# Concerns raised over geo-engineering projects altering natural weather patterns



Concerns have been raised over ongoing and proposed geo-engineering projects aimed at intervening in natural weather patterns, prompting renewed public attention and debate. These projects include solar radiation management (SRM) techniques that aim to dim the sun and cloud-seeding operations intended to modify rainfall. The discussion has emerged against a backdrop of persistent and heavy rainfall in parts of the UK and Europe, which has had significant consequences for agriculture and food production.

According to a recent series of articles initially published on 3 June 2024, and investigated by Lt Gen Jonathon Riley for The Conservative Woman, geo-engineering technologies are being deployed around the world with government backing and limited public awareness. The series highlights the historical background and current status of such activities, calling attention to their potential environmental and social impacts.

The UK environment has suffered from incessant rainfall this year, contributing to warnings of agricultural crises and food insecurity. Despite government financial support for farmers affected by weather conditions, the broader issue of modifying weather patterns through technology is raising questions. Cloud seeding, which involves dispersing substances such as salt or silver iodide particles into the atmosphere to encourage precipitation, has been used in countries ranging from Saudi Arabia and Dubai to the US, China, and Russia. In some cases, such operations have led to unprecedented rain and flooding, as seen in Dubai and Saudi Arabia.

Solar radiation management—a more controversial form of geo-engineering—involves spraying particles into the atmosphere to reflect sunlight and cool the Earth’s surface. Though often described as a theoretical or experimental approach, there have been reports of active experiments in some countries, including the US and the UK. Research commissioned by the UK government includes a ‘Geoengineering Model Intercomparison Project’ aimed at understanding SRM’s effects on climate. The approach is largely viewed as a last-ditch effort to address climate change, with some scientific bodies suggesting that its use becomes more likely as reliance on emissions reduction falters.

Regulatory frameworks appear underdeveloped, with some government reports indicating that shorter-term weather modification like cloud seeding may fall outside stricter geo-engineering regulations. The World Meteorological Organization has recommended more comprehensive research and monitoring of such programmes following concerns about their environmental impacts.

Environmental and scientific observers have voiced worries about the unpredictable consequences of these interventions. There is uncertainty about whether increasing rainfall in one area could inadvertently lead to drought elsewhere or cause severe flooding. Additionally, concerns have been raised about the ecological toxicity of chemicals such as silver iodide, which is commonly used in cloud seeding, with potential harmful effects on terrestrial and aquatic life.

Further controversy surrounds the covert nature and scale of some weather modification operations. For instance, a European parliamentary question submitted by Ramon Tremosa, a Catalonian Member of the European Parliament, alleged that Spain had engaged in nationwide aerial spraying of substances including lead dioxide and silver iodide since at least 2015. The question suggested the objective was to suppress rainfall and raise temperatures to benefit tourism and agriculture, alongside claims of adverse health effects caused by inhaling toxic materials. The European Commission officially denied such claims.

Other research, including a peer-reviewed 2017 article, asserted that coal fly ash—a byproduct of coal combustion—had been dispersed in the lower atmosphere since the late 1990s, suggesting a deliberate lack of transparency towards the public.

Analysts and academics caution that large-scale geo-engineering interventions may exacerbate environmental problems rather than mitigate them, and could potentially strain international relations, particularly when actions by one country affect neighbouring states. China, for example, is reported to pursue large-scale weather modification regardless of cross-border impacts.

As these technologies gain traction amidst ongoing climate concerns, public knowledge remains limited. The series of articles concludes with plans to investigate UK government and corporate involvement in weather modification activities, aiming to shed light on the extent and implications of these interventions.

Source: [Noah Wire Services](https://www.noahwire.com)

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