GEOENGINEERING IN THE GLOBAL SOUTH (ETC PODCAST)

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Episode #6 of the ETC Podcast is a conversation with ETC Group's Latin America Director, Silvia Ribeiro, about geoengineering and the Global South. Silvia has been working on geoengineering issues for 13 years, ad was at the UN negotiations that passed the global moratorium on deployment in 2010.

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Dru Oja Jay: Welcome to Episode 5 of the ETC podcast. My name is Dru Oja Jay, and today, we'll be talking about the effects of geoengineering on the Global South with Silvia Ribeiro. Since the early 2000s, billionaires and fossil fuel companies have been facing the necessity of reducing fossil fuel consumption. In response, many of them are developing ways to justify the continuation of extracting and burning fossil fuels. Many of their proposals fall under the category of geoengineering. What that means is modifying the climate at a planetary scale.

Geoengineers, as we call them, plan interventions that would affect every ecosystem if implemented. Critics categorize geoengineering by the places where the effects will be felt. For example, land geoengineering, ocean geoengineering, and atmospheric geoengineering. But proponents of geoengineering categorize the different types by technical distinctions. In the following interview, you'll hear references to solar geoengineering and carbon dioxide removal. Solar geoengineering refers to the idea of blocking sunlight from reaching the earth or reflecting it back into space.

These theories about blocking the sun are sometimes called Solar Radiation Management or SRM. Carbon Dioxide Removal or CDR refers to attempts to pull carbon out of the atmosphere, usually to be buried underground on land or sea. There are profound problems with both sets of proposals. If they're deployed at a large scale, they could have destabilizing effects on weather patterns and ecosystems worldwide. Today's guest is Silvia Ribeiro, Latin American director at ETC Group.

She has been campaigning against geoengineering for 13 years and played a central role in the successful push for a global moratorium on geoengineering activities backed by the 196 countries that are members of the UN Convention on Biodiversity. We chatted a few weeks ago about the effects of geoengineering on the Global South.

Dru: It's been pointed out that a lot of the geoengineering activity comes from the North and has a disproportionate effect on the South. I'm just wondering if you could elaborate on that and how you see those dynamics playing out in your work.

Silvia Ribeiro: When we think about the researchers, the majority of them are based in the North, for sure, and they are funded by either billionaires or governments in the North. There is not a concrete figure because nobody knows exactly how many researchers there are, but I would say that 90% of the researchers are located in the North. And that even if they are in the South, many times, they respond to projects in the North. If we look at who is funding and who is researching, this is definitely a Northern project. But the most important thing on why this is a Northern project is that geoengineering is a way of perpetuating the system we already are in.

Climate change historically has been produced mostly by 10 countries. These 10 countries where the US has historically been the leader in greenhouse gas emissions that cause climate change – these account for more than two-thirds of the emissions that have been produced overall, and it's more than all the rest of the countries together, and all the rest of the countries are– most of them are in the South and some in the North also, but also, for instance, Africa: they haven't caused any climate change at all when you look at it historically.

When you look in present terms, the situation is still 10 countries which have produced two-thirds of the emissions. I think the US is one of the largest. Since a few years back, it's China, but even when you look at the per capita emissions in China and in the US, in the US, it's ten times more than in China. The US with 5% of the population is now consuming about 25% of the energy. It's not only about the US, but the issue is that most of the ideas, the proposals, the researchers, and the money comes from the US for geoengineering.

Do you wonder, why is all this research happening on a technology that implies a lot of risks? The oil companies, the fossil fuel companies, most of them are also based in the US and continue working on this. In this sense, it's not only about the research, it's also about – what are they trying to do? There is a lot of speculation about how we could address some of the symptoms of climate change that they define. Also, they have control over much of the modeling. Not only in the US: they're even in the international research institutions. Most of them, again, are Northern researchers.

They define what is an emergency, how long this will last, what will be the measures we need. We're exposed to this all the time in the geoengineering discourse. On the other hand, we can see that they are not even thinking that people or even… In the geoengineers' mentality, they are not thinking that people in the South and governments in the South may want to do something completely different, even if facing an emergency.

For instance, why would any government want to develop a very complicated technology, which has a lot of risk, instead of investing massively in some kind of adaptation and taking measures to save people from flooding? Of course, the main point of everything is that the only way of addressing climate change is real reduction, both on the source of the emissions and also where they are consumed. Because it's both parts, which are the key parts of climate change.

Geoengineering is not touching anything of that. It's like kind of preserving the status quo because they said, "Well, this is just in case, we have temperature that is over 1.5 degrees, or that we can sequestrate or absorb the carbon dioxide from the atmosphere, we can't waste any time, we have to make these reductions." This is their priority and they are working from the countries that are the actors of climate change, like the real culprits of climate change. I don't like to speak on the whole country because they are also poor people in those countries, of course, that are not benefiting from that.

The powers, the economy, and those governments– why are they working on these solutions that will give an alibi to these countries and say, “Well, we can invest in something else” ? The other thing that I think is really imposing is that, as I said, they are not looking at real solutions, most of which are located in the South and come from the South. As our work in ETC has shown, one of the most important solutions to climate change – not the only one – is deep changes in the food system.

The majority of food producers that are diverse, that are locally placed that are sustainable, who don’t use chemicals are farmers, peasants, women in the South. It’s not only in the South, again, it’s everywhere where there is this kind of a small-scale agriculture, what we call the Peasant Food Web. There’s also a lot of other ways of working, localized and decentralized – they are not looking at these kinds of things, nor are they even aware that many of the proposals of geoengineering will impact particularly on those groups.

For instance, where national fertilization, the first project of Ocean Fertilization, one of them was in Philippines. The project was to fertilize the Sulu Sea among the islands of the Philippines. That would have put out of work 10,000 small fishermen and women. That is only one thing, but also, for instance, when you think about Solar Radiation Management, that will have changes all over the world. As researcher Alan Robock has shown and many of the models have shown – the mathematic modeling – it will have a very heavy impact on the monsoon regime in Asia, and also produce droughts in Africa.

That will, of course, hit some of the poorest regions in the world in order to have something that theoretically will lower the temperature, particularly for regions in the North. This is one of the proposals, which is about putting stratospheric aerosols in the Arctic. The whole thing is about not listening, not seeing people, and organizations in the South. Not only about the concerns, but also about the proposals and the things we want to do.

Dru: You just mentioned one thing there at the end. I’ve seen David Keith several times say that their studies show that solar geoengineering would actually just reduce temperatures globally in a uniform way without affecting – having these regional effects that people have worried about in other studies. Where’s that debate right now and what is your observation about that?

Silvia: Well, the issue is that all the proposals that came for Solar Radiation Management in the beginning when they started with this after 2007 – there were others before, but when the whole discussion on geoengineering came up after 2006 – they were based on covering the Arctic with some kind of layer that will reflect back the sun. Those proposals to really have an effect on climate and the global level, will also imbalance the rain and wind patterns and particularly affect people in the tropics and particularly in the South in Africa and Latin America.

What happened is that people saw that this is really bad. With SRM, Alan Robock says – not ETC Group – Alan Robock said that 2 billion people could be in danger with their source of food and water. What [geoengineers] did after that was to start tweaking the modeling. They said, “Well, instead of doing so much here, we can do a little bit of geoengineering in another part. If we do a lot of carbon dioxide removal, then we will have another scenario.”

One of the expressions that was used was that they will do cocktail geoengineering. They will do a little here, a little there. Based, not on the cocktail itself, but based on these tweaking the models, they have come with a series of other scenarios. Where they say, “Well, we could do little less here and increase a little more there. If we do this and this and that and we change this and that model,” but the issue is that this is just extremely speculative, but basically because all geoengineering, particularly solar geoengineering is totally based on theories and speculations.

They can speculate anything. They can continue moving the models until they get some results that they think appear to be better. This is exactly what they are doing. As part of what they are doing now is trying to get teams in some countries in the South, just to try to counter this perception that they are so Northern focused, but still, still they are funded by the North and with an agenda that is of the North. And trying to get people to say the same thing by tweaking models, which is until they get a result that says “we could maybe have better results or less climate problems.”

It’s extremely far from proven. It is unproven what happens with the technology in the South because you could go back and see the uncertainties about the climate system and how different factors in the climate systems interact with each other on these changing dynamics of not only climate change, but also other phenomena that are happening and all the variability of the climate change. These are models that could be useful to have some scenarios, but they are not the reality. In the case of geoengineering, it’s more how they are being used.

They are being used as a way of influencing policy. It’s influencing to allow for geoengineering to be deployed, even if they don’t know what will happen. And everything that they do will have terrible effects, particularly on the South. Even if they do this kind of tweaking with the model, they cannot– what is hidden is that they are implying, for instance, the massive use of other forms of geoengineering. They are implying that there is a global mechanism that will control [all geoengineering

activities] so that they can use a little bit here and then there, and then take it down.

All that is completely ignorant of the political reality of the world. The injustice, the differences among countries, but also the geopolitical really difficult situation.

Dru: Can you talk a little more about that geopolitical situation – like, what is the power inequality now between the North and the South when it comes to geoengineering and how is that likely to play out if geoengineering were to move forward, how would that affect the power dynamic between effectively the majority world and these 10 countries that you're talking about?

Silvia: Well, what happens today is that geoengineering is a tool that really is a technological proposal that assumes not only that there is the money to deploy it, but also certain the conditions to control it. In many cases, it has been said that it will involve military to be deployed because of the field where they need to use it because of the permissions they need to do to use the space and many other things. That means also that will exacerbate the geopolitical inequities that are already in place, where they have more resources not only in terms of technology, money, but also stronger militaries.

The main problem is that those countries, as I said before, are the main culprits of climate change. If they don't do anything to really address climate change and to start with geoengineering, then this is a perfect captive market for those controlling geoengineering because they will always need to deploy more and more geoengineering because climate change will continue. That is one of the main problems because among of the many fantastic things that the geoengineers produce. Now they have said that geoengineering's effects are so terrible that once it is researched and there are the possibilities to be deployed, then countries would be so afraid, they wouldn't use it.

That's like what I said about cocktail geoengineering. It's the same thing. It's like taking an argument, which is on the table and is completely real, which is that geoengineering is favoring the deviation of attention and resources from the real solutions and from the real measures that have to be taken and put it. They tweak it again, and say, "Oh no, but [developing geoengineering] will help because it is so terrible that they will be afraid."

The idea is that then [policymakers] will say, "no, no, we have to do something else," which is to combat the idea of the moral hazard. That is also ridiculous. In terms of North-South, what's happened is that again, we have today a very bitter discussion at the climate change convention to see how they can make those countries that are the main emitters, really restrain themselves, and change these patterns. And how are they going to do it? Once they do geoengineering, will it stop if it is a business for them? They will add a layer of complexity on something that will create more inequity between North and South.

Still, United Nations is the [closest thing we have] to something that could help countries in the South to do something, and that's why 196 governments that are part of the Convention on Biological Diversity voted for a precautionary approach on this. The precaution approach is don't deploy before there is a multilateral agreement that everybody can take part in, very clear on how the science functions and that there is this global mechanism, that is democratic and where really all countries have to be part of it.

Because geoengineers know – this is in every study, that geoengineering is profoundly unequal in the sense that there will be winners and losers – and they say it all the time. The losers will be the countries that cannot decide. There is no scenario where all the countries will get together and some countries will say, "Okay, all our country will disappear like that small island, or we will be flooded, or we will have a terrible drought, but we are okay with [solar geoengineering]." That scenario is ridiculous and that is what they say all the time.

They say "international governance" instead of saying multi-lateral and full government because there is no way to have any decision that is fair on Solar Radiation Management that is not based on everybody agreeing on that. That scenario doesn't exist and they know this. They ride on this inequity thing that is already there and try to advance different forms of experiments or even discussions on governance that are not really including all the parties like it happened, for instance, when they did the moratorium at CBD.

In the CBD, there were all countries and we started the discussion on the moratorium with both Russia and China opposing the moratorium. And then at the end, it was a discussion, because the US is not a party of the Convention on Biological Diversity. It was a discussion about, "Yes, we have to have a precautionary approach on this so we can see what the impacts are before this is deployed." That was the decision that was taken.

Dru: Just speaking of the CBD, the CBD is, of course, about biodiversity. I'm just wondering if you could comment on the likely effects of geoengineering on biodiversity, especially in the global South, but obviously globally as well.

Silvia: Well, of course, the issues that many of the geoengineering technologies will produce a carbon imbalance in the climate and also imbalances in ecosystems. We don't like to speak about Solar Radiation Management and carbon dioxide removal. We would prefer to speak about marine geoengineering or atmospheric geoengineering or terrestrial geoengineering because it communicates more about the impacts that will happen.

What happens if you, for instance, deploy Ocean Fertilization? It will create anoxia – lack of oxygen in some layers of the ocean. That will create problems in the whole Marine food chain. But also it has, of course, a larger impact on biodiversity. That will also happen with many of the technology proposals – they will have a localized impact in some places. With Solar Radiation Management, the only way that this will have an effect to modify the climate, is if it is deployed at such a large scale that it cannot be deployed without any side effects. These side effects will be, for instance, again it will create droughts in other places depending on the technique in where this is deployed. This is, of course, a big problem for biodiversity.

The most affected in this are not only in the South, the most problematic is that the people that will be most affected are the people that are directly dependent. People whose livelihoods are based on a relationship with these ecosystems, like the small artisan fisheries or pastoralists or even peasants. Because geoengineering will change the conditions of the sun radiation, of course, but also rain, droughts. This will happen in a way that is not the way that they know in their traditional knowledge. They already have problems with climate change, but in the case of geoengineering things will happen in a much more rapid and drastic way.

That will impact particularly those people. Those are the people that today, are not only the main base for foods in the world (because the Peasant Food Web is providing the food for almost the equivalent of 70% of the world), but it's also these kind of activities that are holding back climate change. In the sense that they are not producing new emissions, but they are also taking care of water and land in a way that absorbs more carbon dioxide. It's affecting the people who are already making the best contribution against climate change.

Dru: ETC has worked in collaboration with movements and civil society groups worldwide to oppose geoengineering projects. If you want more information, visit geoengineeringmonitor.org, our collaboration with the Heinrich-Boell Foundation and Biofuelwatch, or handsoffmotherearth.org, which is the site of the global Hands Off Mother Earth campaign to stop geoengineering – HOME for short. Thanks for listening to the ETC podcast.