**Weather Modification: Geoengineering in China.**

**What Is Geoengineering:**

Geoengineering refers to the intentional and large-scale manipulation of Earth’s natural systems, especially the atmosphere and climate, with the aim of modifying environmental conditions.

**Main techniques include:**

* **Cloud-seeding:** stimulates rainfall by dispersing chemicals like silver iodide into clouds.
* **Solar radiation management:** reflects part of the sun’s rays to reduce global temperatures.
* **Carbon dioxide removal:** extracts CO₂ from the atmosphere to mitigate the greenhouse effect.

**Why Governments Are Using Geoengineering:**

* Governments are increasingly turning to geoengineering to manage environmental conditions during high-profile events and to combat pollution.
* China used cloud-seeding—a form of geoengineering—to induce artificial rain and reduce air pollution ahead of the Chinese Communist Party’s centenary celebration on **July 1st, 2021**, held in **Tiananmen Square, Beijing**.

**What Is Cloud-Seeding:**

* Cloud-seeding is a technique which involves dispersing chemicals like silver iodide into clouds to stimulate rainfall.
* This process helps water droplets form and fall, clearing the air of pollutants and improving visibility.

**Geoengineering: Impact, Strategy, and Controversies.**

**Benefits:**

* Significant reduction of PM2.5 pollutants in the air.
* Clearer skies and improved visibility during public events.
* Better air quality and more pleasant environmental conditions.
* Support for agriculture and drought mitigation.

**Risks:**

* High economic costs associated with large-scale operations.
* Potential inhalation of chemical agents dispersed in the atmosphere.
* Possible disruption of regional weather patterns and long-term climate instability.
* Lack of international regulation governing geoengineering practices.