UN STI Forum May 5-6, 2022
Thematic session 5: Emerging carbon dioxide removal technologies for addressing climate change
Written Statement
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Thank you Mr Chair, dear STI organizers and participants,

We have no time to waste to address the root causes of the climate crisis to prevent further disastrous impacts for communities, the environment and future generations.

Despite their promotion as potential solutions, none of the proposed Carbon Dioxide Removal technologies address the root causes of climate change, like fossil fuels, industrial food systems and consumption and production patterns based on fossil fuels. In fact, these technological proposals could even increase greenhouse gas (GHG) emissions and perpetuate *business-as-usual* production and energy patterns.

As with other geoengineering proposals, all CDR technologies entail significant environmental, social, economic, and political risks and potential impacts. Furthermore, they are not developed or barely at research or pilot stage. There is no proof that they will function to effectively address climate change, but they require huge amounts of public subsidies and investments, while maintaining the status quo that put us in the crises.

Over 80 percent of current Carbon Capture and Storage (CCS) installations are used to access deep oil reserves, which will lead to increased CO2 emissions. Proposals to remove carbon directly from the atmosphere, such as Direct Air Capture (DAC), are extremely expensive and energy intensive, which could also lead to increased emissions and/or severe competition for renewable sources of energy needed to meet existing demand. Bio-Energy Carbon Capture and Storage (BECCS) and industrial plantations for biochar would also compete with land for food production and have large impacts on biodiversity.

Proposals to fertilize the ocean by dumping iron or urea to force oceans to absorb more carbon, could disrupt marine food chains and cause anoxia in deeper layers of the sea. Manipulating ocean chemistry by dumping tons of rocks or minerals—including toxic mining wastes—would exponentially increase the mining industry and its impacts, and it could also have unwanted side effects on marine environments.

Many of these proposals are planned for Indigenous territories, in violation of their rights and without considering their right to Free, Prior and Inform Consent (FPIC).

Based on the precautionary approach, and because of the potential impacts of these technologies on biodiversity, the Convention on Biological Diversity called for a de facto moratorium on the deployment of geoengineering in 2010. Likewise, the London Convention on Ocean Dumping and its London Protocol decided that ocean fertilization should not be allowed, except for legitimate scientific research. They are currently analysing other marine geoengineering technologies.

But probably the most immediate risk that CDR technological proposals entail is that even though these technologies have never been effective, they provide an excuse for polluting industries and governments to avoid making the necessary reductions of carbon emissions now, because they would supposedly be technologically offset in the future.

This is a dangerous gamble. It wastes the limited time and public resources we should use to address the root causes of climate change and scaling up real, social and ecologically sustainable alternatives that already exist. There are many proven, safe technologies on key sectors such as food systems, building, energy saving and others, that are available or could be developed at local levels and be affordable to most populations, especially in the Global South. These technologies actually prevent further GHG from being emitted and need to be recognized and supported in their scale up, with the active leadership from rural and urban communities and Indigenous peoples.

The STI could play a key role in confronting the global environmental crisis by promoting the establishment of mechanisms for participatory technology assessment, which must be inclusive, transparent and anticipatory. This could integrate a necessary diversity of perspectives -- especially those who may be negatively impacted-- namely, women, youth, Indigenous peoples, farmers' organizations, trade unions and other organizations from civil society.