A Global Just Transition — For Whom?

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Greg Dalton: This is Climate One. I'm Greg Dalton. We often talk about the need for a just transition from a fossil fuel-based economy to one that's more sustainable and healthy. That also means supporting poorer countries as they decarbonize, develop new industries and adapt.

Ani Dasgupta: All these countries were colonies for hundreds of years, where labor and resources were extracted by design, not by accident.

Greg Dalton: But it's not just a moral calculation. There are clear financial incentives for this shift.

Ani Dasgupta: If we did transition the global economy in the way it needs to transfer to low carbon, people friendly, nature positive, there is a $26 trillion additional gain to the economy and millions more jobs.

Greg Dalton: And the reality is, we don't have a choice.

Ani Dasgupta: In the long run, countries will not be able to grow if they do not address the climate. Because the risk of the cost of climate will be so much higher.

Greg Dalton: A Global Just Transition. Up next on Climate One.

Greg Dalton: This is Climate One, I'm Greg Dalton.

Ariana Brocious: And I'm Ariana Brocious.

Greg Dalton: A fundamental injustice of the climate crisis is that the rich countries responsible for most greenhouse gas emissions have the money to adapt – and poor countries don't.

Ariana Brocious: According to the United Nations Development Program, 54 countries, accounting for half the world's population, are carrying so much debt that they can't pay for climate adaptation and mitigation on their own. Most of these same countries are in the most climate-vulnerable regions in the world, which sets them up for expensive and compounding disasters.

Greg Dalton: That means those in the developing world will likely need help from wealthy nations which caused this situation to transition to a clean energy economy.

Ariana Brocious: This is a thorny issue, with complicated interactions between finance and international aid, economic growth, national interests, resource development and economic justice.

Greg Dalton: It's complicated. So I invited an expert to help unpack all this. Ani Dasgupta is President and CEO of World Resources Institute. He has experience ranging from nonprofits in India to the World Bank.

New analysis from the International Energy Agency shows that the richest 1% of people in the world emit a thousand times more CO2 than the poorest 1%. Of course, we want to lift people out of poverty. But I asked Ani Dasgupta: if wealth and climate disrupting pollution go hand-in-hand, how do we help people get richer without increasing emissions?

Ani Dasgupta: That has centrally become a justice conversation between richer countries and poorer countries simply because historically richer countries have produced because they become rich by industrializing, by burning fossil fuel, it's not their fault that was the norm 200 years back. But the fact is that's how they become rich. And you go to Africa, who has produced 3% of emission out there in the atmosphere. So, then to answer the question is, you know, who should bear the brunt of paying for this right now. If an island in Fiji is going underwater because the sea level is rising, who should be paying for it? So, the last time countries came together in Sharm el-Sheikh in Egypt, the biggest win was this loss and damage fund. Rich countries finally after 30 years acknowledging that yes, this damage that is happening that you can't recover from, if a village is going underwater from the sea level rise, you can't adapt to it, you have to move that village. That cost, that they said yes, we agree and we should pay for it. I mean that's just a beginning the fund is not there but agreement to it is a very important part. And that's true inside a country. When climate related impacts take place it's the poor who suffer. There's a land you can't grow crop on, it's the poor or poorest farmer who suffered. There's no water, it's not the rich who suffer, because they can afford the rising cost, it's the poor who suffer most. I personally think the good news is that vast evidence shows that it is possible to grow our economy and take care of climate on agriculture, on energy, on transportation. And not only that, that in the long run countries will not be able to grow if they do not address the climate because the risk or the cost of climate would be so much higher that it won't be able to grow anymore. Research we have done shows if we did transition to global economy in the way we should transfer to low carbon people friendly nature positive there is a $26 trillion additional gain to the economy and millions more jobs. That is what the evidence is showing but how does it happen in every country is something we need to all figure out one by one and every country transition would be different.

Greg Dalton: Right. And the US has shown the US emissions have gone down while the economy has gone up so it has decoupled emissions from growth, so that's possible in a rich country. But the question is --

Ani Dasgupta: Yeah, 37 countries, Greg, in our evidence that actually has bifurcated growth and carbon emissions, and some of these countries they're not the richest.

Greg Dalton: Right. But there seems to be underlying this conversation that kind of richer countries

are rich because somehow, they've got some things that they, I don’t know, do better. And that there is, you know, most Americans don't have a passport for if you travel outside the United States. So, it's hard to develop empathy for people you've never seen. So, how do we get to a place where there's more humanization and empathy of this conversation?

Ani Dasgupta: You told me that you interviewed Wanjira Mathai who’s our head of Africa program and leader on her own right. And she said this is the gap here is a gap of empathy between countries, between people. The climate or the atmosphere doesn’t respect any national boundaries. It is across the world. And we cannot solve the problem alone without us coming together. A very good example of that, Greg, is that, you know, we all talk about climate change, quickly it becomes a discussion of energy, how we need to use different energy, how we need to move away from fossil fuel. All that is true. But at the same time there are 740 million people in the world who don't have energy access. So, for them the question is not whether there’s fossil fuel or not, the question is whether they have electricity in their home or not. So, that is a very different problem than if you have a big car and you need electric car. It's a very vastly different definition of the problem. And that is exactly why we need to have a global solution; for some countries actually the energy demand is going up and we need to support them so they can actually get out of poverty-produced energy so they don't burn fossil fuel in their homes and kitchen, which causes the biggest amount of health issues with children and women. And they actually have an alternate source of energy to cook, which is a basic, basic thing. There’s a vast amount of population that doesn't have access to that. Only point I'm making, Greg, is that the problem of transition looks very different from different countries. And I think empathy is absolutely needed but I also must tell you that I'm actually quite encouraged how the current administration and the Congress push together three of the most ambitious climate related policies ever in any country especially in the United States: the Infrastructure Bill, the Inflation Reduction Act and the CHIPS bill. But what is very interesting to me is that they frame that transition as an economic transition. You know the word climate doesn't come up in any of the three bills. They’re about shifting the economy creating job focusing on Justice40 which is what they’ve said. And I think that is the story in any country, that how do we transition our economy to a more competitive economy in the world. So, what I'm saying is if you focus on that transition if you understand that transition, you would understand what are the countries that are going through.

Greg Dalton: And that's what a group of 20, the world's 20th largest economies are working on that. They pledged to give Indonesia $20 billion to help retire coal plants early. This was seen as a huge breakthrough in funding a just transition. Yet Indonesia the fourth most populous in the world is still building new coal plants. You recently returned from Indonesia. What struck you personally there about a just transition?

Ani Dasgupta: What struck me is how difficult and thoughtful we need to be in this just transition part. So, here is a case where the government at the highest level, the president the coordinating minister, very much pushed through a commitment to reduce their carbon emission. They are a very big coal -dependent country and to reduce goal, you know, decommission actually coal fired powerplant and move toward a just transition. The world pledged $20 billion, $10 billion public, $10 billion private. Now, the complexity of this is these powerplants that are being built, they are being built because they are PLN which is the company that is the national utility, actually has long-term contract to buy power from them depending on that they actually have financing for this oil company. So, their contractual agreements that are existing already that allows these both powerplants to be financed by different country China, Korea, Japan. So, the next step is to unravel and figure out how does one take this off the table and work negotiated outcome as for the financiers for PLN to be there and solve them so they don’t go to jail because they are throwing our contract. What I'm saying is this complexity of working through is the next step. there is a political

commitment then there is the economics and the financing off these transactions that's already in the book that you can't just wish away you actually have to work one at a time to make sure. That's one side of it to make it viable. The second side of it is to figure out what happens to employment for people who used to work in this place which is what South Africa is trying to figure out. Which is a very important part of the just transition. We've been encouraged, Greg, how South Africa has dealt with it, it created a commission under the president to actually look at the transition as a multiparty multi-voiced commission in South Africa. They're lucky to have very strong labor movement who've been very much part of the conversation about training who gets the job. And even there it's difficult. But I wanna say other side of the just transition which is one is to moving from one kind of energy to another. The second is a mixture of people who benefit from this transition and don't lose out. People who used to work in the older fossil fuel economy. And the third side is that we also make sure the nature positive part is part of the story it's not just energy. And Indonesia, Indonesia has been phenomenal in the last six years in reducing deforestation that they will be net sink by 2030, which is a very important and significant. They're not just focusing on the just energy transition, but also focusing on the nature part. I do think, Greg, they need to do a lot more on the transition of employment part which will come next as these different plants get decommissioned.

Greg Dalton: So, that's really helpful. Flipping off coal plants not so easy because there's lots of contracts and funding intertwined with them in Indonesia and same is true in the United States as well. Jobs are a key part of that and then financing. And we talked about Indonesia, South Africa, a lot of the just transition there is actually as debts rather than just actual grants. And so, the question comes up about how to help these countries without increasing the national debt, which in international development that's been a big real problem, right, loading up developing countries with crushing debt. So, you've talked about they need $5 trillion to between what spent and what's needed to make this energy transition. Where will it come from and will it all come from debt?

Ani Dasgupta: So, just on the $5 trillion. The $5 trillion is how much money we would need for the transition by 2030. And it is one of this number come from IEA which is just energy transition. Remember it's not just energy we need to transition we need to transition agriculture, transportation, cement, steel all these sectors. The more conservative number has been has come from the World Bank which is about a trillion per year now. Just to give for your audience to give a sense of these how large these numbers are compared to what the current transfers are right now from the richer countries to the poorer countries to public and private sector is about you know about five to $600 billion total if you add them up. So, there is a magnitude of half a trillion gap right now and it's going to increase exponentially as we go. So, the question is where will that money come from? I don't want to simplify this answer because it's a complicated answer. Right now, public sector plays a big role in it, public finance domestic public finance. But if you look at the global finance, Greg, the only place this amount of money can come from is actually a massive infusion of private capital into this transition. Because there's not enough public capital if you add up the development banks like the World Bank and the Asian Development. There's not enough capital there. They can be very instrumental and catalytic in helping private sector move, but we need private capital flow in Global South transition which is not really happening at scale we need.

Greg Dalton: Right. And when I was at the latest UN climate conference in Egypt in the African continent spoke to a trade minister there who said that private capital sees investing in the Global South as risky. The cost of capital is higher for countries that need it most to develop their economies. So, there is risk in developing countries is there also racial overtones to that?

Ani Dasgupta: I don't know if there's a racial overtone to that. I do think people perceive risk differently for places they haven't worked in. A lot of these funds are big fiduciary funds like life insurance and things like that. They do need, you know, predictable capital return; your my pension might be in these funds, for example. But the fact is absolutely true if project in the United States

might get funded at say 2% or 4% whatever the number is it might be 10% more expensive in Nigeria and Pakistan. The same project, exactly the same project.

Greg Dalton: Alright. And there's also corruption risks to be fair, right, in countries.

Ani Dasgupta: I think the risk people perceive are following. That historically there has been political risks, existing contracts have been thrown out by some government fiat.

Greg Dalton: The rule of laws.

Ani Dasgupta: That's why Indonesian PLN is so careful not to do that, right, for the coal one that I just mentioned. They're careful to figure out how to do it in the most negotiated way so it doesn't look like they're not falling. So, that's been one big the lack of long-term contract or long-term project. There are other kind of foreign exchange risk, risk of policy. But I do think it is possible, places like World Bank and others, and I have seen the International Finance Corporation, which is an arm of the World Bank that focus on private capital can do things to decrease the risk or assume the risk of this political risk or these policy risks that this thing. And I think these are the kinds of things need to happen. That's why the just energy transition in Indonesia is so important because the $10 billion private capital it's sitting next to $10 billion public capital. So, that 10 billion public capital definitely could be used in a way that makes it possible and attractive for private capital to flow in this project. So, you know, this is the best-case scenario, right, when there is associative public capital there that can assure, provide assurances to the private capital that this risk can be reduced.

Greg Dalton: You're listening to a Climate One conversation about a global just transition. If you missed a previous episode, or want to hear more of Climate One's empowering conversations, subscribe to our podcast wherever you get your pods.

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Coming up, a community in South Africa navigates the decommissioning of their local coal plant and the transition to renewable energy, and what it means for local workers:

Margareth Mahlangu: If you're going to phase out the coal and you're going to close the power station that is using the coal... I'm thinking of my nine year old today. When she reaches my age, how is she going to survive?

Greg Dalton: That's up next, when Climate One continues.

Greg Dalton: This is Climate One. I'm Greg Dalton. We're talking about how to create a just global climate transition with Ani Dasgupta, President and CEO of the World Resources Institute.

According to the International Energy Agency, the transition to a cleaner economy will create 14 million new jobs by 2030. At the same time, 5 million fossil fuel workers could LOSE their jobs. That's a net gain of 9 million jobs but that's still 5 million people out of work. And these new jobs may not be in the same region, and will require new skills.

Ani Dasgupta: This is the crux of the just transition issue: employment. And there it is whose employment is it. the transition can replace the jobs in theory, that's the bottom line. But the biggest issue is where are these jobs? Because these jobs are not exactly where coal plants were or natural gas plants were because there is a logic to where you can build wind energy and solar energy. There

is a particular map and that's where it is. So, the labor mobility is a very big issue of justice. And I must say I feel and we all feel that we have not focused enough on the specificity of employment. We say, you know, 900,000 jobs, 800,000 jobs but we need to focus on which jobs are changing, which jobs can be changed. And who needs training where it should be located. This is something that's happening in states now here, not all. We just want to see more happening in South Africa but not enough granularity is not there in place. I also want to say, Greg, that the big oil and natural gas companies in the United States, for example, actually, right now have the most spendable capital in this business and much more than the government and the most trained personnel. So, if these companies actually shifted, they actually bring capital and personnel that you absolutely need for this transition with them. So, for me it would be good to see when will these companies they're not yet in the path to transition, but when they are will be that would be a very positive shift for all of us.

Greg Dalton: Right. In fact, they're actually going the other direction. BP has backed off its climate commitments, etc. So, they're spending capital where they get the most returns. WRI podcast on the just transition in India looked at what happened to the local community when some seemingly underused land was transformed into the world's third-largest solar energy plant. Sounds really good although the landowners got money, but the local agricultural laborers lost out. That land was no longer available to be farmed. What does that say to you about how clean energy can widen wealth gaps and as you kind of alluded to earlier, the poor often get screwed either way.

Ani Dasgupta: They do and then that's why that example is a perfect example, Greg, that we need to be much more thoughtful about not only people and employment that people in those communities are part of the decision-making. That it is not just just transition, not just everyone's getting job but communities that get impacted by whatever, if it is infrastructure about land. Land is a big issue both in the United States and in India because both solar and wind require a lot of land, transmission requires a lot of land. And a deeper understanding of who is getting impacted. So, an example very similar example in South Africa, which is a well-meaning the first decommissioning of a 60-year-old coal plant took place recently. Where they did the analysis, they said no one will lose jobs and they said they would get trained all those good right things. But it turned out, the community turned and basically said this is not good enough. If you're giving a package that doesn't mean people are not losing jobs. And also, they said, this is all of our former employees of the company. There's a huge amount of contract, the day laborers in this that got nothing about it. So, I just want to point out you're absolutely right, we need to understand the complexity of who is getting impacted and who is part of the ecosystem, not only directly employed by the coal plant who is dependent on the coal plant for example. And that is a bigger ask than just training of employees that actually you're employing right now. So, this Greg, is also a political question of power and how people participate in decision-making. Because a lot of it is very top-down right now, right, if you think about just energy transition in Indonesia or South Africa, government has made a plan to do this, but how it gets implemented and how just it is. I think will not only matter for a moral side, Greg, I actually think you won't be able to implement these if people do not see benefit out of it because they won't elect the government who is pro these things next time. It's a political issue, right?

Greg Dalton: Right. Right. And oftentimes the costs are today and the benefits are tomorrow or in the future or somewhere else. And that's one of these challenges. Developing countries are often characterized as climate victims. I spoke with your colleague Wanjira Mathai, leader in Africa. She said the problem with that framing is it makes it sound like people in developing countries are sitting around doing nothing. And so, how do you think about the language and framing because there is, we've learned from the last two years certainly I have how white supremacy is enshrined in the U.S. Constitution, the Global North tends to be these white countries that somehow these developing countries they're less developed because of some kind of reason, right? There is sort of --

Ani Dasgupta: I think a big reason is that these countries that we're talking about just now all these countries, the colonies for hundreds of years where labor and resources were extracted by design, not by accident. So, you can't forget that, right, this is not by accident these countries are poor right now, poorer not there, some of these countries are not poor, Indonesia is not a poor country, South Africa is not. But they are poorer because of the extraction of labor and resources. And we need to acknowledge it. I mean that is why this is such a tricky conversation. That is why it took us 30 years to have a loss and damage fund. But I must say that I just came back visiting 4 countries. Let me list them. Ethiopia, Kenya, Rwanda and then Indonesia. And I met with senior leadership, ministers, presidents and not a single one of them think they are victims. And not a single one of them I felt, oh my god, they're reluctantly embracing what they need to do. They are rushing forward. They know what needs to be done that climate is a reality. Their people are suffering. They need to do something and not wait around. And each one of them I can actually list what they're doing. So, I very much agree with Wanjira. I think this idea that they are just sitting around being a victim they're just a misrepresentation. These are ambitious leaders they're trying to figure out what to do in a very difficult situation. how do you do this. Okay, we agree just transition but what does it mean? How do you do it?

Greg Dalton: We'll hear more from Ani Dasgupta in a little bit. But now we're going to take a closer look at one of the examples he mentioned, in partnership with Foreign Policy's climate podcast, Heat of the Moment. Reporter Elna Schütz visits a community in South Africa where a coal-fired power plant was recently decommissioned by the country's utility – Eskom – using a just transition framework. While funding and plans have been put in place to help the community recover after losing its main economic engine, many locals remain concerned about their present situation.

[PLAYBACK]

Elna Schütz: Komati is a small, quiet town in rural South Africa, in the Mpumalanga province. Really small. The kind where chickens run in between the houses, which are all older brick buildings and look a bit the same. The town has the same name as one of the oldest power plants in the country, built in the 1960s, and with good reason. The fate of Komati village has long relied on that of the plant and its accompanying mines. But, ward councilor Edward Nyambi explains that just a few days before I visit, in November 2022, everything has changed.

Councilor Edward Nyambi: On Monday they were shutting down the power station. So we as a community and the people that were working there, we are very, very disappointed. But we cannot do anything on that because they have explained to us that the power station is too old.

Elna Schütz: Councilor Nyambi is in a tricky situation. On the one hand, his community needs jobs and investment, like clinics and more public spaces. But, on the other, the power utility and Eskom have long supported the area, and have to fulfill their climate commitments. In fact, all of Komati is stuck in this balance. We can theorize a lot about how a Just Energy Transition should work, but here is an example of what it actually looks like on the ground, when it happens.

Sikhonathi Matshantsha: We are entering into this just energy transition phase by converting that power station into these three technologies - wind, photovoltaic and natural gas.

Elna Schütz: That's Sikonathi Mantshantsha, the national spokesperson for the country's power utility Eskom.

Sikhonathi Matshantsha: And we are training the staff that was working at the power station to actually be technicians that can build, that can assemble, and that can maintain renewable energy components at our station.

Elna Schütz: Noella Molefe, a senior advisor from the Eskom team talked about how the existing energy infrastructure in this part of South Africa is a key reason why jobs should be able to remain in the area.

Noella Molefe: Mpumalanga is very well endowed with a lot of resources and can easily become the energy hub for the energy transition and it's more likely to transition quickly than any other place in the country. Most of the power stations are situated in Mpumalanga, so therefore we have the grid which is already readily available to connect the renewable energy. So that is one positive aspect of Mpumlanga, as well as the people. We've just reflected on the unemployment rates and there are approximately 200 thousand people that can be reskilled or trained to work in the renewable sector.

Elna Schütz: While the future is bright, the immediate implementation is tricky. On that Monday, the plant is decommissioned and some of the workers or contractors are sent home. On the Thursday, Eskom hosts a town hall consultation in Komati. Many attendees are reacting to the company's plans with skepticism and derision.

Margareth Mahlangu: [Speaks Zulu then switches to English...] It's foreign to us. Whether it's good or bad for us, we have to take.

Elna Schütz: Margareth Mahlangu was born in the area and has lived in Komati since the 80s. She's worked at the power station for many years, hopping from one contract to another with different service providers. She says working for the coal plant is all she's known.

Margareth Mahlangu: I started as a general worker, then to the cleaning service. Accommodations and logistics.

Elna Schütz: Her latest contract ended a few weeks ago, with no clear prospect of a new one on the horizon now that the station is decommissioned.

Margareth Mahlangu: Yeah, this is very difficult because there's nothing that you can do. So when you work, especially on contracts, it's like from hand to mouth, you cannot invest in anything.

Elna Schütz: Margareth is trying to help herself and the community in the shorter term by growing vegetables on a small plot of land. Still, she feels that the people on the ground aren't being helped.

Margareth Mahlangu: So people will survive. We will live with or without. Even though we know that there are people who are going to benefit even more, not even thinking about the people that on the ground, how do they survive like now?

Carlos Vilankulos: You can't just move to another place to work.

Elna Schütz: This is Carlos Vilankulos, he used to be a welder at the power station. He worries about finding a new job.

Carlos Vilankulos: The future is 50/50. It's like a coin. I might say we're gonna win, and I can also say we're going to lose. So we will just wait and see.

Elna Schütz: There are a lot of questions swirling around tonight and the answers offered by the Eskom representatives seem to be doing little to assuage the concerns in the room.

Consultant: What did we miss? We're trying to understand. Help us understand. [Shouting]

Elna Schütz: While the consultants and power utility representatives are clearly trying to come up

with solutions in a difficult situation, for the community members suddenly sitting without jobs, the future is scary. Here's Margareth again.

Margareth Mahlangu: If you're going to phase out the coal and you're going to close the power station that is using the coal... I'm thinking of my nine year old today that when she reaches my age, how is she going to survive?

Elna Schütz: Margareth is glad there are consultations happening, but she feels they are somewhat lacking.

Margareth Mahlangu: They've consulted with a small portion of the community, and the information that was collected, it was never given to the community at large.

Elna Schütz: But, the Eskom spokesperson, Sikonathi Matshantsha, is more optimistic about the longer term future.

Sikhonathi Matshantsha: The reality, though, is you may see initially when the power stations close some job losses, but over time, you start a new industry all together. This will be a net job creator. They are estimated at 300,000 jobs to be created out of renewables in those areas over the next 20 years, which is way more than you currently have in coal and can ever have.

Elna Schütz: Filling the gap between what's planned and the reality on the ground will take a collective effort, that all these different players - from Eskom to the government - are trying to make central. Lives are being disrupted. But the hope is that the investments being made today will pay off not just for the climate but for the community as well. The World Bank has been working closely with the government and Eskom for many years. Here's the country director for Southern Africa, Marie Françoise Marie-Nelly.

Marie Françoise Marie-Nelly: What we understand is that for one job lost, there will be two or even three new jobs created. Unfortunately, the challenge is that the jobs may not be created in the same area where they will be lost. And secondly, the new job may not be able to occur at the same time. So that means that there is a need to have a proper strategy to support not only the employees but also the community.

Elna Schütz: While plans have been put down on paper, whether this all works out is another question.

Greg Dalton: That was reporter Elna Schütz with the podcast Heat of the Moment, a partnership between Foreign Policy and the Climate Investment Funds. We're partnering with them on today's episode to bring you these stories.

Greg Dalton: You're listening to a conversation about a global just transition. This is Climate One. Coming up, a key and often overlooked aspect of this shift:

Ani Dasgupta: Every time you hear about climate you hear about energy which is obviously important. But I must point out that it's just half the story. Most people in the world, the poor people in the world are employed on land and agriculture. And agriculture produces 35% of emission in the world. That transition is as important as energy transition. (:20)

Greg Dalton: That's up next, when Climate One continues.

This is Climate One. I'm Greg Dalton. We're exploring the idea of a global just transition, helped by our friends at the podcast Heat of the Moment, a partnership between Foreign Policy and the

Climate Investment Funds.

Now we head to Bolivia, where Amy Booth reports on the country's nascent lithium mining and EV industries.

Amy Booth: I'm in Cochabamba in central Bolivia. This is a beautiful city where the avenues and squares are lined with immense palm trees and intense purple bougainvillea flowers spill over the walls of the houses. You can see why it's known as the city of eternal spring. But despite its beautiful weather, the city faces a pernicious problem: it's so polluted here that the municipal government has declared three Sundays a year as car-free days, to clear the air.

It's pretty clear why people living here might want to switch to cleaner forms of transport. But there's one problem: how are Bolivians supposed to switch away from gasoline when electric cars are so expensive? Even the cheaper Tesla models tend to cost at least $40,000 - that's more than 10 times what the average Bolivian earns in a year.

Then, a local businessman had an idea. Maybe the solution to Cochabamba's pollution problem didn't involve Teslas. What if there was a company that made electric cars right here in Bolivia?

Jose Carlos Marques: En América Latina el el tráfico es bastante lento. Por ejemplo, el promedio en Ciudad de México es 13 kilómetros por hora. En Lima 12 kilómetros por hora. Y no necesitamos un auto rápido como Tesla. Necesitamos algo que se mueva bien dentro de las ciudades y que al mismo tiempo sea económico.

[TRANSLATION: In Latin America the traffic is pretty slow. For example, the average in Mexico city is 13 kilometres per hour. In Lima, it's 12 kilometres per hour. We don't need a car as fast as a Tesla. We need something that moves well in cities and is cheap at the same time.]

Amy Booth: That's Jose Carlos Marques, the founder and CEO of Quantum Motors, Bolivia's first car company. They came to market in 2019, and all their vehicles are electric. On a sunny weekday morning Adriana, a Quantum employee who also owns one of the cars, drives me to the factory. The engine sounds less like a traditional car and more like some kind of spaceship. There's a driver's seat and room for one or two people in the back, or a large load of shopping. It's a modest vehicle. There's no trunk, and some models struggle with hills. But for people who live in the city, it's a practical option to get to work or the market. Depending on the model, they cost between 6,000 and 8,000 dollars new. It's still a lot of money for most Bolivians, but it's a lot cheaper than a Tesla.

The factory is in a big warehouse out in the western suburbs. Near the door, teams of engineers are wiring in bright yellow and black battery packs, while further back, others hammer parts into place and spray paint the doors. In a corner, sparks fly like fireworks as a mechanic cuts pieces with an angle grinder. After a quick look around, I sat down for a chat with Eunice Muñoz, an industrial engineer at Quantum's factory.

Muñoz: Bueno, actualmente lo que se ofrece es una autonomía de 50 kilómetros con una velocidad máxima de 50. Pero es a lo que estamos ya avanzando. Más se podría decir con las nuevas baterías de litio que tenemos de 105 amperios, que estamos llegando a una, a una autonomía ya casi de 80 kilómetros y a una velocidad superior.

[TRANSLATION: Well, right now what we're offering is a range of 50 kilometres with a maximum speed of 50 kilometres per hour. But we're making progress already. You could say that with the new hundred and five amp lithium batteries we have, we're managing a range of nearly 80 kilometres and a better speed.]

Amy Booth: Muñoz just mentioned something crucial: lithium. Bolivia is home to the world's largest lithium deposits. Together with northern Argentina and Chile, it forms South America's so-called lithium triangle, a region that contains around 50 million tonnes of lithium resources, according to the US Geological Survey. Just under half of it - around 21 million tonnes - is in Bolivia, the largest known lithium deposits in the world. That's more than four times as much as China's reserves, A car battery requires around 8 kilos of lithium, depending on the model. The lithium is mostly around the Salar de Uyuni, the world's largest salt flat. Unlike metals such as tin and silver, it doesn't come from a mine, but rather is extracted from the brine under the surface. The solution is pumped into giant evaporation pools so it can dry out and become concentrated. Then, the lithium is extracted via chemical treatment and filtration. But while Chile and Argentina have become major producers and exporters of lithium, in Bolivia, bringing it to market has proved complicated. The Salar de Uyuni is in a remote part of south-western Bolivia where infrastructure is less developed than over the border in Chile. Many of the region's roads aren't paved, and there aren't many high-tension power lines either. The government is currently in the process of selecting a foreign company to partner with state lithium company Yacimientos de Litio Bolivianos, or YLB for short, to kickstart large-scale extraction and work on increasing yields. Despite these challenges, Bolivia has started to commercialize small quantities of lithium, including the production of lithium batteries. In mid-2022, Quantum began using nationally-produced lithium batteries in its cars.

Jose Carlos Marques: Al ser Bolivia el país con las reservas más grandes, nos gusta que que seamos pioneros y que al mismo tiempo pensemos de que no solamente vamos a ser exportadores de materias primas, sino dar valor agregado a un punto que ya tenemos un producto terminado.

[TRANSLATION Since Bolivia is the country with the largest reserves, we like that we're pioneers, and that at the same time, we can think that we're not just going to be raw material exporters, we're adding value, to the point that we already have a finished product.]

Amy Booth: For Bolivia, Quantum is a tech sovereignty success story showing that the country isn't limited to exporting raw materials. But are the communities nearest to Bolivia's lithium deposits seeing the benefits of what many hope is an incipient lithium boom? I traveled to the edges of the salt flats to find out.

I'm on the main street of Rio Grande, about 600 kilometres from Bolivia's administrative capital of La Paz. Throughout the 80s and 90s, Rio Grande made a name for itself extracting first lime, and then borax and ulexite, minerals with many industrial uses, from the deposits here, just outside the village. But now, there's a new gig in town. About 3 miles away, YLB has built its vast flagship lithium plant, the Planta Llipi. Some people thought that would be a turning point in the town's fortunes. Donny Alí is a lawyer and businessman who's also from Rio Grande. The idea that his small community was about to transform into a bustling commercial hub inspired him to open the aptly-named Lithium Hotel in 2016. But the reality hasn't lived up to his expectations.

Donny Alí: yo pensaba que teniendo aquí el centro de hospedaje, el Hotel Lithium, pues iba a ser el centro de repente de hospedaje de los grandes inversores, gente de negocios que venga por el tema de litio. Mucha gente profesional que quizás venga a trabajar al proyecto. Pero no fue así. Solamente fue una temporada que una o dos empresas se quedaron aquí de hotel y estábamos con todo full en las habitaciones.

[TRANSLATION: I thought//, businesspeople who would come here for the lithium. A lot of professional people who might come and work on the project. But that's not what happened.

Amy Booth: So far, the main job lithium has brought to Rio Grande has been driving trucks. But Ali says truckers were disappointed to discover that the pay was actually lower than in the borax

industry. What's more, the truck driving work came with conditions attached. Unlike borax and ulexite, lithium extraction is a water-intensive industry, and he says it was part of an agreement whereby YLB gave them work in exchange for being allowed to extract the community's water. Now, Alí and others worry that they don't know how much water is left.

Donny Alí: si bien ellos han accedido a darnos una oportunidad de trabajo con las volqueta en el salar, no se han cumplido otros compromisos, como por ejemplo informarnos del caudal del agua de los pozos de San Jerónimo. Y tampoco tenemos la información exacta de cuánto es la explotación diaria de estas aguas y que reservas nos quedan

[TRANSLATION: Although they've given us the opportunity to work with the skips on the salt flats, they haven't fulfilled their other commitments, like for example keeping us informed about the water levels in the San Jerónimo wells. And we don't have precise information about how much water is being consumed each day and what reserves are left, either.]

Amy Booth: I spoke over the phone to Merardo Ramos Lopez, cazique - that is, leader - of Mallku Villamar, a remote Indigenous Quechua village of 580 people. Recently, Merardo went out to the Pastos Grandes lake and got a nasty shock.

Merardo Ramos Lopez: Entonces, en esa ocasión visitamos lo que es la laguna, o sea el Salar de Pastos Grandes, y encontramos actualmente la empresa YLB está en tema de exploración actualmente

[TRANSLATION: So, on that occasion we visited the lake and the Pastos Grande salt flats, and we found that YLB is currently exploring there.]

Amy Booth: The lake is on his community's land, he said, and the community should have been offered prior consultation before works began. But even though he's the cazique, he didn't know about it. When he spoke to YLB officials, they told him they already had the environmental permits.

Merardo: Practicamente yo estoy molesto como cómo es posible? Ellos trabajan sin tomar en cuenta una comunidad originaria.

[TRANSLATION: Really, I'm angry. How… how is it possible? They're working without taking account of an Indigenous community.]

Amy Booth: Dr Diego Von Vacano, a political science professor at Texas A&M university, who has worked as an advisor on lithium policy to Bolivian president Luis Arce, agrees that YLB needs to do more to consult and include local communities in the areas where it's extracting lithium, as well as cutting down on water consumption - but going forward, there are reasons to believe it could improve.

Diego Von Vacano: I think the new technologies, again, will not necessarily use water to the extent that they have been using in Chile, for example, with very bad effects on the environment and the local communities. So I think if Bolivia makes a concerted effort on using the right technology, using less or almost no water eventually

Amy Booth: He's referring here to Direct Lithium Extraction. That's a new method of extracting lithium. It's a developing technology that's still being scaled up. But if they can get it to work in Bolivia, it would not only use far less fresh water, it would also be faster, because it doesn't rely on waiting for water to evaporate from the ponds. In the 2000s, Bolivia largely nationalized its oil and gas industry and plowed the profits into social programmes that helped reduce poverty. Now, with gas reserves dwindling, the government's dream is that lithium could do the same.

Greg Dalton: That was reporter Amy Booth from the podcast Heat of the Moment. Their whole season is focused on these questions surrounding a global just transition–check it out wherever you get your pods.

I also talked about Bolivia's lithium resources with Ani Dasgupta of the World Resources Institute. We discussed the difficulties presented by mining, a historically dirty and dangerous business, even in pursuit of materials essential to a green economy.

Ani Dasgupta: They could be a dirty deal, but there are ways, Greg, for countries like Bolivia, countries like Democratic Republic of Congo which has a vast cobalt resource deposit that you need for electrification of cars. What should we be doing? We should be all should be helping these countries to develop as safe mining practices as possible and not only that, as much of the value added. So, what happened in cobalt in DRC they get mined and the whole ore --

Greg Dalton: Often by children.

Ani Dasgupta: Yes, terrible labor practices. They actually get ore and ship to another country to get processed. All the value-added jobs are not in DRC. So, this is exactly what we should be helping these countries so that they actually have a resource now that they have a developer practice that does not include children. And we know what safe mining practices look like and how we can help these countries to develop an industry that is low carbon that creates the value-added job. Because these countries, I mean we have to recognize Democratic Republic of Congo, for example, because it's close to my heart because I've met with a lot of people, Rwanda they all came, is a country that is at I think $550 per capita income, right.

Greg Dalton: And a huge colonial legacy there from King Leopold, terrible, terrible.

Ani Dasgupta: Right. So, that country if you think about it absolutely needs growth, economic growth, employment, livelihood increases up its people so that income rises, that is a political leadership that is the primary occupation to make sure a country that actually can grow. So, we need to not just talk about decarbonization, we should be talking about what is modern industrialization look like at this moment for this country. What would create employment will there be green nature positive that can protect the absolute treasure of tropical forests that the Congo has the Congo basin has a lot of it is in DRC.

Greg Dalton: So, what's an example of a model that is a just transition? Where is a case study that you say this country or this locality got it right? What's the shining model?

Ani Dasgupta: I don't think there's a country that in the Global South, I can say. I do think there are examples of what could it look like. I'll give you one very specific example that's very fresh in my mind. Vast amount, 60% of Africa's land is degraded. So, there's a huge potential and a massive amount of people, more than 60% of people are dependent on land for their employment. So, you can imagine you can make the land productive it's a huge impact for us. So, one of the programs that we are doing with the African Union is how to restore this land. So, that would seem like a good thing to do. I met an entrepreneur very small entrepreneur, three-women firm that it seems could not raise any money but got a small amount of money from this project that we are doing. Not much money, like hundred thousand or something. And what they do is they buy macadamia nuts from farmers, process them and sell macadamia nuts to the world as a commodity. So, that's what they do. And by doing this with farmers they are able to restore land because provide healthy growth of macadamia trees which is once you grow them it's a multi. Supporting farmers to learn how to do them and take care of macadamia trees they have now 7,000 farmers they are supporting. This small firm of three people and their ambition is to support 180,000 farmers like that. This is an example

for me, Greg, where you're creating an economic opportunity to 7,000 farmers doing it sustainably providing income, creating new business that has own cycle own virtual cycle of growth. Because as I said these three women have ambition plan to grow. They just raised a million dollar in private capital. These are the kind of things we need to be seeing across the world that we actually have a plan of economic developments so people have an option otherwise we will be dependent on destroying the forest they have because there's no other opportunity for them. That's a very visceral example for me when I met this team or this firm that what needs to happen. But one small unit at a time. There is not one silver bullet. You do this and it's done but how do you grow this new kind of economy that is supportive of the recovery we need and the shift to a low carbon future.

Greg Dalton: Right. And that million dollars is kind of it's not microfinance it's not big dollar project finance. And there's money out there, but there seems to be gaps in like how do someone --

Ani Dasgupta: How do you get that -- you need to do that for a million people, right, that million dollar.

Greg Dalton: Right. Yeah. And how do you find all those people and what's the infrastructure to get to match the people with the money that's what's missing here.

Ani Dasgupta: There's a very, very, very fantastic program we are part of it's called AFR100 Africa Restoration Project, 100 million hectares of land that the government have agreed, actually, they have agreed to restore 121 million hectares, 31 countries are part of the African Union. This is the kind of way I feel and I want to highlight this example simply because I think too much of the just transition or transition is very focused on energy which is needed. Because every time you hear about climate you hear about energy which is obviously important. But I must point out that it's just half the story. Most people in the world are employed on land and agriculture. And agriculture produces 35% of emission in the world. That transition is as important as energy transition.

Greg Dalton: Right.

Ani Dasgupta: And more connected to livelihoods than energy transition.

Greg Dalton: Personally, I'm worried that the underlying problems of human greed and capitalism itself are such that tinkering with the financial rules are not gonna be enough. What's your take on capitalism and can it really can we solve this energy transition and this equity transition within the structure that we have?

Ani Dasgupta: The current system of how we allocate capital is not producing the results we want at all. Because actually if you look at last every country in the world including the United States the division between rich and poor actually increasing. Our society are becoming more unequal as we go forward. But my answer to your question is I actually do not think I am viscerally against capitalism. Which means a market's ability to allocate capital to the right places that is needed. What is not happening are that is what it's that our capitalism is not valuing the right things. It is only valuing profit of a particular kind while we are extracting from labor and from nature at free cost. So, if we had a capitalism that actually valued the atmosphere we are destroying, or the pristine tropical forest we're destroying to produce soya bean in Brazil or labor we extracting without paying for it. We need that capitalism.

Greg Dalton: Yeah, the capitalism that values the pollination that bees do for us that helps our food without it we can't have our food.

Ani Dasgupta: Exactly. Or biodiversity. That is critical. So, World Economic Forum published a

report I think two years back saying out of the $80 trillion of global economy $44 trillion dependent on nature providing the services providing. Think about that for a second. More than half of the capital of the world is dependent yet our system that we have doesn't reward doesn't penalize or reward you for taking care of nature or destroying it. It's just ambivalent. So, my answer to your question, Greg. Yes, it is not we don't have a system right now that actually allows us to produce a world that would be sustainable. And all of us all seven and a half billion people will be equal parts of it. It's just extracting one part to reward another part both of people and of nature. And we have to have a system that doesn't do that.

Greg Dalton: You have a book coming out in the fall called The New Global Possible: Seven Reasons to Feel Optimistic about the Planet. What's your personal number one?

Ani Dasgupta: My personal -- that's why it's called seven, Greg.

Greg Dalton: I'm asking you to pick your favorite child.

Ani Dasgupta: My favorite child is our ability, the book is about looking backwards and seeing the mountain we have climbed that things we have done to get us here. We don't realize it. We take it for granted. That the UNFCCC look at this or we can actually count carbon. And so, the book is about that we have actually have done difficult things as a society as a human race. We need to do more difficult things. My optimism about the book is about coming together and solving problems. So, my biggest, I think can I get two?

Greg Dalton: Sure. Okay.

Ani Dasgupta: My biggest is our ability as a world to come together to solve problems.Everyone when Ukraine war took place, every article in the world said how the world is in the fragment and we will have regionalism. Remember China and Saudi Arabia selling oil and not in dollars and all this. However, by the end of the year in December the world came together in Montréal for the biodiversity conference every country actually came to get signed up to an ambitious outcome that we didn't expect it was even more ambitious than we expect. The fact that in a year that was a really difficult year of distressed war inflation that countries could come together and see the higher good the bigger good the bigger beyond us that the world needs. And it gives me hope that we can come together.

Greg Dalton: Ani Dasgupta is President and CEO of the World Resources Institute. Thank you so much for sharing your insights in your travels with us.

Ani Dasgupta: Thank you, Greg. Thank you for having me.

Greg Dalton: On this Climate One... We've been talking about the complexities of a global transition to a healthier and more equitable future.

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Brad Marshland is our senior producer; Our managing director is Jenny Park. Our producers and audio editors are Ariana Brocious and Austin Colón. Megan Biscieglia is our production manager. Wency Shaida is our development manager. Our theme music was composed by George Young (and

arranged by Matt Willcox). Gloria Duffy is CEO of The Commonwealth Club of California, the nonprofit and nonpartisan forum where our program originates. I’m Greg Dalton.