Environmental Diplomacy and Social Justice

Saleem Ali

The 2024 Baker Institute International Symposium, Toward Environmental Justice: Transition to a Sustainable Future, October 9 and 10, 2024

Saleem Ali is the Blue and Gold Distinguished Professor of Energy and the Environment at the University of Delaware. He also serves as a Senior Fellow at Columbia University's Centre on Sustainable Investment.

I am introducing environmental diplomacy, a term coined by my former PhD adviser, Lawrence Susskind, a professor at MIT to whom I owe much of my career. He wrote a book called *Environmental Diplomacy*, and it was a special joy for me that when the second edition came out about twenty years after the first, he asked me to co-author it with him. Some of these ideas come from that book, but as is the theme of the talk, I will also link the concept with social justice and the broader theme of environmental justice. I'll do that in the context of contemporary conflicts I've been involved in trying to resolve. I should note that I am in a rather uncomfortable zone between the private sector, public sector, and civil society, and I'm always trying to maintain trust with all three. I've learned from great leaders like my fellow panelist Julia Marton-Lefèvre, who, as she mentioned with the structure of the International Union for Conservation of Nature (IUCN), also operates in this uncomfortable space between governments and civil society.

A lot of my research is informed by these questions. For those of you going into academia or plan to become researchers, it is important to start with questions, not answers. We are always tempted to start with answers because we all have predilections. In terms of the work I do, my primary research question has been: how does the inclusion of environmental factors in negotiations influence cooperative behavior? Is there something about environmental issues that can lead us to cooperate, even if we don't like each other? Is there something we sometimes refer to as a "superordinate goal" that can bring us together? Intuitively, you might think, yes, sure—we all need to live on the planet, we need to share these resources. It should be something that brings us together. But we are in election season and the environment is more of a fractious issue than one that brings us together. In the US, that's been a relatively recent development; if you go back several decades, the environment was bipartisan, and it brought different political parties together. The Environmental Protection Agency, for example, was created by a Republican president, Richard Nixon. It wasn't considered a "woke" issue or polarizing—it was uniting. That has been puzzling for me, and I continue to investigate it.

There are also sub-questions. How can we use territorial conflicts as a way to inject and resolve environmental issues? Some of my work has looked at transboundary conflicts. I'm originally from Pakistan, an area fraught with conflict, especially after the departure of the British and the Great Partition that divided the subcontinent into various countries, which has led to longstanding conflicts, especially between India and Pakistan. I've also been involved in trying to resolve conflicts between South Asian countries. Then, what mechanisms are needed to establish governance systems that could maintain peace? Finally, what ecological boundary conditions are most likely to be associated with de-escalation? Are there ways to reduce conflict using specific strategies?

What I found in my research is that there are basically three kinds of pathways we can follow. First, territories could cooperate over the distribution of a necessary resource—water, for example. Second, there could be cooperation over what we call a "common aversion." For instance, if a group doesn't want something bad to happen to its resource base, like pollution, they might cooperate. This often occurs in the context of lakes, where communities cooperate to prevent pollution because everyone would suffer if the lake were polluted. Finally, as we're observing with climate change, you could theoretically have cooperation in crisis as a catalyst for lasting collaboration. Disasters can bring us together. To some degree, this has happened with certain natural disasters where countries or donors provide funds. However, it's not nearly as much as we hope for or need; if you look at the numbers, it's actually a very small amount. The UN has been negotiating an adaptation fund for countries impacted by climate change, but the funding is minuscule compared to what is needed. When compared to global expenditure on defense, the climate bill is less than 1% of that.

Below is a diagram that outlines the challenges of achieving cooperation in combatting climate change. On one level, it doesn't make sense—climate change is a threat to all of us. Why can't we cooperate? Why was it so difficult to establish the Paris Agreement? One of the great examples of environmental diplomacy was the only UN treaty ratified by every member state of the UN, including North Korea and the United States: the Vienna Convention on ozone-depleting substances and the Montreal Protocol. The protocol is a document that sets targets. It's called the Ozone Treaty and it regulated the chemicals that were destroying the ozone layer. We were able to achieve a remarkable consensus fairly quickly on that agreement. It was negotiated in the 1980s and the global community, even during the Cold War, came together. However, this kind of agreement has not happened regarding climate change, and the diagram shows some of the reasons why. A lot of it has to do with the challenge that climate change requires a much more behavioral response—a greater change in behavior—compared to dealing with ozone-depleting substances.

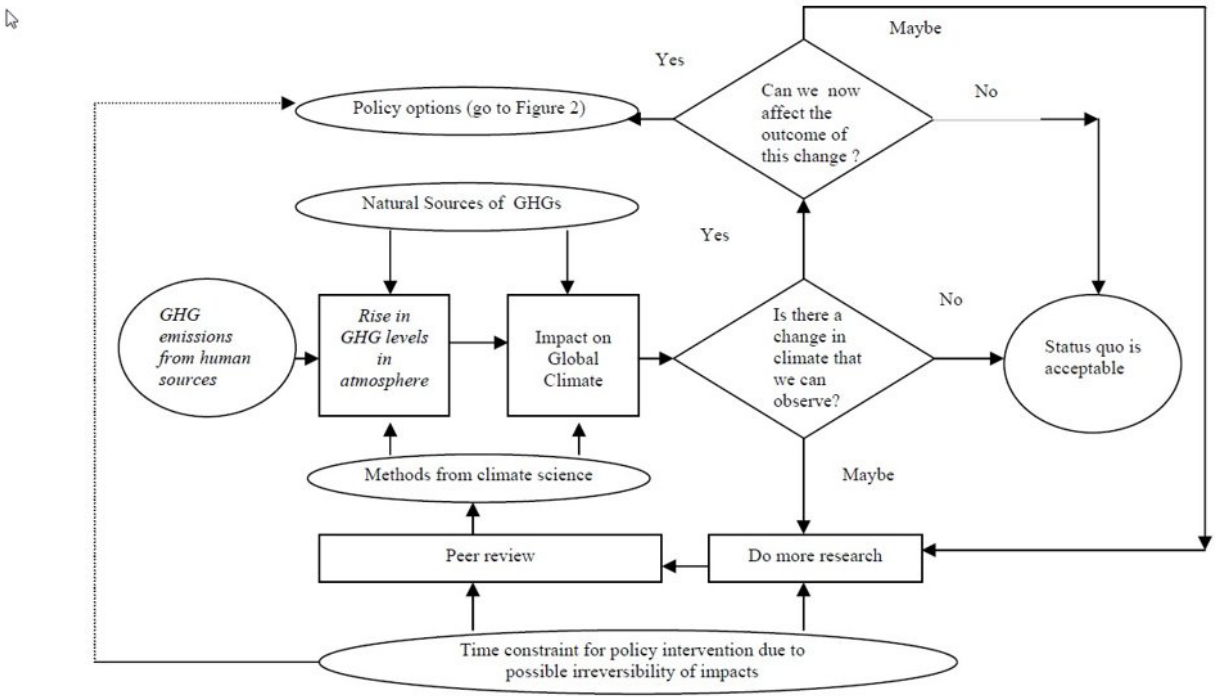

Figure 1. Argument Flow for Climate Change Debates. Source: Saleem Ali.

A key to combatting the lack of cooperation is the role of science and how science is operationalized. With climate change, there are many opportunities for doubt to be cast on science. In contrast, the ozone treaty faced fewer doubts because that science was much clearer. The Nobel Prize-winning work by Sherwood Rowland and Mario Molina—Molina was a professor at MIT when I was there and I had the good fortune of interacting with the wonderful Mexican-American scientist—helped establish a clear scientific basis. Because the science was so clear on ozone, people cooperated. However, regarding climate change, the number of wedges that could speciously be inserted into science is significant. Naomi Oreskes's and Erik Conway's famous book *Merchants of Doubt* highlights how this played out. It became increasingly easier to undermine trust in climate science. This led to the need for mechanisms to vet science, which has been a focus of my recent work. How can we build trust in science? There's a whole field called science diplomacy. With climate change, this lack of trust has been a particular challenge, often resulting in what we call paralysis by analysis.

More recently, I've been working on minerals. My empirical research focuses on the environmental and social impact of extractive industries, such as mining and mineral development, which is relevant to this part of the country, Pennsylvania. For instance, considering a green transition,

extractive industries have become a wedge issue of conflict. To produce solar and wind energy, lot of minerals are needed. Solar panels require tellurium, and rare-earth minerals such as neodymium are essential for magnets in wind turbines. My first degree was in chemistry, and I say that chemistry is my first intellectual love. Looking at the periodic table, you'll notice the wonderful group of elements at the bottom—the lanthanides and actinides. These "weird" elements are needed for many of the green transition technologies.

You may have heard of Joe Rogan, the podcast host. On average, 11 million people listen to his podcast. That's a huge audience. He interviewed a journalist named Siddharth Kara, who wrote a book called *Cobalt Red*. This book, published almost two years ago, is about the extraction of cobalt from the Democratic Republic of Congo and how it is often carried out with child labor, leading to conflict. This is a huge area for peace and conflict studies—a real conundrum. It's a country that, sadly, has been at war for so many decades. I was surprised to see Joe Rogan interviewing this good-hearted journalist about his book. But essentially, Rogan was questioning the issues surrounding electric cars, tying into the paradox of the green transition. Many proponents of massive technologies, like Elon Musk, struggle to address the associated social problems. Recently, Ruha Benjamin, from Princeton University, highlighted this issue in her TED Talk. She described how techno-optimists, so positive about solving technical challenges, often fall short when tackling social issues like homelessness or child labor. Rogan's angle in the interview seemed to suggest that the problems of child labor and conflict in the DRC raise questions about whether we should even manufacture electric cars.

When people ask me how I define myself, I say I'm a geographer by department, but that my training in natural sciences leads me to identify as an environmental systems scientist. Systems scientists deal with complexity. There's a key difference between something complicated and something complex. Complicated systems have many parts, but each can be reduced and fixed. Complex systems, on the other hand, involve interconnected parts where fixing one aspect doesn't necessarily solve the whole system—you need to look at it in its entirety. Consider, for example, some of the different types of batteries: lithium iron phosphate (LFP), nickel manganese cobalt (NMC), and lithium nickel cobalt aluminum oxides (NCA). If cobalt uses child labor and has environmental justice issues, should we use magnesium or lithium-ion phosphate batteries instead? The batteries vary with regards to efficiency, energy density, power density, cycle life, cost, safety, and temperature operational range. Such variables help us recognize that we live in a world of trade-offs, and that is the other lesson in complexity: one inherently must deal with trade-offs. That is one way in which I have been thinking of resolving these conflicts. We have to find better methods of measurement at the systems level, so we can actually present data and find solutions. My solution isn't to stop buying cobalt from Congo but to solve the child labor problem.

Simply abandoning cobalt would be like being an ostrich—burying our heads in the sand instead of addressing the real issue.

In the context of Africa, this was the focus of an article we published in 2023.[1] We have greenwashed the efforts in Africa to move toward a sustainable future. In early 2023, I visited Gabon, a country celebrated for its forest conservation. It's an oil-rich country, and because of this, it has not had to engage a lot in timber extraction. But the poverty alleviation data for Gabon is highly skewed. This is a country people praise; Jeff Bezos flew into Gabon and said something like, "This place is so cool, it's got the best national parks, it's the Costa Rica of Africa." But if you look at the poverty alleviation challenge, it is terrible outside Libreville, the country's capital. I went to a manganese mine to look at the other elements they are extracting in place of cobalt. At the manganese mine, people didn't have electricity. They didn't have running water. But looking at the macroeconomic data, it seems that Gabon is doing well because the wealth is very skewed towards the capital. Figure 2 shows different environmental variables for Africa, but if you look at the social development variables, they are not going well at all. We argued in this article that green development must be coupled with social development, otherwise, there will be conflict. This is the main reason there is so much resentment on this matter.

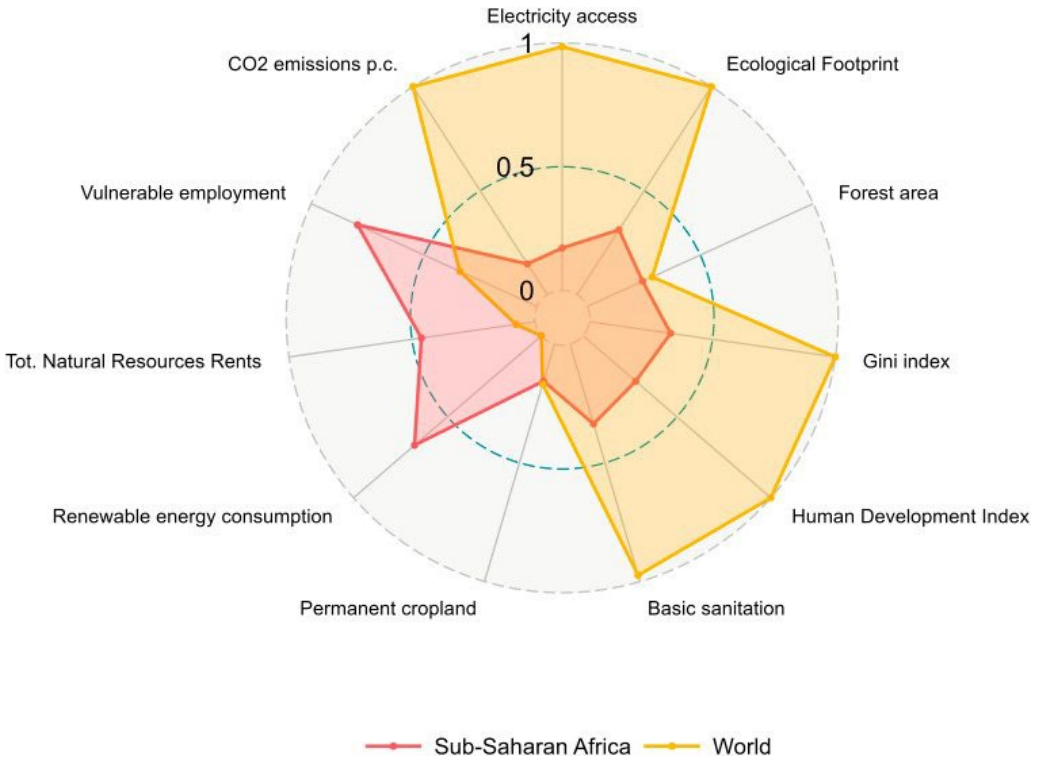

Figure 2: A Systems View of Ecological and Development Indicators for Sub-Saharan Africa. Source: Ali, Diallo, Kameni, Billon, Oromeng, Davis, and Carr (2023).

These are some suggestions. More specifically, we should link carbon credit schemes to green metrics. I gave a TED Talk on the idea of a minerals trust in May in New York City for the Rockefeller Foundation. If we globally unite and establish a minerals trust, tensions will reduce between China and the US that have led to a negative race to the bottom. Finally, we must have peace and conflict resolution enshrined within the major trust funds—the Global Environment Facility and the Green Climate Fund, for example. They have superficially tried to do this and have position papers on it, but they have not enshrined it directly.

NOTES

1. Saleem H. Ali, Penda Diallo, Apoli Bertrand Kameni, Philippe Le Billon, Kopo Oromeng, Kyle Frankel Davis, and Edward R. Carr, "In Africa, 'Climate-smart' Conservation Must Be Coupled with Poverty Alleviation," *Proceedings of the National Academy of Sciences* 120 (2023). https://doi.org/10.1073/pnas.2309279120.