Environmental committee (EVC)

Balancing Geoengineering Solutions with Environmental Ethics

September Keurentjes

Forum: Environmental Committee

Issue: Balancing Geoengineering Solutions with Environmental Ethics

Name: September Keurentjes

Position: deputy chair of the Environmental Committee

Introduction

Geoengineering and environmental ethics are two things that often seem to conflict. However, many have tried to find a middle ground to properly balance the two. Geoengineering, being something that's know as a relatively new concept has challenged many environmental ethics. With environmental ethics we ask ourselves if we would rather act upon something, which might have an impact on the environment, rather than avoid it. Think of the debate on paper straws, would you rather use a single-use plastic straw that leads to pollution, or are you going to use the paper straw. In this debate you challenge environmental ethics by saying is your pleasure as a human being worth more than using the paper straw which might be less fulfilling than a plastic straw.

The paper straw debate might seem as something insignificant compared to environmental ethics, but it's the same concept in a way. in geoengineering we try to delay or "fix" climate change by intervening in the process of change. Although this might not seem like something that conflicts with many environmental ethics, it still asks the question of "Is your pleasure as a human being worth more than ..." As stated before, in geoengineering we often delay the problem without actual change in our current ways of living. We keep on living in a way that is pleasurable or easier for us, think of'; excessive flights, non-stop use of cars, or even using plastic straws. Using geoengineering fixes as a way to live morally or ethically-well can be seen as just delegating the problem for later generations which is not ethical nor is it environmentally ethical in ways.

Definition of key terms

CDR

Carbon Dioxide Removal also known as CDR, is a way of geoengineering by removing carbon from the atmosphere on large scales. Methods range from sucking carbon straight out of the air to the large-scale burning of trees for energy, capturing and storing the emissions, and even dumping minerals in the ocean or developing monoculture seaweed mega-farms to increase carbon uptake.

Climate-engineering;

you may find this term in your personal research; the term geoengineering and climate-engineering are close synonyms of each other. Thus, **these two terms can be used interchangeably, but please use the term geoengineering in resolution and amendment writing**.

Environmental ethics

Environmental ethics is an ethic branch that studies human beings' relationship with the environment and the role played by ethics in the background. Environmental ethics suggests that human behaviour is based on the ethical values guiding us towards other living things. People often speak about the three main types of environmental ethics, which are anthropocentrism, ecocentrism, and theocentrism.

1. **Anthropocentrism**
   Humans are the centre being, nature is useful when it serves us, but it does not have any moral rights, like humans do. Nature is only valued for its instrumental value.
2. **Ecocentrism**
   Nature is morally important and should be valued independent of present or future human interest. Meaning all life on earth has moral rights and in decision making nature, and possible negative effects, should also be considered.
3. **Theocentrism**
   God is the only higher authority, creating humans and nature. God wants all its creations to do well and to be prosperous. How different religious branches interpret this can be contrasting/inconsistent.

Geoengineering;

Geoengineering refers to large scale interventions in the Earth’s atmosphere, oceans, and land to counteract some of the effects of climate change. These methods range from reflecting sunlight to removing carbon dioxide from the atmosphere.

Solar geoengineering;

This type of geoengineering is one that has sparked a lot of discourse. Solar geoengineering can also be seen as solar radiation modification; it proposes to artificially cool the Earth by injecting reflective

particles into the stratosphere to block incoming sunlight. By artificially cooling down the earth ecosystems wont naturally adjust to the change, which could cause livelihoods in some areas to be affected negatively by limiting food security/agriculture.

SRM;

SRM is an abbreviation of the term solar radiation modification; this term and solar geoengineering are close synonyms of each other. Thus, these two terms can be used interchangeably.

Terraforming

Terraforming, a much more radical way of geoengineering is the process of making other planets besides the earth suitable for life, as of yet, this is still theoretical, but many have already speculated on how this theorem would work. To make this work we need to deliberately change the atmosphere of said planet to mirror that of our earth.

Major parties involved

Vanuatu and other pacific island groups;

Vanuatu being one of the very vulnerable island groups in terms of climate change, has greatly spoke out to be against the use of solar geoengineering, stating that it represents an unacceptable risk we must not take.

Switzerland;

In the 6th session of the United Nations environmental committee held in Kenya, a controversial resolution of the increase of solar geoengineering was proposed by Switzerland. The idea of the resolution is to mimic volcanic eruption by SRD.

SpaceX;

This organization is very interested in the use of terraforming and other types of geoengineering in space.

NOAA (National Oceanic and Atmospheric Administration)

NOAA governmental scientists from Boulder, Colorado have put (solar) geoengineering waring systems into action. This would mean that these scientists release a "balloon" to detect whether other

countries or cooperations are using geoengineering without telling others. These balloons are also released (but not as frequently) in other parts of the world such as**;** Alaska, Hawaii and New Zealand; Reunion Island, near the coast of Africa, and Antarctica.

General overview

Background

Geoengineering is a term we just recently started using around 2009 when it entered our dictionary's, this does not mean that we've never used geoengineering before that time due to the large number of different branches of this term, but the way of geoengineering before 2010 was not developed in the way we know it as now. Environmental ethics on the other hand are something we have valued for centuries, even cavemen already had a strong sense of environmental ethics. These groups would often be ecocentrics, although they saw the instrumental value of nature, they valued it highly because they relied on nature for (almost) everything. In later times we started to lean more to the side of Theocentrism, the high regard of God in daily life was something we wanted to preserve. God was who made everything possible and so we will act how God wants us to do, since God was such a big part of peoples moral understanding, they chose to be more of community centred, which is a small difference compared to Anthropocentrism which often places the singular human as centre. As you can see environmental ethics often change per person, community, religious group or even as government.

Evolution and Current Global Relevance

In the 6th session of the United Nations environmental committee held in Kenya, a controversial resolution on the increase of research on solar geoengineering was proposed by Switzerland. The idea of the resolution SRM by mimicking volcanic eruption. Something very controversial about this resolution is that some nations in the UN were already putting measures into place to combat further use of geoengineering technologies, however many are still in favour of this resolution. By increasing research that can be overseen by all nations and the UN, we limit the misuse of the technology. Since these technologies could affect the planet in a way that needs to be overseen, this would mean that the resolution makes sure that the research, and testing is not don't in isolation by powerful cooperations. You could say that this keeps environmental ethics well in place, by making sure communities won't be affected by the testing in silence. On the other side we know that SRM is one of the worst kinds of

geoengineering, due to the implications on agriculture, food security, biodiversity and global (wealth) inequalities.

The inequalities shown by SRM, are a great worry for those who strongly belief in environmental ethics. And so many countries are restricting private companies to engage in this activity. The United States also chose to invest in research and develop a stable waring system to detect if others are using SRM, and other solar technologies. With the USA being such a big part of international news due to adventurous billionaires and the current political state many argue that the USA should not oversee something like this because it has shown to not always have the rights of humans at centre. Ecocentrics have however stated that something like this would make sure nature nor vulnerable communities are at risk.

Some say the future of geoengineering is bright. This process being so far evolved has made many things possible, something highly speculated is terraforming and many think the beginning steps of terraforming are going to begin soon. Organizations like SpaceX are already putting steps into action in order to seen what needs to be done to achieve a planet to be habitable for us.

The theorem on how we could for example terraform mars would make mass-use of lasers; by using these mechanisms we can laser the non-fertile grounds to be more like sand, it would also release moisture stuck under layers of ground. Creating a new suitable planet specifically for us would seem like the most anthropocentric think to exist, but in reality, this process would take so long that many generations would only experience the side-effects of shaping this planet, and not the planet itself. The money rich cooperations would claim by commercializing this planet would also not put us humans first, building this new planet also means building a new economic system for those living there. This has a high probability of skyrocketing inflation and enlarging the group of people living below the poverty line, since people involved in the terraforming will become rich in both the economic system on earth and on the other planet.

In ecocentrism of environmental ethics many argue that firstly the use of lasers would not benefit nature. Besides that, the use of commercial space flights, is very polluting, even now when we only use spacecrafts once in a while but then imagine that if we would have a new planet this would be a daily thing. The habitable earth could also be polluted similarly to ours. Seeing this we could establish that terraforming, and other possible space related geoengineering would be against the beliefs of environmental ethics. Since it does not do good for humans nor for nature.

Timeline

September 17, 2009, Geoengineering entered the Brittanica encyclopaedia.

2010, Un convention on biodiversity and London convention, movement to stop geoengineering, body of materials published that exposed geoengineering as a false solution.

December 2022, 83 national and international organisations from 40 countries published open letter to UN-CBD to say no to geoengineering.

January 2023, Mexico banning geoengineering-experiments after SRM tests by USA.

March 2023, 35+ African NGO's published open letter on not to geoengineer Africa.

February 2024, 6th UN environmental committee convention held in Kenya,

1. Controversial resolution by Switzerland proposed.
2. Multiple African countries advocated for precautionary approach.

March 2024, Cancellation of SCoPEx (Harvard) after years of demands.

June 2024, UN worlds ocean day, calling for an end to marine experiments.

September 10-27, 2024, Science Summit, held on the 79th session of the United Nations General Assembly in New York. brought momentum to solar geoengineering, governmental officials thought about putting restrictions on these solar interventions due to its effects.

Possible resolutions/Research

Important things in environmental ethics are equality, think of government-led project; those are the once that are the easiest to make equal, wealth wise, for most civilians.

Since geoengineering is so broad try to find something that won't harm nature as much as SRM for example.

Warning systems, many countries are not on board since the USA is the leader in this area, but it is very useful.

This is a link to a site where you can see all geoengineering projects from 2000 - 2025, to know which ones are happening in your country;

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