ABCI XIX SYMPOSIUM ON INTERNATIONAL TRADE

DAY 2 – INTERNATIONAL TRADE, ENVIRONMENT, AND CLIMATE CHANGE: CAN TRADE HELP?

Prof. David Hunter (American University)

Heloísa Pereira (Brazil's Undersecretary for Trade Policy)

Sergio Goldbaum (FGV EPPG / ABCI Board - moderator)

TRANSCRIPTION

ALUISIO DE LIMA-CAMPOS: Good morning, everyone, or good afternoon, and good evening, depending on where you are. Welcome to Panel 2 of the XIX Symposium on International Trade. Yesterday we discussed international trade and artificial intelligence. And today, our topic is trade, environment, and climate change. I would like to say a few words about today. Let me just remind you what we said yesterday. Yesterday we mentioned there are three economic related topics that we at the ABCI Institute view as very important for the future of humanity and the future of the world itself. One is access to critical raw materials, which was a subject of our summer webinar. And the second is artificial intelligence, which we covered yesterday, in Part 1 of the Symposium. If you were not able to join us yesterday, I encourage you to go to our website and check the video recordings of these two events, ABCIinstitute.com. The third topic is trade and agricultural products, the subject of today's panel. A few words about that. Trade and agricultural products play a crucial role in global economy, contributing to food security, economic growth, and poverty reduction. We believe that if pursued with economic efficiency in mind, it can ensure a diverse and affordable supply of food for consumers worldwide. To achieve that goal, however, trade in those products must flow as unimpeded as possible. Unfortunately, that has become increasingly difficult under present political and economic realities. International cooperation on this matter has been frequently mentioned as the best way to move towards mitigating solutions. I hope for positive developments and look forward to learning more today from our panelists. Before I introduce today's moderator, I would like to thank our institutional supporters, Arnold & Porter, Carla Junqueira & Associadas, and Tozzini Freire Advogados. For those not familiar with the ABCI Institute, our objective is to foster the study and knowledge on international trade. And our website has the history and more information about us. You can find it at ABCIinstitute.com. We are a nonprofit organization based in Washington, DC. And if you like, of course, we depend on donations to do this work, and if you like to donate to ABCI, we have an account on PayPal that you can use. Now, without further ado, we have an incredible panel for you today which will be formally introduced by today's moderator, my colleague on the ABCI Board, Sergio Goldbaum. Sergio holds a Ph.D. in Economics from Fundação Getulio Vargas in São Paulo. He is currently an associate professor at the School of Public Policy and Government of Brasilia. He also teaches a course in Economics in FG São Paulo Business School. His main fields of interest include industrial organization, international trade, environmental Economics, and Economics and law. Additionally, he coordinates the research group on Jewish demography in Brazil and is the co-founder and partner of GPM, specializing

in antitrust and infrastructure regulation. So, without further ado, take the helm, the floor is yours, Sergio.

SERGIO GOLDBAUM: Thank you, Aluisio. Good morning, good afternoon, or good evening to everybody in the audience and the panelists as well. The relationship between trade and the environment has always been dual. On the one hand there has been concern about the use of environmental reasoning as protectionist measures in disguise. Some of the most well-known examples include the Tuna Dolphin case and the Retreated Tires case. Recent measures like the Carbon Border Adjustment Mechanism (CBAM) and the Deforestation Act in the European Union as well as the subsidies to electric vehicles included in the Inflation Reduction Act in the United States have heated the debate about trade policy, environment, and protectionism. On the other hand, many international trade rules have been designed to help nations achieve environmental improvements like WTO green subsidies. The recently released WTO report, Climate Change and International Trade, unequivocally takes the second perspective. The objective of the report is to explore the complex interlinkages between climate change and international trade, revealing how international trade can contribute to addressing climate change. More recently, a Georgetown professor Jennifer Hillman and her research assistant Loriane Damian released a nice book on the matter, Using Trade Tools to Fight Climate Change, bringing together a series of contribution that examines how trade operates and how coordination between both regimes condition harnessed to address the climate crisis. To discuss the tension between trade and climate, we have the great honor to welcome today Dr. Heloisa Pereira and Professor David Hunter. I appreciate your time and availability. Dr. Heloísa Pereira is current Undersecretary for Trade Policy in the Brazilian Foreign Trade Chamber. She holds a PhD in International Economic Law from the National University of Singapore and a Master's in International Law and Economics from the World Trade Institute, University of Bern. With more than 20 years of experience in international trade law and policy, she has worked in the public and private sectors, in international organizations and research institutions in Brasília, Geneva and Singapore. She was Economic Affairs Officer in Rules Division of the WTO from 2011 to 2014. In Brasília, she was Deputy Director of Trade Remedies Division in the Ministry of Industry and Foreign Trade between 2014 and 2015. Between 2016 and 2017, she was research fellow at the International Centre for Trade and Sustainable Development. In Singapore, between 2018 and 2023, she undertook her PhD inquiring into the intersection between international trade rules in WTO agreements, FTAs and other trade agreements and climate mitigating measures. On the other corner, David Hunter is Professor of international and comparative environmental law at American University's Washington College of Law. He currently serves on the Boards of Directors of Accountability Counsel, the Environmental Law Alliance Worldwide-US, and the Project on Government Oversight. He is a Member Scholar of the Center for Progressive Reform and a member of the Organization of American States' Expert Group on Environmental Law, the InterAmerican Network for Environmental Law's Advisory Board, and the Strategic Advisors Group for the International Finance Corporation's Compliance Advisor/Ombudsman. He is co-author of International Environmental Law & Policy (5th ed.) and Climate Change Law (2nd ed.). His research interests include human rights and the environment, environmental standards and accountability mechanisms in international finance, and climate change litigation, law and policy. As I mentioned, we much appreciate your time and availability. I would like to start with Professor David Hunter. Professor David Hunter, the tension between trade, environment, and protectionism, is on the rise right now. How can trade help to mitigate climate change effects?

DAVID HUNTER: Thank you, Sergio, and thank you, Aluisio, and organizers of the event, very happy to be here. I'm going to address that question, but I want to take a step back and actually challenge the premise a little bit, that there's actually more friction with respect to trade environment today than there was in the past. In some ways there is, but in some ways it's a product of the conflict over trade more generally, the idea of trade restrictions and trade being weaponized and geopolitical discussions are somewhat caught up in that. The reason I want to make that point is, it's not necessarily that the trade and environment arena has become more conflicted. I think it's part of our current structure of talking about trade. But also, I think we're at a different stage in the way we talk about trade and environment, particularly with respect to climate change. What I mean by that is that when trade and environment first emerged as a major conflict area or an area of tension, academic scholarship, and people being concerned about it in the early 1990 s, there was significant fear on the environmentalists in particular that trade and environment would really be a way of preventing and harming multilateral environmental agreements (MEA), that the mixture, the goals of trade and the economic growth that it promised and the emphasis on competitive advantage would lead to environmental protection and the MEAs kind of being a second class citizen. And there was much concern that we would lose all the trade disputes that would come up because they would be presented before a trade tribunal applying trade law, and it felt like a biased system. And in that context, I think there was much more concern and focus on the trade preventing environmentalists from doing what they wanted to do and much less conversation about how trade could promote sustainable development or promote the environment, at least among the environmental ministries. And now I think at least as we think about climate change, it's very much a dual discussion, much more than it was perhaps in the past. We see now that the discussion is, yes, there's many more environmental trade-related measures that are coming up and being notified at the WTO and being challenged around climate change. But there's also tremendous dialogue around how trade is necessary for the promotion of a just energy transition. And so there may be more specific conflicts because there's so much activity right now going on in climate change at the environmental level, but there's also discussion and free trade principles and the huge transition we have to make for the global economy. The dual tensions between trade and the environment have always been there. They're still there to this day. And I think a couple of other things about the nature of how the trade and environment discussion has changed, as we think about today, relates as well to where we are with respect to environmental legislation. And I'll get to climate change in a minute. But in the days when we were concerned about whether the trade regime would preempt or change the way we think of something like the Montreal protocol, which was just abhorrent to environmental lawyers and others that this other regime could somehow trump our Montreal protocol, and it never happened. The concerns about the trade disputes or trade and environment disputes going to the WTO and finding that the multilateral environmental agreements were being cut down in some ways never happened, partly because every party was also a party to the Montreal protocol, we had universal applications, we never had cases with nonparties being brought to the WTO on most of the MEAs. But also because we worked out the sort of policy coherence under the framework of sustainable development between trade and environment, and looked for those synergies. The environmental structures have changed as well. At that time, we were very concerned about when he talked about trade and promoting free trade and the economic growth that would hopefully come along with it, we were often dealing or sometimes dealing with countries that had little or no environmental

regulation in the early 1990 s. We still have many countries that didn't have environmental ministries. Trade was used as an avenue for promoting stronger environmental ministries in many countries. That's changed today. So now when we look at the framework, we recognize that countries have environmental regulation, they have environmental ministries. We're not so worried about the race to the bottom. Instead, when we look at implementation and things like the Forest Trade Treaties in the European Union or the US-Peruvian Forest trade agreement that had so much emphasis on implementation, compliance, enforcement of forest laws, we've moved to this focus on capacity building and implementation at the national level. The second thing that's happened in addition to the rise of environmental ministries is that much of the environmental regulatory action globally now isn't really with governments, always. It's what we think of as private governance, and the use of enforcing of supply chains, and also less regulation, even when it is government, less regulation on what's coming out of the pipe or the production processes of how things are produced to the products themselves. So, most of the new environmental regulations or much of it, putting aside climate change for a minute, which is a little different, but for much of the rest of the excitement in environmental regulation, has been on what we say about the products themselves, and the markets. So, if the European Union puts a set of requirements on the products, including their supply chain, that has a different impact on the global market than did old water pollution standards or air pollution standards. It's really more of a race to the top than a race to the bottom, because from the private sector market perspective, if a country, a major consuming country puts an environmental standard on their product, it's not that the governments themselves are going to challenge it. It's the market's going to move there. Manufacturers just want to produce one type of product. So, they'll end up changing the style of their products altogether. Because it's a product regulation, it doesn't always run afoul of the trade provisions, because it's not on the production process methods. So, the nature of environmental regulation has changed I think in the way that, as I say, it's more like a race to the top with private market itself being the major players, other than governments. Having said that, it's a little bit different in climate, because we're seeing all hands-on deck for this energy transition. And we're seeing a tremendous number of challenges or national legislation as we take to the nationally determined contributions under the Paris agreement. Even if we think about how that system changed from what we were doing in Kyoto before, now that we've changed to nationally determined contributions, we're allowing much more diversity of what national governments can do in order to promote this global goal. And so, from a trade perspective, we don't necessarily start from the perspective that all the countries have agreed to this one type of trade and environment measure. What they have agreed to is that all the countries have to do something. And then as they implement it, the diversity of implementation can lead to different challenges or different approaches to the trade system. So, as we move from the Kyoto kind of top-down approach where all the countries were collectively negotiating what standards they would take, and thus probably avoiding some of the trade challenges that might have come, we've set up a system where we're relying at different diverse actions at the national level to make commitments. And there's no -- there's much less collaborative, cooperative agreement at the international level that these types of measures are the right types of measures, which sets up potentially for greater challenges under the trade regime. So as a result, we see the Paris structure allows for a lot of different changes, a lot of different national initiatives. We're seeing tremendous numbers of subsidies that are being challenged. We're seeing the rise of border carbon tax adjustments and procurement issues around renewable emergency and things like that that are all raising concerns about trade. But there's also I hope that's not being picked up, the noise on the other

side. The moment we're in with respect to climate is also going to shape how we think about the trade and climate debate dramatically, as it's shaping everything. We have to overcome our differences and work in a collective way towards addressing climate change, including using economic growth and investment in trade as a tool. Everybody recognizes that. And there's been an interesting set of analyses within the last couple of weeks about the impact of the trade restrictive -- the slowdown in trade relations between China and the United States, for example, and how the freeze between the U.S. and Chinese relationships on trade is increasing the global cost, particularly the cost in the United States, for making the global energy transition. Solar is much more expensive. Wind power and things like that are much more expensive. I apologize for the background noise. Is that bothering you?

SERGIO GOLDBAUM: It's okay.

DAVID HUNTER: It will go away in a moment. The net result is these restrictions with China have had huge negative impact on what it costs for us to do the energy transition. And as we recognize that, I think it's going to -- from the broader geopolitical discussion about trade, I think we recognize the value of free trade policies to promote climate change. I'm going to stop right there and let Heloisa pick up on the second question.

SERGIO GOLDBAUM: That's okay, thank you very much. I have written down two or three points about your comment, okay? The first one is that, we understand, yes, it is on the rise, but not because of climate change actually. It goes together with the geopolitical rising tension, the trade war, the trade conflict, the trade friction between United States, Europe, China, some Asian countries, whatever. The second point I have written down here is that you added an important point that I had forgotten to include in my opening remark, about environmental justice. I understand you mentioned that trade can improve, can help, not only mitigating climate change, but doing it in a fair way. If we don't have geopolitical frictions as well. There is a third point I have written down from your comments. You mentioned the role of the national institutions, the authorities. You mentioned but not in a direct way the role of multilateral organization, institutions. I'll save this last point to the second round of questions, instead of asking you again, I pass the floor to Heloisa Pereira, Dr. Heloisa Pereira. What is the impact on Brazil from environmental-related trade measures taken in Europe, and in the U.S., the subsidies for electric vehicles, and how is the Brazilian government reacting to it? Please, Heloisa, thank you very much for your time and availability, and please take the floor.

HELOISA PEREIRA: Thank you, Sergio, for this invitation, it's great to be here, and good afternoon to everyone. Professor Hunter gave us a step back and before going to your main question, I would like to just mention the motto of this op-ed, last week I was attending an investment event here in Brazil and the president Lula was giving the opening remarks. He mentioned that the climate change crisis is extremely serious, and planet has already pushed the other look. It is saying, take care of me, don't destroy me, if you destroy me, you'll destroy yourself on the way. Then we have seen many different types of extreme weather events either here in Brazil, in Mexico, or the United States, everywhere we are seeing. And this is the

main motto of this Brazilian government, to have economic growth and economic development that's green and sustainable. And it should be clear that to tackle climate change, we need to change the way we consume, the way we produce, the way we move around, the way we eat. And that's where the main question of this webinar is, can trade help. The answer, Professor Hunter already gave us, of course trade can help, trade measures can help. But the more elaborate answer is, it depends. It depends on how trade measures are designed to tackle climate change, and what roles we have on the other hand (?) of trade measures that are being adopted by many countries. And this brings me to Sergio's question. What's the position of the government in relation to all these trade measures that are adopted with the aim to mitigate climate change? It's clear by now that the government's measures are arbitrary and unjustifiable discrimination, regardless of the fact that this is a top priority to protect the environment. Then I will give some -- there are many aspects of this that can be regarded as discriminatory. I'll focus on one of them, if you'll allow me. If you look at CBAM, it first sets out rigid carbon accounting standards. So, the EU sets out the standards that other countries must abide, but their own producers do not comply with this complex and burdensome methodology. And by stipulating this complex carbon counting methodology, the EU ran roughshod over international carbon counting methodology that's out there, and the industry in Brazil and elsewhere are adopting. So, there are ISO standards for carbon counting methodology, the greenhouse gas protocol carbon accounting standards under the (?) Triple C that the EU disregards. Apart from that they will also stipulate that all the countries that want access to their goods, to their corporate goods, iron, steel, aluminum, cement, fertilizers, if they want access to the market, they must essentially adopt the same program that EU adopts. That goes against what Professor Hunter is saying about what the Paris agreement supports, that there is diversity of measures to mitigate climate change. So what the EU CBAM does is exactly the opposite of what was agreed in the multilateral climate change agreement which is the Paris agreement. So, this is the first problem with the CBAM. The second problem with the CBAM is that the regulation disregards differences -- different conditions between different countries, so different jurisdictions. If you look at CBAM, I will give you one example is the energy mix. The CBAM applies to products, five products, and some of the products related, that are energy intensive. These products are intensive in energy. That's the only reason why they are carbon tested. You have the same product, the CBAM assumes the carbon leakage theory, which means that if a producer decides to produce in a jurisdiction that does not have a carbon price, that's exactly the same of the carbon price of the EU, then there is going to be a leakage of carbon, which means investment and production will leak from the EU to another jurisdiction and the carbon will be leaked from the EU to the other jurisdiction. But this thesis can only be valid if you consider same energy mixes of these two jurisdictions or an energy mix that's worse than that of the European Union. But if you consider instead the energy leaks of Brazil, right now Brazil has 88% of its energy mix based on renewable energy and 50% of electricity used in the production comes from renewable energy sources. This is more than double of the EU average, more than 2 1/2 times the world average, and more than four times the U.S. average. So, one of those five products is produced in EU with carbon price that is produced in Brazil without carbon price, even without carbon price, what we're going to see in this situation is carbon containment, not carbon leakage. So, the thesis on which CBAM is sustained is flawed, because it considers both, it considers that both exporting jurisdiction and EU has the same energy mix. So, this is the second problem, because it disregards this difference between countries with different conditions and one crucial difference is the energy. In the calculation of CBAM they could consider indirect emissions from electricity but instead it selects iron, steel, aluminum, which two-thirds of the emissions incorporated in

these products come from electricity, and decided to exclude indirect emissions from the calculation just because that would be a higher price for European producers to pay. So, indirect emissions from these three products are not considered in the calculation of CBAM which also undermines the goal of the EU CBAM regulation to mitigate carbon emissions and then mitigate climate change. And a third problem with the EU CBAM is that it stipulates greatly different phasing periods for EU domestic producers and foreign producers. If you can recall the European Union adopted the carbon pricing mechanism which is emissions phase system in 2003, 20 years ago, and in that period European producers had the chance to receive free allowance of carbon permits and they received subsidies for indirect emissions which means using electricity from fossil fuels. But the CBAM was published this year, it started to become operational in October. There is a transitional period of two years and three months for foreign exporters to adopt to this very complex and burdensome system of CBAM. So if we compared to 20 years for domestic producers and two and a half, two years and three months for foreign producers to adapt to carbon pricing systems is not inconsequential. De facto, all these three aspects of the CBAM represent, may represent an import ban to foreign producers that are not -- that will not be able to comply with all these requirements in such a short time frame. And you have received many industrial representatives in the Ministry of Development, Industry and Foreign Trade, and even if they have some systems already adopted, even if they are willing to comply because they don't want to lose market access, they won't be able to comply in such a short time-period. Then if you look at EU regulation, you can see it may represent arbitrary or unnecessary discrimination or protectionism. First, there is no special rules for small or medium producers in the supply chain of all the commodities that are over there. In contrast, there are some special rules, small and medium companies that are traders and operators, trade that's export or operators in the EU market. So, while they have the special rules for small and medium operators and traders, they don't have special rules for small holders and small producers that are the indirect link in the supply chain. Even if they do not produce in areas that are tied to deforestation they are not able to fulfill all the requirements to trace the product back to the original plot of land or to install a system to register monitoring, online monitoring of deforestation of their plot of land. And apart from that, these systems are costly. They require training. They don't have the capacity or expertise. And there is no special rule in the EU deforestation act regulation right now concerning these small holders that are the indirect links in the supply chain. We see this with cattle, soy, palm oil, cocoa, rubber, almost all of the seven, and even wood. A second problem with the deforestation EU regulation is that because it's too restrictive and too strict, it may push small holders outside supply chains, these small holders that depend on the income of these products for survival, they will be pushed out of this chain, into illegality and they will increase rather than decrease illegal deforestation. There might be the reverse impact on deforestation that is the aim of the regulation. The regulation has two aims, to decrease the European Union's impact on deforestation and forest degradation, and the second objective is to decrease the EU impact on the greenhouse gas emissions from deforestation and forest degradation. However, by not stipulating any role regarding small holders, the main objective of this regulation will be undermined by their own requirements of the regulation. And third and importantly, the deforestation free regulation also disregards measures that might be comparable in effectiveness in mitigating or reducing deforestation or mitigating greenhouse gas emissions from agricultural production, because the deforestation regulation has a specific scope which is deforestation from agriculture production, after a cut-off date in December 2020. It does not talk about deforestation caused by mining activities which is very energy intensive and has an entire infrastructure that dispute and destroys forests. On the contrary,

we see that both the EU and the US are actually supporting more exploration of mining places with domestic laws and trade agreements. This is the case of the EU. And second, the legislation does not deal with the issue of subsidies. There are two types of subsidies that are bad for forests and for greenhouse gas emissions related to forest activities. The first one is subsidies to biomass. In the EU they have given large amount of subsidies because if they chop off trees, they can use trees as a source of biomass for member states. And this can count to their renewable energy targets and the legislation says nothing about cutting trees and using as biomass to meet targets and moreover to give subsidies to that. And the second types of subsidies are subsidies for agriculture production that stimulates consumption, they use fertilizer and practices that are not very productive and innovative. So the regulation does not address these types of subsidies, they're very problematic in the EU region, leading to increasing greenhouse gas emissions and leading to deforestation but not as defined by the EU. And finally, the regulation also disregards best practice in sustainable system like the practice we have in Brazil that increases carbon capture by soil, that increases productivity in a smaller piece of land, and that recover degraded land to produce agriculture products. Finally, in a few minutes, Sergio, with respect to Inflation Reduction Act, of course the impact on our exports is not so direct as these two other legislation, but the industry is using it as a bargaining chip, because they say we have these in the grass, they are giving money for producing cars, for mining activities, for iron, for everything that is in the base of the industry, and we have the cost, Brazil have everything, so I want to move my industry, my manufacturing facilities to the U.S. So I will end here. Thank you, Sergio.

SERGIO GOLDBAUM: Great comments, Heloisa, thank you very much. You brought to us three main points of criticism on the CBAM, and then three or four points of criticism on the Deforestation Act, and also one or two points on the criticism on the Inflation Reduction Act. But I understand that below all of these points, underpinning all of these points, we think back to environmental justice. Who should bear the cost of it, of mitigation, climate change? Now you bring also the discussion between developed and developing countries, if Brazil as a developing country should bear the same cost as developed countries, not to mention the least developed countries, which is an even more difficult discussion. In Economics, there is, let's say, a dispute between green growth, by the way, you also mentioned, but also degrowth. The more people who think that climate change is a real danger is advocating for degrowth. But should degrowth -- requiring degrowth from developing countries is the same as requiring it from developing countries. So there's something that brings us back to climate change justice discussion. Okay. That way I'll go back to, Dr. Heloisa, may I ask you another question, could you please also provide us with some information on environmental-related trade measures being considered by the Brazilian government? You mentioned one or two, but can you please give us more detail?

HELOISA PEREIRA: Sure. Thank you, Sergio. Very important points about environmental justice that you made. Whether we are talking about green growth or degrowth, whether EU deforestation regulation is designed to stop growth in forest regions, in countries that have preserved, for example, in the case of Brazil, two-thirds of its territory is preserved today, its forest. While Europe has 30%. If you think about the UK, it’s around 10% of the country is preserved, the forest. What we have is two-thirds of our country is preserved. They want Brazil keeps the forest standing up, but they don't want to pay for the carbon captured by this forest

and they don't want the population that depend on economic activity related to this forest, to have an income. So, it's a really tricky issue and it's important to address. Coming to your question now related to what are the actions that the Brazilian government is doing related to trade measures relating to climate change, I would just like to refocus on actions related to trade-related measures on climate change. In the national level, we have a carbon, a bill for adoption for regulating carbon market in Brazil that we intend it will be published, it should be published before this COP, but probably will not pass by then, but there are efforts to put in carbon market in place as soon as possible. And there are command and control actions that are made by the Minister of Environment that reduce deforestation by 50% in the first nine months of this year. And there is special financing for green mobility. So, there are different type of actions related to trade right now at the national level. At the bilateral level, much of the effort is in the EU-Mercosur agreement, these negotiations which the Brazilian government is using also as a platform to help in implementation efforts of the regulations because it's well-known by now, there is one side letter agreement talked about trade and sustainable development and there is a focus on sustainable management of forests. And the idea is that the agreement may help with implementation of the deforestation regulation, monitoring the national systems for monitoring deforestation for allowing trade stability and these two types of systems are recognized. So, this is also one of the main points being discussed in bilateral discussions between the Brazilian government and the EU. And then at the multilateral level, the multilateral space is a favored space Brazil has for discussing trade, and climate-trade, and environmental issues. If you think about the main activity that's going on in the WTO today is in the committees, especially the committee on trade and environment. Last Friday, Brazil, together with other countries, questioned many aspects of EU deforestation regulation and there has been also opportunity to challenge the aspects of the CBAM. Everybody knows that the appellate body is not functioning since a long time, and then the main activities are still in the committees. That's it. Thank you, Sergio.

SERGIO GOLDBAUM: Thank you, Heloisa. Now, again, I understand that trade-related measures, actually environmental policy in general, is again a priority of the Brazilian government. I'm not sure it was a priority in the last years, but I see that it's again a priority, I think it's a good thing. Please, Professor David Hunter, what is your opinion about the current environmental related measures that have been taken in the Europe and the U.S., please.

DAVID HUNTER: I'll step back first, before I dive into those a little bit as well, I think Heloisa's -- Dr. Pereira's comments were quite strong. I think it reflect some of the real tensions that exists particularly with the EU legislation and the efforts they are trying to do. I want to suggest that this is one of the fundamental conflicts between trade and environment that we're seeing it play out now in a massive way with climate because of how important climate is, and the massive economic transition that we all have to make. And that is that from the very beginning in international environmental law, countries did not want international standards to be set, standards on sectors or on other places. They certainly didn't want one country imposing an external standard to their consumption through putting some combination on the tuna we ate or on the energy that we make and where we get it from, the steel that we get and how it's produced. The standards were to be made; environmental standards were left for the sovereign countries to be done at the sovereign level. The problem with that, that leaves us, which the EU is trying to address on one hand, is that they address in something like climate

change where you're not permitted to -- where you're conscribed about how you can go into your supply chain, is problematic. The only (?) is produce and this is how the climate regime counts carbon as well. They count carbon (?) European Union what it produces now and what they consume. It doesn't count for what energy emissions; indirect emissions are in the product they consume. That's not part of what we were trying to do when we were doing Kyoto. It left every country where the products were produced to do their own accounting and to be accountable for the emission that caused in their country. The impact of U.S. consumption on climate change is way beyond how we can (?) emissions and climate, it goes to all the emission than are produced when a product is produced in China that we consume, and we drive. And so, from an environmental perspective, there is a tension here because, as we try to extend our regulatory approach to hit the production of things that we're responsible for consumption, we neither can do it in the environmental regime nor can we do it that easily in the trade regime without running afoul of the trade rules. So, we've done, from an environmental movement perspective, the move was towards the supply chain. And the private governance regulation. Environmentalists moved to trying to get Walmart to change their -- what they put on their shelves as a way of addressing the impact of our consumption, as opposed to trying to do it through governments. Now, as we've moved into this crisis period of climate, all hands are back on deck, and we're trying to readdress and reach and sometimes overreach the impact of our consumptive behaviors, our overconsumption, and how things are produced. This is not to say it's not also being used for protectionism, it clearly is, because as we think about environmental justice issues, and I won't come to Europe (?) as we look at what US is trying to do with this Inflation Reduction Act and other things, quite overtly it's trying to protect or to bring back the supply chain back into the United States manufacturing, whether it's renewables or electric cars, that's clearly a part of the motivation. And that's not necessarily at all for environmental purposes. It's to respond to the pressures of domestic labor and of kind of EJ issues or environmental justice issues or the just transition issues domestically. Of course, it imposes that perhaps externally, I totally agree. But I think that -- so I think that the trade -- I think we're going to see more of these climate-related environmental measures and they're going to require us to address them, why we see so much activity at the Committee on Trade and Environment. Maybe we'll see them again at the Framework Convention to be taken up more there. This movement in Paris where we stopped negotiating the tough questions across issues and just agreed on these nationally determined contributions is in some ways kicking down the road the difficult questions of how we're going to do this industrial rationalization across countries, which brings me back to the EJ and the principle of Common But Differentiated Responsibilities. And with respect to these trade type of questions, so the European Union's standards, which are inartful and probably protectionist with respect to carbon counting and relying on the carbon pricing, as Heloisa mentioned, as opposed to -- I think it's a very strong point, that's a rather broad weapon for dealing with -- and doesn't take into account the energy mix. But we're also going to have to -- we're going to see much more of the harmonization of carbon counting, it gets very technical very quickly. It's played on both sides, partly to avoid any kind of the standardization and increase of standards from countries who haven't admitted to much, and then played a different way for those who are heavy emitters. Brazil is -- I don't want to comment that much on Brazil, it's not my role, but it's such an interesting position with respect to these issues, because from the perspective of the climate negotiations and really from the response to the pressure that's coming through the markets for increasing standards, Brazil is in the middle, in a very real way. They're a middle income and more powerful economic force every day, and also a more significant contributor to climate change every day, which leaves them in this delicate difference, they

can no longer, Brazil is not the only one, sake the position they're the same as the African countries or island states with respect to their responsibilities, I'm not saying they're doing that, but at the same time, no one can say that they've historically contributed or are as responsible as the U.S. is or the European Union. So from the climate negotiations from an EJ perspective, we have to recognize the need to address the economic transition in energy in a way that promotes economic growth, but green growth, not degrowth, as we were saying, and I have some hope, I mean, we're seeing a lot of protectionist activities, in ways that are -- but I'm also -- and I think -- I go back to the geopolitical aspects, like for the U.S., the protection of the supply chains, protection of getting domestic production of electric vehicles through subsidies and things like that, it's both -- it's really not an environmental drive at all, it's a fear of not being able to have the supply chains, being disrupted through the geopolitical parts as well as trying to make amends for the impact on our fossil fuel industry or on our old school labor -- the coal and the old manufacturing jobs. So that transition here is being managed and being exported unjustly through the trade system to some extent. The vehicle for dealing with that isn't just trade. It's also the large and should be larger transition of financing that comes through the climate regime and through now the World Bank is reshifting much of its financing into trying to address this. So I think the trade discussion and the use of trade doctrine to tackle some of these environmental measures are justified. But I also think they're being taken in the context where the solutions may be negotiated over on the side of financial investment, through the climate funds, or through how the development banks go. I think we have to look at it from this overarching context. And probably that's not to say anything about the investment we need to make in loss and damages and adaptation as well as the environmental justice side. So, I'll stop there for now.

SERGIO GOLDBAUM: Thank you, Professor Dave Hunter. I fully agree with you that Brazil is in an important position for that discussion for many reasons. One of them, I know you are also an energy specialist. I used to say to my students, my foreign students, that Brazil has it all. Wind power, solar power,the thanol program, even oil we have. And I expect we won't use it but even oil we have. But we have all kinds of green sources of energy, Brazil. So this is an asset for the country that should be used. But on the other hand you have the problem of deforestation which is part of the concerns of the current government. Thank you very much. I'm afraid we are already running out of time. But before we close the session, I would ask if the audience has, someone from the audience has any questions to be made. Victor? Nobody? No questions from the audience?

VICTOR LEITE: Sorry, there is no questions from the audience. I can make a question to the panelists. So I was wondering if you could comment on the role of international organizations, the goals that countries can achieve through these international organizations and what are the limitations that you envision for these countries to achieve through the institutions.

SERGIO GOLDBAUM: The question is for both panelists, yes?

VICTOR LEITE: Yes, both panelists. I'll keep monitoring the chat feature, so if anyone in the audience has any questions, please feel free to shoot us a message and I will pose the questions to the panelists.

SERGIO GOLDBAUM: Dr. Heloisa, could you make a comment on Victor's question, please.

HELOISA PEREIRA: Thank you, Victor, for this question. It's a very important question. And of course there is a role, when I think about trade institutions, there is a role for the WTO to step in and regulate how these measures are applied. Right now, there are limitations. The first one is that we have dispute settlement system that's not operational. We have a temporary one, but it has limited use as well. And we have , if one is optimist, we might have an outcome on the dispute settlement mechanism that's better than we have today. And the other limitation is that the rules are outdated. The rules as they were designed do not capture all the details and everything that we have in this new climate change, trade-related climate measures. And if you think about deforestation regulation, it sets sustainability standards for sustainable forest. As Professor Hunter said, this is only a new practice of government because since of 2000s we have these private standards and WTO rules also are not apt to regulate private standards. So, we have a huge gap in the rules today. The question is whether members are willing to grant the power to panelists that are selected randomly, and I must say from a short book of panelists. This should change from now on with the new Director General, but we have seen the same names going, so we know what's gob the result of their analysis of these measures. So these are two limitations. But the WTO should be the institution, in my personal opinion, that will regulate how these measures operate. I don't mean that we need new mandatory rules, but at least minimum standards, minimum principles, minimum guidelines that will tell countries what they should do as a minimum so that regulation that aims to mitigate climate change, either CBAM or sustainability standards for forests, shall operate, should operate.

SERGIO GOLDBAUM: Thank you, Heloisa. David Hunter, can you jump in into this discussion?

DAVID HUNTER: It's a very good question. I think international organizations, a number of them are struggling to think about what their role is in a world where we're focusing around climate change so much, and so urgently. I think the WTO, given its dysfunction in the trade dispute area or its decline there, has lost a lot of the power to be the place to do this. They're still obviously going to have to think about that. But the commitment, I go back to the geopolitical comment for a minute, because I think if we think about what's going on with respect to the rare earth minerals and the minerals needed for renewable energy, central to the energy transition, we're basically weaponizing trade rules and other rules in order to give each country, the major countries, China and U.S. in particular, in order to try and have advantages over access to these resources, because they're going to be so valuable in the future. This doesn't help either the trade goals or the environmental goals. And so, we do need a forum that's strong enough where those countries and others will sit down and talk about it. But I don't see -- I'm not sure I see that happening anytime soon. And also, we have a fractured

-- climate change, like trade in a way, but climate change is so broad and affects so many sectors that every international organization both needs to be involved and also doesn't necessarily have the capacity or tools like what Heloisa was saying, to address the new demands. We see the World Bank changing its mission to talk about alleviating poverty in an inhabitable planet as a way of trying to reorient itself a little bit. But it's no better on the environmental side. The climate change regime or the environmental side is fractured across many different entities all dealing with the climate issue, whether it be dealing with airplane traffic or IMO dealing with shipping. And so, we've got a -- it's hard to know how it all gets unified. Perhaps some of it gets unified under the climate change convention. But the idea we had before of having a global carbon market that was somehow going to bring all these things into place, in one respect this is good news for trade, we're not going to have a carbon market with basically a lot of different, smaller trade regimes around carbon with different rules. But the push for -- the need for harmonization is going to require greater international cooperation. But that's going to take some political will at a time when everybody is still trying to get advantage over the new economy and trying to make sure that they have access to resources that also have an advantage in what is going to be a new economy, frankly.

VICTOR LEITE: Thank you very much for the questions. Both of you mentioned the dysfunction of the WTO appellate body. This last spring, we held a webinar discussing the MPIA to experts on the field. So, everyone is -- I invite everyone to watch the recording we have on our website to have a more in-depth discussion about the dysfunction of the WTO appellate body. Sergio, we have two questions from the audience, and one from Aluisio. I give you back the floor. Thank you.

ALUISIO DE LIMA-CAMPOS: Thank you, that was an excellent question, Victor, by the way. I have more, I think it's more of a comment than a question. David raised for me one of the inherent conflicts that we have between achieving a green economy and on the other hand, how to deal with critical raw materials. One example that we discussed during our webinar on critical raw materials was lithium, for example, which if you're looking for a green economy, you need batteries. And lithium is a primary component for batteries, which it's not in short supply underneath the surface, but it needs to be mined. And then you get this conflict with environmental policies. There is a short supply of lithium, but on the other hand there's an abundant supply under the surface. So it needs to be mined. So it's one basic problem that, as David raised, you know, needs to be solved somehow. And David, if you have an additional comment on that, that would be great.

SERGIO GOLDBAUM: Wait, wait, please. I'm afraid I don't want to extend this session, I don't know if Heloisa and Dave Hunter, if you have availability. I would suggest bringing together Heloisa's questions and the two questions from the audience and then the panelists can answer together. Is it okay for everybody? Okay. Victor, could you please read the question from the audience.

VICTOR LEITE: Sure. The first one I think is for both of the panelists. What could be the possible impact for export controls on technology products and AI development, especially in developing countries. Not sure if the matter was addressed as I joined late. And the second one was specifically addressed to Heloisa. So Heloisa, do you think that some of the just concerns you raised regarding the EU legislation on carbon adjustment tax and deforestation regulation and the IRA subsidies in the U.S. could be dealt at the G20 during Brazil's presidency or have to be dealt bilaterally with Brazil or with Mercosur?

DAVID HUNTER: Who do you want to go first?

SERGIO GOLDBAUM: Heloisa, would you like to be the first one?

HELOISA PEREIRA: Professor Hunter.

DAVID HUNTER: Go ahead.

SERGIO GOLDBAUM: It's okay, whatever.

HELOISA PEREIRA: I'll talk about the later one. I think Brazil will take the opportunity at the G20 to address some of Brazil's concerns, which is not only Brazil's concerns, it's many countries' concerns, in the G20. Of course the final text must be agreed by all. So the language that will come out will reflect the negotiation process. So that evokes more than 20 parties now. But it's the Brazilian government intention to deal with some of these issues, about deforestation, about product standards, about carbon accounting methodology, about recognition of national systems for carbon counting, for national monitoring systems, deforestation. So it's the intention of the Brazilian government to put these issues for discussion. But what will come out in the final text, it's different. Then of course a bilateral negotiation between the Mercosur's countries and the EU countries, it's not only two countries, there is two jurisdictions, there are not two countries, there is also a difficult negotiation. But it's the convincing process is just like for two different parties in the end, while the G20 is more than 20 parties. These issues are dealing dealt in every fora that the Brazilian government has the opportunity to discuss, with the bilateral EU, WTO, maybe in the COP there will be discussion from the government. The private sector will definitely discuss these issues in COP and the government will still be figuring out what's going to be discussed in COP. But of course, in the G20 this also will be discussed. Thank you.

DAVID HUNTER: First, let me respond to Aluisio's comment about mining, which is a very big and very real one. Although I have to say that I kind of (?) would different most people do from an environmental perspective. Yes, we do have to mine it. I have yet to see an analysis that says it's significantly worse than the mining of uranium or coal or things we've mined for years

for the old economy. So we're going to have to be smart about how we mine it and deal with the human rights and other aspects of it. But I have a feeling that some of the noise about it is the old industry still trying to point the finger at the new industry. We mined a lot of things during the last 200 years, we can mine lithium. Yes, we'll have to make some sacrifices about it, but I don't think it's a reason to -- we're going to have to do it wisely and sustainably. But in comparison to what we're doing with the other fuels, it's also mining, and the uranium life cycle has been horrible, so I feel like we environmentalists, I put myself in that group, are shooting ourselves in the foot by talking about it as if it's a huge impediment, when, you know, the other things are also bad. So there's no good solution. So we have to do it, we just have to do it wisely. Then with respect to intelligence, artificial intelligence and technology, I can't get my head around artificial intelligence, I'm having a hard enough time with natural intelligence. I'll have to listen to your last thing about it. I do know the technology transfer and the need to spread if you good ideas is a big part of how we're going to solve the climate problem. I'll just close by saying trade, technology, if nothing else, climate is demonstrating to us we're all on one planet and we'll have to figure out ways to do this in a just and equitable way with inclusive growth, which is something trade and environmentalists can all agree on. Thank you.

SERGIO GOLDBAUM: Thank you very much. I think there are no more questions from the audience, I guess. Only Beatrice thanks us, thank you very much. It's already a quarter to 3:00 in Brazil time or 1:00 p.m. eastern time. I would like to open for final remarks to everybody. But I'll start with my final remarks, okay? There is a very interesting paper, I don't remember the name right now, but the title of the paper is something like that, we are discussing climate change since 1992 in Rio de Janeiro. The title of the paper is something like that, after three decades of discussing climate change, why haven't we been able to bend the curve of CO2 emissions? And at least two or three points in the paper we have been discussing right now. First, international governance. We have been failing. International organizations have been failing on that issue. And also, the lifestyle, it's a very difficult issue to tackle. So I suggest the paper, I think it's very interesting. Not only we could not bend the CO2 curve emission, but it's even on the rise. The CO2 emissions is still on the rise, after three decades of discussing the issue. So with that, I would like to invite Heloisa and David Hunter for their final remarks. Heloisa, could you please.

HELOISA PEREIRA: This is an interesting question. I will be sure to read the paper. These are three simple questions, and of course there must be political will to mitigate climate change. As it was mentioned here before, Professor Hunter also mentioned, there are so many sectors that are affected, that affect climate change. It's different from at COP, they were talking about some specific factors that come from some specific products. When you're talking about climate change, we talk about the way you produce, the way we eat, the way we move, the way we take our holidays, everything is related to climate change. And the point is that to what extent each one genuinely mitigates climate change. My entire point, the EU regulations, the two regulations do not have the main goal of mitigating climate change for these aspects I mention here, but in theory, climate change should come first in the regulatory exercise that we see around the world. I'll stop here, Sergio.

SERGIO GOLDBAUM: Thank you very much, Heloisa, for your time. Professor Hunter, final comments, final remarks.

DAVID HUNTER: One of my favorite environmental actions was the youth that showed up in the Cancun negotiations wearing T-shirts saying, you've been talking our entire lives, please stop talking and do action, all these 20-year-olds showing up and talking about how long we've been talking about climate change. We had it right in one respect in 1990, '91, '92, we thought it would take about 30 years. The governance system decided to go the way of a carbon market, which brought a lot of problems and issues along the way, including that we would have to do the whole thing as one unit. We didn't take a sectoral approach and deal with things in a different way. So the governance system has been -- it was a very hard thing, it turned out, because what you're doing when you're negotiating climate change is you're negotiating at the pace of development. And especially when we hadn't delinked energy. If we take a step back, the solution to climate change is, to take a free energy source, the sun, and the wind, and use it to replace an energy source that we have to pay for by the gallon. And on one core level, that just makes so much sense from an equity and justice perspective, if we can just get it right. We should have started it 20 years earlier. I like the Paris agreement governance structure that has countries doing things as opposed to talking about doing things, and even if we don't all agree and it's going slowly, maybe we're making some headway. The price of renewable is now competitive in many places, and that's a big shift. And so the thing is, nobody should have to go without basic electricity and light bulbs, so that I can take a holiday on the beach with my minivan or my camper van. So when we talk about climate change, we're talking about equity, justice, a global economy that works for everyone. And those are rightfully all combined in the conversation. And guess what, it's really hard [laughs]. We're probably going to solve it as much by private innovation and the private sector than we are by diplomacy and the diplomats. But we all need to be working on it.

SERGIO GOLDBAUM: Thank you very much, Professor Dave Hunter. It was a very rich discussion, I'm very grateful for everybody, including the staff, the technical staff, Courtney, Lee Bursten, Ryan, thank you very much for all the help. I would like also to mention that the discussion, the recording of this discussion, will be made available in the ABCI Institute, I don't know, in a week or two. For those that are interested, there are the recordings of the previous webinars of the ABCI, including one about the critical rare minerals and also one about the MPIA that were mentioned here. If you are interested, please have a look. So thank you very much, and then I pass the floor to Aluisio to close the session. Thank you very much, again. Please, Aluisio.

VICTOR LEITE: You are on mute, Aluisio.

ALUISIO DE LIMA-CAMPOS: Sorry about that. Thank you all very much. We're so thankful that you were able to participate and accept our invitation. And I would like to thank Heloisa, David, for their participation. My colleagues, Sergio and Victor, for their -- Sergio for his able moderation, Victor for his support, and Mirian also, who was not able to join us today. I would

also like to thank my colleague Padideh Ala'i, she was not able to join us today but she has been a partner in all of this. Also Ryan and Courtney for the support of having us on without any technical glitch. And while I was listening to the final comments, and the promises, I think it was David that mentioned solar energy, and it reminded me of a comment I heard from Elon Musk. And correct me if I'm wrong, but I think he said that if we take an area of 100 miles by 100 miles and fill it with solar panels, we can provide energy to the whole United States . And I was so -- I was so impressed by that comment. And I said, but that's it? You know, there are so many deserts around the world that could be used for such a thing. And his final remark was that the sun is -- he gave the numbers, but I forget now, but he said the sun is basically a nuclear reactor, the greatest nuclear reactor in the world that can be tapped for energy. He gave the numbers, which are very impressive numbers, but I don't remember them. But, you know, you can probably look it up on Google or YouTube and find his comments. But anyway, I just wanted to throw that out there about how little it takes to generate immense amounts of energy, clean energy.

DAVID HUNTER: He'll have to finish that battery he's been working on and quit wrestling around with Twitter.

ALUISIO DE LIMA-CAMPOS: Oh, X and Twitter. Is that correct, 100 miles by 100 mails?

DAVID HUNTER: I haven't heard that statistic, but I do know there is tremendous potential for solar to make huge ingrowths, but we do need to solve the battery problem still, the cost effectiveness of holding that electricity into the nighttime and things like that, which he's been working on for many years. While I took over the forum, thank you, Aluisio, for ABCI and the partnership we've had for so many years, I guess it's 19, given that this is the XIX seminar. My hats off to all of you.

ALUISIO DE LIMA-CAMPOS: Thank you, David. I am closing. Let's just say stay tuned for our next annual, which is going to be our XX year. We're planning something really extraordinary for next year. So stay tuned, and we'll let you know soon about that. Thank you all. Until next time.