alters the climate. They believe that the weak outcome of December's climate summit in Copenhagen means that emissions will continue to rise unchecked and that the world urgently needs an alternative strategy to protect itself from global warming.

Many methods of cooling the planet, collectively known as geoengineering, have been proposed. They include rockets to deploy millions of mirrors in the stratosphere and artificial trees to suck carbon dioxide from the air. Most would be prohibitively expensive and could not be deployed for decades.

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However, a study last year calculated that a fleet of 1,900 ships costing £5 billion could arrest the rise in temperature by criss-crossing the oceans and spraying seawater from tall funnels to whiten clouds and increase their reflectivity.

Silver Lining, a research body in San Francisco, has received \$300,000 (£204,000) from Mr Gates. It will develop machines to convert seawater into microscopic particles capable of being blown up to the cloud level of 1,000 metres. This would whiten clouds by increasing the number of nuclei.

The trial would involve ten ships and 10,000sq km (3,800sq miles) of ocean. Armand Neukermans, who is leading the research, said that whitening clouds was "the most benign form of engineering" because, while it might alter rainfall, the effects would cease soon after the machines were switched off.

Other types of geoengineering, such as mimicking volcanoes by using aircraft to spray reflective sulphate particles in the stratosphere, would have much longer effects on weather patterns.

Stephen Salter, Emeritus Professor of Engineering Design at the University of Edinburgh, said that there was no need to wait for regulations because the trials would not add chemicals to the atmosphere. But Sir David King, former chief scientific adviser to the Government, said that experiments with potential consequences beyond national borders needed international

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