

Human Rights Council Advisory Committee

Questionnaire on the impact of new technologies for climate protection on the enjoyment of human rights ¹

Please answer core questions as well as specific questions addressed to your category of stakeholder (UN agency, State, NHRI, civil society, technical community and academia or private sector). The questionnaire is distributed to you in its entirety for the purpose of transparency.

Please respond as concretely and concisely as possible, listing factors and giving relevant examples.

Please note the definition of “new technologies for climate protection” (hereafter NTCP) in the footnote. There is no need to answer all questions if some are irrelevant to your work.

Core questions (for all stakeholders)

To begin with a general point: I am concerned that many of the questions below seem to assume that geoengineering will happen and it is simply a matter of addressing the particular challenges posed by different proposals, whereas we would say geoengineering is not the answer. New technologies generally are exceedingly unlikely to ‘solve’ our fundamental problems. They are being proposed as an alternative to the real action we need.

This action involves radical change to our dominant, highly inequitable model of development based on perpetual growth and immediate reductions in emissions of greenhouse gases and biodiversity degradation and destruction. We need to adopt a systems approach rather than developing technological fixes to supposedly address complex planetary system issues we do not fully understand, fixes which are likely to have unforeseen impacts that may be extremely deleterious.

1. Which new technologies for climate protection (NTCP) are of particular importance when it comes to impact on human rights? List three most relevant and explain your choice.

All new technologies have the potential to have a major impact on human rights. Geoengineering is no exception and potential impacts include:

- Those which may have unexpected impacts on vital weather patterns, eg: those that would be likely to interfere with monsoons ... and those which may have damaging impacts on biodiversity, eg: the promotion of plantations of fast-growing, often alien tree species.

¹ The term *new technologies for climate protection* for the purpose of this questionnaire broadly refers to techniques of deliberate intervention in the Earth’s natural system in order to prevent further climate change or reverse it. The two main kinds are (1) Solar Radiation Management SRM (i.e. stratospheric aerosols) and (2) Carbon Dioxide Removal CDR. CDR solutions can be nature-based (forestation, soil carbon sequestration, biochar, etc.) or technological (enhanced weathering, bioenergy with carbon capture and storage, direct air capture and storage, etc.).

- One possible impact of SRM applications of geoengineering I learned of only a few days ago concerns changes that this could cause to the **geographical incidence of malaria**. Lowering temperatures to reduce the impacts of heat stress could lead to the re-introduction of malaria into areas where rising temperatures had previously helped to greatly reduce or remove incidence. There would no doubt be other unexpected impacts that we have not yet considered or cannot predict.
- Those which have to be actively maintained on a continuous basis because the sudden impacts of halting them could be worse than doing nothing in the first place.
- The physical and psychological impacts of certain proposals eg: loss of blue skies or dimming of sunlight due to proposed SRM approaches.
- Impacts on the rights and territorial impacts on Indigenous Peoples and local communities of, eg: CDR: BECCS (Bioenergy with Carbon Capture and Storage) or other proposals eg: for planting huge numbers of fast-growing, often alien tree species, often on so-called marginal land used by local communities/IPLCs, with the stated aim of capturing carbon and then using the trees as fuel for the production of bioenergy. This whole idea of trees for carbon storage may anyway be on the verge of breaking down since forests are beginning to emit carbon rather than storing it due to climate change.
- Indeed **by not tackling climate change directly by reducing emissions now**, we further endanger earth systems that are already helping to remove and sequester greenhouse gases.
- Since **some experiments in geoengineering have taken place on or above Indigenous land or are planned for it**, it is vital that they have the right to free prior and informed consent (FPIC) in order to be able to object, as the Saami people did to the proposed SCoPEX (Stratospheric Controlled Perturbation Experiment) to look at stratospheric aerosol injection (SAI):

<https://insideclimatenews.org/news/07072021/sami-sweden-objection-geoengineering-justice-climate-science/>

The same is true of the Ice911 proposal: ‘**an attempt to experiment with the preservation of Arctic sea ice by covering it with a layer of reflective silica “microbubbles”**. The project's leader, Leslie Field, suggests that this technique could be used on a massive scale to slow the melting of Arctic Ice, preventing sea level rise’.

<https://www.geoengineeringmonitor.org/2019/02/arctic-geoengineering-experiment-is-dangerous-lacks-community-consent-inupiaq-organizer/>

- There is a serious likelihood that the development of geoengineering techniques, far from addressing inequity between rich and poor, will actually exacerbate it.

This is especially likely:

- if geoengineering is used to justify continuing with business as usual, eg the current model of development based on endless growth; inequitable structures within and between states together with continued high levels of greenhouse gas emissions and the continued forcing of climate change and its many impacts.
- If geoengineering technologies were to be imposed (as is most likely, by the rich countries with the capacity to develop them) on poor countries, especially since this would be likely to give an advantage to the rich, ie potentially modify the impacts of climate change for them, while possibly exacerbating negative climate and human rights impacts for the poor

The imposition over the last few decades of industrial agriculture could be seen as having similarities to geoengineering, since the impacts on both climate and biodiversity are major as well as strongly promoting our current consumption-driven economic model. Profits rise in the short term and negative impacts become clear only in the longer term.

Industrial agriculture has also been disastrous for Indigenous Peoples and local communities and also for peasant or smallholder farmers, who (in spite of attempts to suggest the opposite) play a central role in feeding us. Serious negative impacts on all of them could also arise from geoengineering.

The name: New Technologies for Climate Protection

The use of the word **protection** suggests that we know that these new techniques will have this effect, whereas in fact we do not. To call such technologies **protection technologies** could easily provide false reassurance. Should this be the case, it would not be the first time we have seen such misleading use of words, take for example the **Foundation for Clean Air Progress**, which is in fact an industry front group, devoted to maintaining business as usual regarding air pollution and all the usual suspects.

We strongly suggest that the name should simply be New Climate Technologies or New Climate Manipulation Technologies or simply Climate Manipulation Technologies, which states clearly what they are intended to be.

The implication that geoengineering is a precautionary approach

The use of the word **protection** also suggests that geoengineering should be seen as somehow precautionary. This is a complete distortion of what that principle means: the obligation to minimise or **avoid** actions that may provoke serious problems. This is indeed what we actually need: **to immediately reduce emissions of carbon dioxide that provoke climate change and to reduce our negative impacts on the planet's biodiversity**. Both are largely the responsibility of the rich countries and of multinational corporations, which therefore need to take immediate action rather than continuing to do almost anything to avoid such change. Trying to interpret geoengineering as a human right could be seen as yet another attempt to avoid **real action to minimise or avoid further climate change**.

2. What kind of NTCP may contribute to human rights promotion and protection? Please, explain how.

Frankly I cannot imagine any such technologies or their application contributing to human rights protection in the current context of inequality and exploitation and, in particular, while we maintain the current model of economic growth with its emphasis on exploitation of resources, climate emissions and biodiversity destruction.

3. What are the key human rights challenges and risks arising from NTCP and from which in particular? Do NTCP create unique and unprecedented challenges or risks, or are there earlier precedents that help us understand the issue area?

A repeating pattern in recent development is **the emphasis on possible advantageous impacts of new technologies with far too little examination of potential negative impacts**. The impacts of the use of pesticides, GM crops and many more such new technologies were either not predicted, or overlooked in the interests of immediate profit or convenience.

Examples include the promotion of gene drives to eliminate invasive species such as mice from islands without considering the impacts of their escape from those islands. The application of new technologies is usually driven by the profit motive, eg: the sad but instructive story of asbestos among many others, whose negative impacts were first seen in 1896 but which was only banned a century later and whose impacts are still being felt - see: **Late Lessons from Early Warnings: The Precautionary Principle, 1896-2000** https://www.eea.europa.eu/publications/environmental_issue_report_2001_22

This would also apply to geoengineering as proposed within the current context of the economic growth paradigm.

The challenges and risks of geoengineering are unprecedented because the technologies proposed involve major interference in complex and extremely powerful systems we do not understand. The combination of arrogance and the desire to avoid the changes we need could be lethal.

4. What specific human rights may be affected by the use of NTCP? Please, explain how. Who are the rights-holders that potentially would be the most affected by the use of NTCP? Are they also the most affected by climate change? How could they and the society at large be engaged in the decision-making process?

Indigenous peoples and local communities, along with peasant or smallholder farmers would very likely be the most seriously impacted. They are suffering the impacts of climate change and biodiversity loss while in fact helping to counter the impacts of these changes, brought about largely by the current economic model of development. If this were fundamentally changed, the twin problems of climate change and biodiversity loss would begin to be addressed. In addition the poorest and most disadvantaged in all societies would likely be those suffering the worst impacts in their respective regions.

Regarding the decision-making process: please see my answer to question 6 below and questions 5 and 6 of the questions put to civil society organisations.

5. Is the existing international and your national human rights framework adequate to safeguarding human rights of those affected by the use of NTCP? Why or why not? If not,

what principles may be identified in order to address the gaps? List them according to priority.

Very often, those most impacted by climate change and biodiversity loss are those whose human rights are most seriously undermined by the current model of development: the poor, plus Indigenous peoples and local communities, along with peasant or smallholder farmers. They often have little influence or possibilities for genuine participation, especially if they are women, and their human rights are frequently violated without those responsible being held to account – eg: the murders of environmental and human rights defenders around the world, see:

<https://www.globalwitness.org/en/campaigns/environmental-activists/last-line-defence/>

6. Given that NTCP may present potential risks for the enjoyment of human rights, to what extent do human rights legal obligations require the States to pursue other climate protection policies presenting less risks of harm, including mitigation and adaptation measures?

This is a core question: human rights legal obligations mean that **we need urgent change in our approaches to the threats we face from climate change and biodiversity loss and the conflicts it will increasingly generate.** This is very different from the approach of developing geoengineering techniques to mitigate these impacts and enable business as usual to continue.

People – citizens – need to be genuinely involved in processes of **democratic deliberation** on these core issues and governments should be obliged to enact the results of such deliberations. Such process of democratic deliberation, eg: citizen assemblies, citizen juries, need to be very carefully organized and carried out without being corrupted or weakened, a major challenge for governments everywhere. See information on the Irish Citizen Assembly process here: <https://citizensassembly.ie/en/>

7. As opposed to focusing on selected few technologies, do you think a holistic and inclusive approach will help reduce any gaps in the existing system for addressing human rights challenges from NTCP?

Developing holistic and inclusive approaches is an immense challenge. If we collectively are capable of addressing those challenges, we could possibly address the issues of climate change and biodiversity loss. This is the context in which these issues need to be considered, rather than engaging in a dangerous discussion about proposed geoengineering technologies, which we have no right to call climate **protection** technologies as this word in itself suggests that such technologies can ‘protect’ when in fact we have absolutely no idea whether this is true.

8. What should be the responsibilities of key stakeholders (UN agencies, states, NHRIs, civil society, technical community and academia, private sector) in mitigating the risks of NTCP to human rights and/or fostering its protection?

All these have the obligation to ensure that the debate does not descend into yet another debate about using (untried and theoretical) technological applications to address the problems we have created, when we simply do not understand enough about earth systems to make these kinds of claims. **Instead we need to focus on real change to our current economic system that is based on endless growth and exploitation of**

resources, our destructive food systems and the profound inequalities that both have created. The core obligation of the private sector is to return a profit, which makes it extremely difficult to change, especially within the context of the model of endless growth based on debt that is already exceeding several planetary boundaries. See: [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(22\)00044-4/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(22)00044-4/fulltext)

In this context geoengineering is simply an attempt to avoid real action.

Specific questions for civil society organizations

1. Please describe the relevant work that your organization has done on the issue of NTCP and human rights. What are the key accomplishments? What challenges has your organization faced?

Although not explicitly on human rights the work we have done on geoengineering was always relevant: critiquing the potential for very unequal impacts on rich and poor. **See attached document for more details.** We helped to achieve the near-moratorium on geoengineering at the Convention on Biological Diversity in 2010 and also helped to argue against and prevent the ‘Balloon and Hose’ experiment proposed for the UK.

The main challenges have always been the pressure to avoid the changes we actually need: ie **immediate reduction of greenhouse gas emissions and biodiversity destruction** by proposing ‘innovative technologies’ such as Solar Radiation Management (SRM) and Carbon Dioxide Removal (CDR).

2. Should your organization be involved in the use of the NTCP (for instance, in a monitoring role) how would it contribute to the assessment of human rights impacts and ensuring its protection?

This question assumes that NTCP will go ahead, hence I decline to answer it.

3. What will be the impact of NTCP on the enjoyment of human rights in the field that your organization covers? What are the main human rights challenges that these technologies pose? Is the international human rights framework well equipped to address them? What are the policy gaps in national policies? What actions at national and international level would be required in order to effectively address these challenges?

One of the major problems with geoengineering is that it is likely to have global impacts, many of which may not be predictable. Impacts on biodiversity and important climate patterns such as monsoons are very difficult to predict accurately for complex systems such as the planet’s climate and biodiversity, about which we still understand comparatively little. It is therefore difficult to predict impacts on human rights, except to say that the poorest and hungriest in the world are likely to be worst affected, as they usually are by eg: droughts, floods and harvest failures.

We actually need a paradigm shift in order to address the serious inequalities we face, away from our current economic system based on perpetual growth on a finite planet. Especially since we have already passed several planetary boundaries. It is vital to accept that new technologies are not the way to address these issues, rather than trying to re-interpret them as a human right.

4. How should the rights to access information, to participate in environmental decision-making and to access to remedy be applied in the context of NTCP-related research, experimentation, development and deployment?

Access to information and processes of technology assessment in a meaningful manner should be a human right. People should also have the right to deliberate and decide for or against new technologies with a major impact such as geoengineering before any experiment is carried out.

5. How do you evaluate citizens' awareness of the potential impact of NTCP on human rights? Does your organization have a roadmap to enhance public awareness of the issue?
See attached document for work carried out.
6. What are the means to ensure meaningful public participation in the debate and decision-making process over the use and potential risks of NTCP, particularly of those most vulnerable or affected?

In answer to both questions 5 and 6, which are of critical importance:

Citizen Assemblies

I believe that genuine processes of deliberative democracy with citizens are the only way to ensure a proper, balanced debate. I was a member of the Oversight Group for the **Synthetic Biology Dialogue** in the UK, which involved randomly chosen members of the public in the debate, and my experience of that strongly reinforced this view. Please see:

<https://www.ukri.org/publications/synthetic-biology-public-dialogue/>

However, this requires commitment from governments to the idea that ordinary people are capable of and have the right to participate in such discussions and have very useful insights to offer. It then requires governments to provide the necessary resources and contexts to carry out such processes and treat them not merely as public consultations but as commitments that they should follow. The Irish government committed itself to so doing with important results: See information on the Irish Citizen Assembly process here:

<https://citizensassembly.ie/en/>

The UK held a brief public consultation on geoengineering in 2010, where the public showed considerable wisdom in their responses in spite of the brevity of the process.

https://www.ipsos.com/sites/default/files/publication/1970-01/sri_experiment-earth-report-on-a--public-dialogue-on-geoengineering_sept2010.pdf