# HOME ALLIANCE MANIFESTO AGAINST GEOENGINEERING

## Our HOME is not a Laboratory

HOME HANDS OFF MOTHER EARTH ALLIANCE

2025

# THE HOME ALLIANCE

**The Hands Off Mother Earth (HOME) Alliance is a diverse alliance of civil society groups, including Indigenous Peoples' organizations, frontline communities, and organizations focused on human rights, climate justice, gender justice, Indigenous Peoples' rights, and struggles against all forms of oppression.**

Together, we reject all forms of geoengineering, because they constitute false promises and serve as dangerous distractions from the real solutions we need to truly address the climate and biodiversity crises.

Healthy ecosystems are essential to the well-being of all human societies and life on Earth. Geoengineering – the large-scale and deliberate technological manipulation of land, oceans, and the atmosphere – would have devastating impacts on communities, human rights, ecosystems, and biodiversity.

## MOTHER EARTH IS OUR SHARED HOME. HER TERRITORIAL INTEGRITY AND RIGHTS MUST NOT BE VIOLATED BY GEOENGINEERING EXPERIMENTS OR THE DEPLOYMENT OF GEOENGINEERING TECHNOLOGIES.

We reject geoengineering as an enabler of the extractive fossil economy, and as a calculated effort to uphold and perpetuate a failing economic system. We reject geoengineering as a dangerous distraction from urgently needed emissions reductions and rights-based solutions that address the root causes of the climate, biodiversity, and pollution crises.

We are committed to protecting Mother Earth and defending her rights, territories, and peoples against dangerous attempts to manipulate and control the climate and the Earth's vital planetary processes.

# OUR DEMAND OF GOVERNMENTS AND PUBLIC INSTITUTIONS

**Given the severe risks that geoengineering poses, the HOME Alliance and its members demand that governments and public institutions:**

## Uphold the precautionary principle

with regard to all forms of geoengineering, ensuring that respect for human rights, climate, biodiversity, environmental justice, and the principle of "do no harm" are prioritized above all else.

## Uphold and enforce the moratorium on all forms of geoengineering

under the Convention on Biological Diversity (CBD), which has been in place since 2010 and was reaffirmed in 2024.

## Build on the CBD's moratorium and implement an immediate ban

on all outdoor deployments and experiments involving marine and solar geoengineering technologies. Halt the development and deployment of land-based geoengineering schemes.

## Put an end to institutional and public funding, subsidies, and other incentives

for outdoor research and the development and deployment of all land, solar, and marine geoengineering technologies. Ensure that governments do not support geoengineering in international negotiations, policies, or institutional frameworks.

## Recognize and respect the inherent, collective, legal and political rights of Indigenous Peoples

including their right to Free, Prior, and Informed Consent (FPIC), their right to self-determination, and their Indigenous legal traditions and practices and ethical stances against geoengineering technologies. Geoengineering violates Indigenous cosmovisions and Indigenous jurisprudence, which is based on the inherent relationships between Indigenous Peoples and their connected lands, waters, air/sky, biodiversity and other non-rights-based inherent responsibility pathways found in customary law.

## Halt the development of new carbon markets

because of their inherent flaws and their proven failure to mitigate the impacts and address the root causes of the climate crisis. Retract and dismantle existing carbon market and offsetting schemes, and until this is achieved, ensure that geoengineering technologies cannot be eligible for any type of offsetting.

## Urgently prioritize real, transformative, rights-based and gender-just solutions to the climate crisis

including the rapid, equitable, and funded phase-out of fossil fuels, the reduction of greenhouse gas emissions, and the payment of climate debts by wealthy countries, based on their historical responsibilities. Support the many decentralized, diverse, and readily available approaches to just transitions and socially and ecologically sustainable production and consumption, with a focus on equity, sufficiency, and well-being.

## Establish and support an international solar geoengineering non-use agreement

which, recognizing that the technology is ungovernable, would ban deployment and enabling actions, such as outdoor experimentation, patenting, public funding, and all promotion in international organizations.

# THE IMPACTS OF GEOENGINEERING TECHNOLOGIES

**Geoengineering refers to the large-scale and deliberate technological manipulation of the Earth's atmospheric, terrestrial, and marine systems to mask some of the symptoms of climate change. Previously dismissed as science fiction, some of these highly speculative technologies have now entered the mainstream climate discourse, fueled by increasing panic over the worsening climate crisis.**

# SOLAR GEOENGINEERING

Solar geoengineering (also known as Solar Radiation Modification - SRM) refers to attempts to dim the warming radiation from the sun by deliberately polluting the stratosphere with reflective particles or artificially manipulating clouds. These planetary-scale and intergenerational technological interventions are inherently unpredictable and risk further destabilizing an already destabilized climate system with new, more extreme consequences. By their very nature, solar geoengineering technologies can only be effectively tested for their impact on the global climate through large-scale and long-lasting deployment. By the time consequences are apparent, the harmful and potentially irreversible impacts may be locked in.

Solar geoengineering technologies include

**Stratospheric Aerosol Injection (SAI)**

**Marine Cloud Brightening (MCB)**

**Cirrus Cloud Thinning (CCT)**

# MARINE GEOENGINEERING

Marine geoengineering refers to efforts to manipulate the chemistry and/or biology of the world's oceans on a vast scale. Most marine geoengineering technologies aim to increase the amount of $CO_2$ stored in the oceans (also known as Carbon Dioxide Removal - CDR). Others would carry out solar geoengineering from the marine environment by brightening ocean surfaces and coastal clouds. A further set of proposals would thicken sea ice or erect vast underwater barriers to prevent glaciers from sliding into the sea. All these approaches would involve massive-scale interventions in delicate ocean ecosystems that are already severely stressed by overexploitation, pollution, climate change, and the creation of vast new industries with a huge coastal and ocean footprint.

Such interference with the oceans could potentially have grave consequences for coastal communities, marine biodiversity, food chains, fisheries, and even the natural capacity of the oceans to sequester carbon. Crucially, none of these approaches has been proven to be effective at removing and storing $CO_2$ over long periods of time , and there are no reliable means of evidencing and verifying the amount of $CO_2$ that would be sequestered.

Marine geoengineering technologies include

**Ocean Fertilization (OF)**

**Ocean Alkalinity Enhancement (OAE)**

**Industrial seaweed cultivation and biomass sinking**

**Arctic Ice Modification**

# LAND-BASED GEOENGINEERING

Land-based geoengineering technologies are mainly designed to manipulate and alter soils and terrestrial ecosystems on a massive scale to enhance carbon sequestration. They are often used in conjunction with Carbon Capture and Storage (CCS)[1], which comes with risks that include leakage, contamination, and accidents, and requires enormous amounts of energy and the use of toxic chemicals. Other land-based geoengineering technologies would involve increasing the Earth's surface reflectivity as a form of Solar Radiation Modification. The enormous energy and land requirements of land-based geoengineering technologies pose a threat to biodiversity, food production, and livelihoods, along with many other impacts.

1. Carbon Capture and Storage (CCS) and Carbon Capture Use and Storage (CCUS) are not considered geoengineering technologies, but they can be enablers of some forms of geoengineering, such as BECCS.

Land-based geoengineering technologies include

**Bioenergy with Carbon Capture and Storage (BECCS)**

**Direct Air Capture with Carbon Storage (DACCS)**

**Enhanced Weathering (EW)**

**Biochar**

# DEFEND MOTHER EARTH! REJECT GEOENGINEERING!

**While the climate crisis is one of humanity's most pressingchallenges, we cannot justify responding to it with speculative, technological, illusionary "fixes" that are as dangerous, or perhaps more so, than the impacts of climate change itself. We cannot repair an already "broken climate" by breaking it further.**

**There are many reasons to reject geoengineering**

## Geoengineering is untestable

To effectively determine both intended and unintended climate impacts and harm, some geoengineering technologies, particularly SRM and marine geoengineering technologies, would need to be tested at such a large spatial and temporal scale that it would constitute actual deployment, hence turning the Earth into a laboratory and potentially locking in harmful and irreversible impacts. Small-scale geoengineering experiments drive technology development and normalize the dangerous idea that these approaches could have a role. They constitute a slippery slope towards larger-scale experiments and, eventually, deployment.

## Geoengineering cannot be governed, and its impacts cannot be controlled

The proposition of geoengineering assumes that humans are capable of precisely managing planetary-scale Earth systems, despite their vast complexity and unpredictability. Manipulating complex and often poorly understood Earth systems, coupled with the potential for mechanical failure, human error, hostile interventions, natural catastrophes, funding cuts, and political changes, makes geoengineering technologies highly volatile, with a high likelihood of severe and unintended consequences.

## Deployment would need to take place on a huge scale

For any geoengineering technique to impact the climate, it would have to be deployed on a massive scale, both spatially and in terms of duration. This would result in major, irreversible impacts, with the greatest impact being experienced in the Global South and Arctic regions. Deployment at this scale would be impossible to control.

Sun-dimming Stratospheric Aerosol Injection would need to be continuously deployed at a planetary scale over hundreds of years, as carbon dioxide remains in the atmosphere for hundreds, or even thousands, of years. Some marine CDR methods, like OAE, would require deploying the technologies over vast areas - potentially up to 10 percent of the ocean's surface over many decades - to achieve any significant impact on the climate. Studies also suggest that large-scale deployment of BECCS would require the use of 80 to 700 million hectares of land globally for dedicated bioenergy cropping. This would be an area 1 to 2 times the size of India.

## Geoengineering deflects and misdirects attention from real solutions

The illusion that geoengineering technologies can somehow "fix" the climate crisis provides governments of high-emitting countries and polluting industries with yet another excuse to avoid taking urgent action to cut greenhouse gas emissions and phase out fossil fuels. This may cause the world to miss the narrowing window of opportunity for genuine and timely societal transformation. We warn the international commnunity that, as attention and resources are diverted towards geoengineering technologies and outdoor research, there is a risk that resources, research, and support may be diverted away from real and rights-based mitigation and adaptation measures that address the root causes of the climate crisis.

## Geoengineering would result in land and sea grabbing

There is already immense pressure on land and coastal areas in the Global South and Arctic Regions. CDR at the scale needed to impact climate change would exacerbate territory grabs and human rights abuses. Geoengineering proposals, such as land and marine CDR technologies, would add considerably to these pressures, with grave consequences for people and biodiversity. The most marginalized groups would experience these impacts most severely.

## Geoengineering exacerbates colonialism, inequality, and injustice

All forms of geoengineering are likely to favor those in power, be they corporations or governments of wealthy countries. Key technologies are generally incubated and often patented in the Global North, and consequently imposed on the Global South. The push for these technologies follows deep-seated colonial practices and involves the deliberate co-option of stakeholders in "vulnerable countries", such as youth leaders, Indigenous Peoples, academic institutions, and government officials. In reality, these technologies create business opportunities for a small elite and provide excuses for maintaining the current, profoundly unjust economic model.

## Geoengineering would harm livelihoods and ecosystems

The negative impacts of different geoengineering technologies would be widespread, and include severe changes in precipitation and other weather patterns, uneven cooling, oxygen depletion in marine and freshwater environments, degraded nutrient cycles, and a weakened ozone layer. This would disrupt ecosystems, harm biodiversity, and impact food systems, lands, and waters everywhere. Indigenous Peoples, peasants, fisherfolk, and other local communities, small-scale food producers, young people, and women would experience these impacts most severely.

## Geoengineering threatens Indigenous Peoples

The Human Rights Council's Advisory Committee also recognizes that geoengineering would have a massive and disproportionate impact on Indigenous Peoples, whose traditional lands and territories are particularly at risk of being used as testing grounds, as well as being exposed to the consequences of actual deployment. Experiments have often been proposed or have taken place in Indigenous territories without Free, Prior, and Informed consent, thereby violating their rights. Geoengineering goes against Indigenous Peoples' cosmovision of nature and undermines their cultural and spiritual values.

## Geoengineering would cause inter-generational inequality

The deployment of geoengineering would likely have irreversible impacts on people and the planet, with profound implications for future generations. Relying on highly speculative geoengineering technologies or failing to regulate or prohibit them risks locking in irreparable harm and violating the rights of both children and future generations.

## Solar geoengineering would risk devastating 'termination shock'

Solar geoengineering would rely on continuous deployment to mask the warming impacts of continued greenhouse gas emissions. If the intervention were to be suddenly stopped, due to war, geopolitical disputes, devastating impacts on weather systems, or changes in the political landscape, temperatures would quickly spike. Such a "termination shock" would likely devastate ecosystems and societies, and it would be impossible for civilization to adapt. Choosing to pursue solar geoengineering deployment would lock the world into an existential crisis: either face the devastating impacts of continued deployment or the even worse consequences of termination shock.

## Geoengineering enables other climate scams, such as carbon markets

Carbon markets are driving the recent proliferation in marine and land-based geoengineering experiments. Numerous companies are already profiting from highly speculative carbon offsetting and even "cooling credit"[2] schemes involving geoengineering technologies. Offsetting is a "permit to pollute," creating the dangerous illusion that the economic model responsible for driving the climate crisis has the answers to fix it. For the fossil fuel industry and other polluters, geoengineering technologies provide an opportunity to make additional profits by trading on international carbon markets while diverting attention away from efforts to reduce emissions.

2. "Cooling credits" is a new proposed form of "permits to pollute" scam that claims to offset real emissions by releasing sun-dimming particles into the sky or deploying other forms of solar geoengineering. The concept of "cooling credits" is deeply problematic and dangerous, as it would fundamentally change the key metric in international climate policy and open the door for the integration of solar geoengineering. "Cooling credits" must be rejected while they are still in a nascent state.

## Geoengineering violates international treaties that protect our oceans and biodiversity

The deployment of geoengineering technologies is prohibited under a longstanding moratorium at the Convention on Biological Diversity (CBD), which was reaffirmed in October 2024. The London Convention/London Protocol (LC/LP) has prohibited Ocean Fertilization (OF) and has warned about the 'widespread, long-lasting, or severe' impacts from four further techniques. Many geoengineering techniques also have potential military applications that could violate the UN Environmental Modification Treaty of 1978. Furthermore, deploying geoengineering technologies would likely violate the precautionary principle and the obligations of states to prevent transboundary environmental harm, as well as the obligation not to pollute the marine environment under UNCLOS.

## Geoengineering risks military use and conflict

Beyond their direct impacts and immense risks, geoengineering technologies also risk fueling disagreements over how, when, and where to deploy them. For instance, unilateral or "small club deployment" of solar geoengineering could cause new conflicts and potentially wars, and could even be used as a weapon of mass harm in its own right. No evidence from human history suggests that (solar) geoengineering deployment could be effectively and stably governed over multiple generations. It is safe to assume that superpowers, mega-corporations, and oligarchs would not permit democratic governance over the deployment of such a powerful technology.

## Geoengineering impacts human rights

The development of geoengineering technologies is also inconsistent with a wide range of international human rights obligations, including the collective Rights of Indigenous Peoples, the Right to Life, the Right to a Clean, Healthy and Sustainable Environment, the Rights of Children, the Right to Water, and the Right to Food. We echo the warning by the Human Rights Council's Advisory Committee has warned that geoengineering "could seriously interfere with the enjoyment of human rights of millions or perhaps billions of people."

**Our home, lands, oceans, and sky are not a laboratory for risky and manipulative planetary-scale technologies.**

# WE SAY TO GEOENGINEERS: HANDS OFF MOTHER EARTH!

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