

Hands Off Mother Earth!

We, civil society organizations, popular movements, Indigenous Peoples, peasant organizations, academics, intellectuals, writers, workers, artists and other concerned citizens from around the world, oppose geoengineering as a dangerous, unnecessary and unjust proposal to tackle climate change. Geoengineering refers to large-scale technological interventions in the Earth's oceans, soils and atmosphere with the aim of weakening some of the symptoms of climate change.

Geoengineering perpetuates the false belief that today's unjust, ecologically- and socially-devastating industrial model of production and consumption cannot be changed and that we therefore need techno-fixes to tame its effects. However, the shifts and transformations we really need to face the climate crisis are fundamentally economic, political, social and cultural.

Mother Earth is our common home and its integrity must not be violated by geoengineering experimentation and deployment.

We are committed to protecting Mother Earth and defending our rights, territories and peoples against anyone attempting to take control of the global thermostat or the vital natural cycles of planetary functions and ecosystems.

Healthy ecosystems and cultural and biological diversity are crucial to the well-being of all people, societies and economies. Geoengineering, whether on land, in the oceans or in the atmosphere, puts ecosystems, biodiversity and human communities at risk of potentially devastating impacts and side effects.

We reject any further entrenchment of fossil fuel economies. We reject geoengineering as an attempt to uphold a failed status quo and divert attention from emissions reductions and the real solutions to the climate crisis.

Carbon Dioxide Removal (CDR) geoengineering projects, including large scale monoculture tree and biomass plantations have severe negative impacts on land, water, biodiversity, food security and traditional livelihoods. Carbon Capture and Storage (CCS) aim to serve and perpetuate the fossil fuel industry. Additionally, Bioenergy with Carbon Capture and Storage (BECCS) would hugely amplify the impacts of plantations, disputing land needed for food production, threatening food security and biodiversity. Other carbon dioxide removal techniques, such as ocean fertilization would disrupt the marine food web and create oxygen deprived areas in the oceans.

Geoengineering technologies may disrupt local and regional weather patterns and further imbalance the climate, with potentially catastrophic effects for some regions, including on water availability and food production. The adverse impacts and side effects could cause more regional and international conflicts.

Geoengineering threatens global peace and security. Some technologies that aim to manipulate climate and weather originated in the military and have a significant

WHAT IS GEOENGINEERING?

Geoengineering refers to a set of proposed technologies to deliberately intervene in and alter Earth systems on a large - i.e. planetary - scale. There are two basic directions such interventions can take: The first is a suite of technologies that aim to reduce the amount of incoming sunlight to artificially cool the climate. These are so-called Solar Radiation Management (SRM) approaches that could consist of shooting aerosols into the stratosphere to mimic the effect of a volcanic eruption or brighten clouds and/or ocean surfaces to make them more reflective. The second category of Earth system interventions falls under the umbrella of carbon dioxide removal (CDR) or greenhouse gas removal (GGR) and aims to suck CO₂ from the atmosphere at a large-scale and store it underground, in the oceans, or in monoculture tree plantations. Overall, geoengineering may comprise interventions on land, oceans, or in the atmosphere that come with large-scale risk and adverse impacts for human communities, ecosystems and natural processes, and international peace and security.

potential to be weaponized. Deploying Solar Radiation Management in particular may depend on military infrastructure and could create a new geopolitical imbalance of winners and losers in the race to control the Earth's thermostat.

We stand united to oppose field experiments and deployment of such technologies and call upon organizations and concerned citizens to join this campaign.

Because of the high risks that geoengineering poses to biodiversity, the environment and livelihoods, including to peasant communities and Indigenous Peoples territories, we call for:

- A ban on geoengineering field experiments and deployment
- A United Nations multilateral governance system that is global, transparent, participatory and accountable to uphold the ban. The Convention on Biological Diversity's moratorium on geoengineering and the London Protocol ban on ocean fertilization are starting points
- A stop to all planned outdoor geoengineering experiments, including:
 - SCoPEX, the Stratospheric Aerosol Injection experiment by the Harvard Solar Geoengineering Program, planned to be carried out in Arizona near the U.S.- Mexico Border in 2018;
 - The Marine Cloud Brightening Project experiment planned for Monterey Bay, California;
 - The Ice911 project, which aims to disseminate glass microbeads over ice and sea in Alaska; and
 - The Oceanos Ocean Fertilization projects in Chile, Perú and Canada
- A stop to all large-scale projects and funding for projects that aim to technologically capture carbon and "sequester" it in geological formations and/or the oceans, and/or use it for enhanced oil recovery and/or industrial applications, including Carbon Capture and Storage (CCS); Bioenergy with CCS (BECCS) and Direct Air Capture (DAC). We reject CCS in all forms including from gas processing, coal plants, bioenergy or industrial processes including fracking. CCS and Carbon Capture Use and Storage (CCUS) projects such as PetraNova in Texas, Boundary Dam in Saskatchewan, Decatur in Illinois, and DRAX in the UK only perpetuate the fossil fuel industry
- A stop to all large scale monoculture plantations
- A stop to any public funding for geoengineering projects
- Recognition of the inherent rights of Indigenous Peoples, their livelihoods and cosmovisions, including the right of Self Determination to defend their communities, ecosystems and all life from geoengineering technologies and practices that violate the natural laws, creative principles and the Territorial Integrity of Mother Earth and Father Sky
- Respect and effective guarantees for the right of Indigenous Peoples and local communities to free, prior and informed consent for any geoengineering experiment or project that may impact their territories or human rights
- Respect for peasant rights, lands and territories, acknowledging that their livelihoods, including Indigenous Peoples' communities, forest dwellers, artisanal fishers and pastoralists, are a vital source of food for most of the world's population; pave the way for food sovereignty; contribute to mitigating greenhouse gas emissions; and regenerate soils and ecosystems. Their lands are particularly vulnerable to being grabbed and exploited for geoengineering experiments and deployment, and their agriculture is threatened by the side effects.
- Support for and strengthening of meaningful investigations into just, sustainable and transformative pathways to limit global warming to not exceed 1.5°C, giving serious consideration to alternative models and scenarios than those currently being used in climate negotiations and taking into account other sources of knowledge and experiences into debate and decision making, including Indigenous Peoples' knowledge and peasant movements' proposals.

• The building blocks for a justice-based, transformative trajectory towards a 1.5°C world are being articulated and developed by communities, activists and scholars across the world. The solutions will be manifold, diverse and mindful of local and regional contexts. They include phasing out fossil fuel infrastructure – not just coal, but also oil and gas; expanding energy democracy powered by renewable energy from wind and solar; reducing energy and material consumption; a just transition for workers and towards a feminist and regenerative economy; supporting peasant agroecology and food sovereignty for climate justice in the food system; as well as vastly but carefully restoring the world's vital ecosystems, above all forests, integrating and respecting Indigenous Peoples' and local communities' rights.

Climate justice will only be achieved if we rely on environmentally sustainable and socially just solutions to the climate crisis instead of high-risk technofixes that privilege current polluters, extractive industries and the military-security complex.

Our home, lands and territories are not a laboratory for planetary-scale environmental modification technologies.

We say to geoengineers: Hands Off Mother Earth!

If you want to endorse this Manifesto, send your signature to manifesto@geoengineeringmonitor.org

SIGNATORIES

INTERNATIONAL AND REGIONAL ORGANIZATIONS

Alianza por la Biodiversidad en América Latina
Amigos de la Tierra de América Latina y el Caribe (ATALC)
Asian Peoples Movement on Debt and Development (APMDD)
Biofuelwatch
Climate Justice Alliance
Corporate Accountability International
Corporate Europe Observatory
Development Alternatives with Women for a New Era (DAWN)
ETC Group
Focus on Global South
Friends of the Earth International
Global Forest Coalition

Grain
Grassroots Global Justice Alliance
Heinrich Boell Foundation
Indigenous Environmental Network
La Via Campesina
Navdanya, international
Oilwatch Latinoamérica
Third World Network
Transnational Institute
World Indigenous Women's Alliance
World March of Women, Americas
World Rainforest Movement

NATIONAL ORGANIZATIONS

350Bcn, Barcelona, Spain
ABA, Associação Brasileira de Agroecologia, Brazil
Acción Ecológica, Ecuador
Acción por la Biodiversidad, Argentina
Agenda Latinoamericana Mundial, Panamá, Panama
AGHAM-Advocates of Science and Technology for the People, Philippines
Amigos de la Tierra, Spain
Amigos de la Tierra, Argentina
ANAA, Asamblea Nacional de Afectados Ambientales, Mexico
Asamblea Comunitaria del Pueblo de Alpuyecá, Morelos, Mexico
Asociación Red de Coordinación en Biodiversidad, Costa Rica
Association For Promotion Sustainable Development, India
ATTAC, France
Base-Is, Paraguay

CECCAM, Centro Estudios para el Cambio en el Campo Mexicano, Mexico
CECOEDECON, India
Censat Agua Viva - Amigos de la Tierra, Colombia
Centar za zivotnu sredinu/ Friends of the Earth, Bosnia and Herzegovina
Centre for Environment and Development, Sri Lanka
Centro de Análisis Social, Información y Formación Popular, Mexico
Centro de Desarrollo Agropecuario, Mexico
Centro de Encuentros y Diálogos Interculturales, Mexico
Centro Ecológico, Brazil
Centro Fray Julián Garcés Derechos Humanos y Desarrollo Local, Tlaxcala, Mexico
CeProNat, Centro de Protección de la Naturaleza, Argentina

CESTA Amigos de la Tierra, El Salvador
ClimateWatch, Thailand
Coalición en Defensa de la Cuenca de la Independencia,
Guanajuato, Mexico
COECOCEIBA-Amigos de la Tierra, Costa Rica
Colectivo por la Autonomía, Jalisco, Mexico
Consejo Regional de Pueblos Originarios en Defensa del
Territorio de Puebla e Hidalgo, México
Consumers Association of Penang, Malaysia
Coordinadora de los Pueblos en Defensa del Río Atoyac,
Veracruz, México
DESMI –Desarrollo Económico y Social de los Mexicanos
Indígenas, Mexico
Earth In Brackets, United States
Ecologistas en Acción, Spain
EJES, Enlace por la Justicia Energética Socioambiental,
Argentina
Ejido San Isidro, Mpio. San Gabriel, Jalisco, Mexico
Espacio Estatal en Defensa del Maíz, Oaxaca, México
Fórum Mudanças Climáticas e Justiça Social, Brazil
Free and Equal Rights, Indonesia
Frente de Pueblos en Defensa de la Tierra y el Agua,
Región Malinche, Puebla , Mexico
Friends of the Earth Ghana
Fundación Solón Bolivia
Fundación Terram, Chile
Global Justice Ecology Project, United States
Grupo de Estudios Ambientales, Mexico
Grupo Semillas, Colombia
GWATÁ –Núcleo de Agroecología e Educação do Campo, Brazil
HOME Foundation, Nigeria
IBASE - Instituto Brasileiro de Análises Sociais e
Econômicas, Brasil
IDIS (Interface Development Interventions), Philippines
Instituto de Estudios Ecologistas del Tercer Mundo, Ecuador
La Asamblea Veracruzana de Iniciativas y Defensa
Ambiental (LAVIDA), Mexico
Les Amis de la Terre-Togo
Marcha Mundial de Mujeres, Capítulo Cuba, Cuba
MASIPAG (Farmer-Scientist Partnership for Development),
Philippines
Movement Generation, Justice and Ecology Project, USA
MST, Movimento dos Trabalhadores Rurais Sem Terra, Brasil
Navdanya, India
NOAH, Friends of the Earth Denmark
Observatorio de Ecología Política de Venezuela
Observatorio Petrolero del Sur, Argentina
ODG, Observatori del Deute en la Globalització, Spain
Oficina Pro Defensa de la Naturaleza y sus Derechos, Ecuador
PAIRVI, India
Pakistan Kissan Mazdoor Tehreek (PKMT), Pakistan
Philippine Movement for Climate Justice (PMCJ), Philippines
Philippine Social Enterprise Network (PhilSEN), Philippines
Plataforma Boliviana frente al Cambio Climático, Bolivia
Pronatura- Friend of the Earth Switzerland
RAPAL, Uruguay
Red Intercultural de Acción Autónoma, México
REDES Amigos de la Tierra, Uruguay
RENACE, Red Nacional de Acción Ecologista de Argentina
Roots for Equity, Pakistan
Russian Social Ecological Union/ FoE Russia
Sahabat Alam Malaysia, FOE Malaysia
Save the Forest, Germany
Sciences Citoyennes, France
Taller Ecologista, Rosario, Argentina
Tonatierra, Nahuacalli, Embassy of Indigenous Peoples,
Arizona, United States
Universidad de la Tierra en Oaxaca, Mexico
UNORCA, Unión Nacional de Organizaciones Regionales
Campesinas Autónomas, Mexico
UNOSJO, Unión de Organizaciones de la Sierra Juárez de
Oaxaca, México
UPVA, Unidos por la vida y el medio ambiente, Argentina
YFEED, Youth For Environment Education And
Development Foundation, Nepal

INDIVIDUALS

Vandana Shiva, India, Right Livelihood Award recipient
Ricardo Navarro, El Salvador, Goldman Environmental Prize
Pat Mooney, Canada, Right Livelihood Award recipient
Nnimmo Bassey, Nigeria, Right Livelihood Award recipient
João Pedro Stédile, MST, Brazil, MST is a Right Livelihood
Award recipient
Fernando Funes, Cuba, Right Livelihood Award recipient

WHY IS GEOENGINEERING SO DANGEROUS?

LARGE-SCALE: For any geoengineering technique to have an impact on the climate, it will have to be deployed on a massive scale. Unintended consequences are also likely to be massive and irreversible, especially in the Global South.

UNRELIABLE: Geoengineering intervenes in poorly understood, complex systems such as the climate and ocean ecology. Interventions could go awry because of mechanical failure, human error, hostile interventions, incomplete knowledge, natural phenomena (like volcanic eruptions), trans-boundary impacts, irreversibility or funding failures.

THE PERFECT EXCUSE:

Geoengineering offers high-emitting country governments and the fossil fuel industry an option other than reducing greenhouse gas emissions and moves them even further away from acknowledging their climate debt. For the fossil fuel industries, carbon dioxide removal techniques appear as an opportunity to continue with the status quo and make additional profits selling new sources of carbon credits.

UNEQUAL: OECD governments and corporations – who denied climate change or evaded responsibility for decades – are the ones with the budgets and the technology to hack the planet with geoengineering. Geoengineering is inherently high-risk and its negative effects, particularly in the case of Solar Radiation Management, would be unequally distributed, impacting some regions in Africa and Asia severely, including potentially disrupting Monsoons and increasing droughts, which would endanger the food and water sources for 2 billion people. Geoengineering would also negatively impact biodiversity, indigenous territories and the lands and waters of peasant communities

and other small-scale food providers, with women experiencing these impacts disproportionately.

UNTESTABLE: To know if geoengineering proposals would have an effect on climate change, it would need to be deployed at such a large spatial and temporal scale (to differentiate it from other ongoing climate phenomena) that it wouldn't be an experiment – it would be outright deployment, with all its potential intended and unintended impacts. Therefore, small scale experiments only serve the purpose of testing hardware and tools to advance research and investments that will then be used to justify “the need” for larger experiments and eventually deployment.

There are several SRM open air experiments planned, leaving computers and labs and moving into the environment and indigenous territories. The proposed experiments in the US are in indigenous territories. All of them are in contravention of the CBD moratoria.

UNILATERAL: Many proposed geoengineering techniques could be relatively cheap to deploy compared to massive investments in the real and just transformation we need to see, and the technical capacity to do so will be within reach of some individuals, corporations and states in the coming decade. A UN mechanism to prevent unilateral attempts at planetary modification is urgently needed.

TREATY VIOLATION:

Geoengineering would violate international treaties that protect our oceans, human rights and biodiversity, among others. Many geoengineering techniques have military applications and they could violate the UN Environmental

Modification Treaty of 1978 along with the Convention on Biological Diversity and the London Convention /London Protocol on dumping matter into the oceans, among others.

Commercializing the climate: Many researchers and proponents of geoengineering have commercial vested interests, including patents and/or shares in geoengineering companies. Competition is stiff in the patent offices among those who think they have a planetary fix for the climate crisis. The prospect of a private monopoly holding the “rights” to modify the climate is terrifying.

CARBON PROFITEERING: Some geoengineers (including those promoting ocean fertilization, biochar, BECCS, DAC) as well as the fossil fuel industries – the largest culprits of climate change – aim to profit from carbon trading schemes by making these unproven geoengineering technologies eligible for offsets and demanding carbon pricing.

CLIMATE WARS: Geoengineering has military origins, particularly through the programs for weather control that were developed by the US Army and used in the Vietnam War, and it continues to be a focus for military interest. If Solar Radiation Management is deployed at the mega-scale needed influence the planet's temperature, it would create a new geopolitical power balance favoring those who can control the Earth's thermostat and inciting the escalation of geoengineering and counter-geoengineering measures.

DISTRACTION FROM SOLUTIONS:

Geoengineering is a dangerous distraction. The mere proposal and consideration of geoengineering as an option is already deviating attention and resources for the real alternatives to climate change.