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Guest: Jos Delbeke
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Jos Delbeke: The climate change agenda is a major industrial revolution that we will have to undergo. And so even that knowledge from these early days helps me a lot in keeping the optimism, because it's only through innovation that we are able to put into the market that we are going to make it.

Rob Stavins: Welcome to Environmental Insights, a new podcast from the Harvard Environmental Economics Program. I'm your host, Rob Stavins, a professor here at the Harvard Kennedy School and Director of the Harvard Environmental Economics Program. Today we're very fortunate to have with us Jos Delbeke, who is currently professor at the European University Institute in Florence, Italy and at the KU Leuven in Belgium.

He's probably best known for his long service at the European Commission, including as Director General of the commission's DG Climate Action from its creation in 2010 until 2018. Even before that, he was very heavily involved in the development and implementation of the EU Emissions Trading System, and for several years was the European Commission's Chief Negotiator at the UNFCCC Conference of the Parties. Welcome, Jos.

Jos Delbeke: A pleasure to be here.

Rob Stavins: So I'm very interested to hear your assessment of many facets of climate change policy ranging from the performance of the European Union Emissions Trading System or EUETS for short to the nature and pace of the ongoing discussions in the international realm with the Paris Agreement. But before we get into that, I'd like to go back to how you came to be where you are. So I want to start pretty early there. Where'd you grow up?

Jos Delbeke: Well, I grew up in Belgium, in Flanders, and then I made it to the University in Leuven and which I was picked up by a professor who convinced me to make a PhD. And so things from then on were rolling quite fast. After my PhD, I had a few very, very interesting months at the IMF in Washington. And then I had to make a decision either to stay there or to come back to Europe. And I went back to Europe and because the European Commission, at that time, was headed by Jacques Delors, who was a stronghold in European politics. And I got signals that they wanted to develop the new environmental dimension of the Treaty of Rome because the original Treaty of Rome was about coal and steel, but not particularly about environment and certainly not about climate. And so I took on that challenge and so things developed in the European Commission.

Rob Stavins: Now, one thing you said really struck me. You said that you're a professor at the University of Leuven convinced you to study economics, to pursue it. How did he convince you?

Jos Delbeke: Well, he convinced me to make a PhD. So I was studying economics, and a PhD journey certainly at that time was a multi-angle experience. Today it's much more structured. It's a program that you have to follow and a thesis to be made, but at the time, the old regime, so to speak, was the major piece of work that you had to deliver. But he was a fascinating professor in economic history and he specialized himself on innovation theory, which is of course something that is very relevant for what we are going through today. The climate change agenda is a major industrial revolution that we will have to undergo. And so even that knowledge from these early days helps me a lot in keeping the optimism, because it's only through innovation that we are able to put into the market that we are going to make it.

Rob Stavins: So it's interesting that you explain that background because we share something. So when I was doing my PhD in Economics at Harvard, there was a requirement at the time to study two classes in economic history and which was an absolute requirement, something I didn't want to do. I loved the two courses, wound up writing a paper, later published, on essentially economic history of technology innovation. So in addition to everything else we share in terms of policy instruments and climate change, there's that as well now.

Jos Delbeke: That's very fascinating to know that. Yeah, indeed. Yeah. Yeah.

Rob Stavins: So let, let's turn then to your work at the European Commission and more broadly in the European Union. I believe that at an early stage that there were considerations being given both to the possibility of a carbon tax and to what eventually became of course the cap-and-trade system. Can you tell us about what were the factors? What were the discussions, debates like?

Jos Delbeke: Well we, we're looking very carefully at the data because I was one of the few economists at the department at the time looking into environmental issues and of course economists looked at the costs and at the technologies, and so looking at low cost solutions was a kind of fresh element that I could bring on the table. And I was asked to make that operational, and in making that operational, you go to the modeling, you go to making simulations. And I had good friends at the University and several universities and so we originally were building the team around which a well-informed policy move could be done based on economic and econometric modeling, which were allowed us to reply to lots of questions that the politicians are normally asking. If we have a tax of "A", what would you expect in 10 years or 20 years the reduction of emissions going to be?

And that's normally always a difficult question to ask. But with our econometric analysis we could give a quite reasonable range, and so people like that. So the modeling together with the search for low-cost solutions made it as an important contribution to what was being done at the time. And as a young official I got many chances to develop this further. We started with air quality and then we moved on to climate change. The IPCC reports 1992, the World Summit in Rio de Janeiro was really bringing the issue on the table and I was asked to be part of the team to roll it out.

Rob Stavins: And then how did it take place between the choice, if it was decided to do carbon pricing or at least to consider it seriously, the choice between a carbon tax on the one hand and a cap-and-trade or an emissions trading system on the other?

Jos Delbeke: Well, we got convinced that carbon pricing was important. That was the first step. And in the second step in particular, according to European traditions at the time, it was spontaneous to go for taxation. So in fact the emissions trading was an alien idea at that time. But as an economist, I followed very much how the United States was developing the sulfur experiment. And that was very new and I had to teach my colleagues that you had an approach of taxation, but you could also go through cap-and-trade. But that was not well understood. And so the spontaneous thing was to go for a tax. Now we learned it the hard way, a tax is always difficult because people do not like taxes. And so in a democracy to explain why you have to go for a tax that is going to make your way of living a little bit more expensive was a journey that was very difficult to explain to the people. And they said, "Well, there may be other ways to protect the environment," but as an economist, I always kept the truth about carbon pricing in the back of my mind. That you could have other technical regulations, but they may be much more expensive and much more difficult to follow up on. And so we started with a tax and we were delivering the proof that it was in a democracy, not possible to go with the required consensus at the time. A consensus is required for tax matters in the Treaty of Rome.

Rob Stavins: So we ought to emphasize that point. Not all our listeners will be aware of that. So within the European Council, within the council of nations, one country, one vote, unanimity is required if it's a fiscal measure, a tax. Whereas for other policies, what's the vote required?

Jos Delbeke: Exactly. And the unanimity requirement, that is a traditional chapter of the Treaty of Rome. It's very explicit. But we just developed in the Maastricht Treaty of 1986, the Environment Chapter, and the Environment Chapter brought forward the possibility of voting with qualified majority. And when we discovered that getting through with a tax was very difficult, I brought forward, why not for going for a cap-and-trade and "Hi guys, look, the sulfur trading system worked in the United States." And that coincided with the Kyoto Protocol of 1997 where the American delegation was very active to bring the carbon pricing and the cap-and-trade on the table. At that time I had not yet convinced my colleagues that a cap-and-trade could make sense and because they were strongly believing in the tax and in Kyoto itself, I was not present. They were fighting against that idea of the cap-and-trade that United States was bringing on the table.

Rob Stavins: You know the European union was opposed to that.

Jos Delbeke: They were very much opposed to that and the whole lineup was being against it. Now in the end, the Article 12, 6, 12, and I think 17 [crosstalk 00:10:02] is has made it into the Kyoto Protocol. And when the team returned from Kyoto, it

was with a sense of defeat that they had to accept this kind of cap-and-trade. And I said, but I told you it's not as bad as you believe it is. So my boss at the time, the Director General called me in he said, "Do you really mean it when you say it was not that bad?" And I said, "Of course that is my notes, and look at this and look at that." And he said, "Well then I will ask you to make it happen. So please can you do it? I move you to another post." Which was then the climate change unit that was created for me to make that happen, to rescue the failed story about the carbon and energy tax, and to move it further towards an emissions trading scheme.

Rob Stavins: So it's a delicious irony that in Kyoto, the United States was leading the charge among the so-called umbrella group of countries, you'll recall, for including emissions trading or something like it actually in the Kyoto Protocol. The European union was opposed, it winds up going in. Then the United States doesn't ratify the Kyoto Protocol and the European union becomes the first point in the world where there's a significant cap-and-trade system on CO2.

Jos Delbeke: Absolutely it's the irony of history because one of the first trips I undertook after being nominated in that new post was to go to the United States and I went to the White House and I met several people with whom I'm still meeting occasionally because I have the best memories of them telling me what your operational plans were, what the plan was for the United States, but then the big disappointment came when George Bush Sr. decided to withdraw.

Rob Stavins: But remember Bill Clinton, who had been president when Kyoto was negotiated, never submitted the Kyoto Protocol to the Senate for ratification because he knew he couldn't get it.

Jos Delbeke: We learned that all [foreign language 00:12:09] as we say, but the brutal reality was that, the United States was dropping out of the Kyoto Protocol, which was a major thing to happen, because the whole Kyoto Protocol targets were designed in a way that United States would be parts of that International Carbon Market. And then the United States dropping out created an enormous disequilibrium in the system that we had to overcome. And that led us to make a design of the EU-ETS, that is not a design between countries. It is not countries trading with one another, but it is companies trading with one another.

Rob Stavins: See, I think that's fundamentally important because countries are not cost minimizer. They don't have the information, even if they were in order to minimize costs, they don't know the abatement costs. But it's firms that can, that's the way the European union has designed it is exactly the right way.

Jos Delbeke: Okay, well that's good to hear that. And also I was aware of that, but we had an inevitable problem. That the EU is several Member States and the Member States were at the negotiation table in Kyoto and they said, "hang on, are you then saying that this EU-ETS will be for companies all over Europe?" And I had to explain "of course that's the definition itself." And thank God we did that, because now we have a European regulation where distortions of competition

cannot happen between companies inside the European union, which once you go for higher targets would have created quite a bit of trouble on the point where we are today where we have to make our targets stricter and we have now a European system where distortions of competition between European companies are absolutely impossible.

It's the same rules of the game wherever you are located with your installation and the North of the South of Europe or the East or the West; it's exactly the same game, and that led to a tremendous cost minimization. I think the low hanging fruit was reaped. In fact, the latest statistics show that between 2005 when we started and today 2018 the emission reduction is 29%, and that is for all the installations in Europe, all big installations and the energy and the manufacturing industry. So 29% down in less than 15 years I think is quite remarkable when we compare it to emissions from transport that are roughly 20% up.

Rob Stavins: Right, which are not covered by the EU-ETS.

Jos Delbeke: They are not covered by the EU-ETS and that is handed over. That's delegated to the Member States to do that and we are not going as fast as we should.

Rob Stavins: So let me ask you since you mentioned that, I guess it's about 50% of the emissions of Europe are covered by the EU-ETS because it's essentially it's a downstream system on CO2 emissions. Another possibility in theory, as you well know, is an upstream system which is regulating the carbon content of the three fossil fuels at the point at which they enter the economy. You made a decision not to go with that approach, but to go with the downstream approach covering half of the economy. Can you tell us what the thought process was there?

Jos Delbeke: Well, we were not jumping to transport because in Europe we have energy taxation at the pump. So the excise duty system as it is officially called is already creating quite high energy taxes at a pump. And we would have pleaded for an additional tax. And so transport was dealt with already through the normal procedures. While for the other installations it was brand new, there was nothing related to taxation or nothing related to environmental regulations, related to greenhouse gases in particular. So it was a field that was not covered. And so it was somewhat easier to come with a fresh new idea of establishing a carbon market because otherwise you were always falling into the trap, "in this Member State that exists or in another Member State something else is existing." And then you had to carve out all kinds of exceptions which would have made the system much less pure compared to what it is today.

Rob Stavins: And with relatively high petrol taxes in Europe. This would have been a real challenge to add an additional [crosstalk 00:16:43].

Jos Delbeke: Absolutely and that is exactly the same question we are facing up today. Yes, because the European Commission is looking into extending the carbon market,

the ETS into other sectors, in particular transport, but that is exactly the same thing. Then we saw the experience of the Gilets Jaunes in Paris where a jump of the petrol prices created quite a bit of unrest and so that's a big lesson that when taxation levels are already high that people are very sensitive to increasing that even further.

Rob Stavins: Now, something else that I heard, it may, it may have been from you, but maybe not so I won't put words into your mouth. Was that another reason for the decision not to go for the upstream economy-wide carbon content of fossil fuels cap-and-trade system is that, that would look like a tax downstream, which is true. It would affect relative prices and that therefore you would've been back in this situation, there would be claims that, wait, this is implicitly a tax. It needs unanimity in the council.

Jos Delbeke: Exactly. And that's why we were very keen to define the cap and not go into the pricing arrangements, and that is also one of the questions that comes back today on the table. Should we not regulate a minimum price or a price collar? And I have always been advocated against doing that because you run into a situation where one or the other Member State may say, "hang on, this looks like a tax, so it must be a tax." So you go for unanimity, and so far we created an instrument, the Market Stability Reserve, that is a cap based instrument to absorb the surplus that was in the market and we avoided in making a price collar for exactly that reason.

Rob Stavins: Same thing again. Yes. So what's going to happen if Brexit takes place? What does that mean in terms of the EU-ETS?

Jos Delbeke: We took all provisions that Brexit would leave the system untouched, but of course the UK would leave and that is a reality we had to bring in. In the Brexit agreement, that is all well spelled out so it's important that we have a Brexit agreement, that the UK is leaving the EU with an agreement. If the UK leaves without an agreement, we have to make a kind of fix to make sure that they could not drown the system because the allowances that are circulating in the UK would all of a sudden have no legal value so they may, just the day before Brexit, dump them all at very low prices on the European market and so we were obliging the UK authorities to label the allowances of the UK as UK allowances.

Normally there is only one allowance and EU allowance but for the very special circumstances that we had under the Brexit debate, that was the fix we were going through. Now having had many discussions with our British friends, I think that the reality may well be the following for the coming years, that is, that the UK hopefully orderly will leave the EU and then may reconnect again into the market with an independent UK-ETS, very much like we are doing with Norway or like we are doing with Switzerland. Switzerland as of the 1st of January 2020 will be operationally part of the system and will handle EU allowances.

Rob Stavins: So I want to turn to the truly international dimension under the United Nations Framework Convention on Climate Change. So you were very involved, or certainly knowledgeable about Kyoto and engaged. Back then you were the head of the European Commission delegation to the UNFCCC negotiations that led to the Paris Agreement.

The Kyoto Protocol and the Paris Agreement are very different animals and I think it's not unfair to say that the reason why the Paris agreement has such broad scope of participation, something like 98% of world emissions with associated countries. compared to the Kyoto Protocols, 14% in the second commitment period, is because of the structure of the Paris agreement, this bottom-up nationally determined contributions. Everyone says that, but I think it's fair to say for that same reason that the individual ambition of countries -- because it's a global commons problem, free rider issues, you as an economist think about that a lot -- the ambitions is not what one would hope and therefore some people are critical of the Paris Agreement. They say we should have done the Kyoto approach. Kyoto on steroids would have been better. What's your thinking of the comparison between the Paris approach and the Kyoto approach?

Jos Delbeke: You are absolutely right and I agree with those people raising the criticism that the bottom up nature of the Paris Agreement makes it much more difficult to have ambition in that Paris Agreement and that is what we lived through today. There is no mechanism that leads to higher ambition. It's rather the other way around. And we also have a very different degrees of implementation of the plans, the indices that were submitted, and that is why I welcome very much that the COPs have lately been shifted more to implementation issues rather than negotiation issues of new targets. Because you first have to deliver and do your homework before you can enter into the next round of discussions. But it's certainly more complicated when it comes to carbon markets. For that reason, we established a kind of a consultation between all those who have been implementing carbon markets or are in the process of doing that.

We do that in Florence and we call that the Florence Process. We have participation from California, from Canada, from New Zealand, from China, from Korea and others are knocking on our door to join because we see that carbon markets are being discussed also in other parts of the world like in South Africa or in Chile or in Mexico. So we are fairly open. But what pays off is that those people can, behind closed doors, change the real practical difficulties they are facing when the legislation needs to be prepared and negotiated for the cap that is reining their systems. But that has been a very fruitful set of discussions. Now, nevertheless, the nations I'm mentioning are only a very small subset of the world and that is bothering me in any case. So we hope that the United States as a state is going to join the process again sooner rather than later. But, it will be in the hands of the United States.

But I do think that when the Chinese get their ETS up and running nationwide for the power sector, they have a plan to expand that to eight sectors,

manufacturing sectors. It will take some time as it took also some time for the European system to have up and the running. But once the Chinese have their act together, I think that may serve as a source of inspiration for a lot of other nations, emerging economies, and in Florence as part of the Florence Process, we are now developing a project together with the CPOC from the World Bank with G20 countries of carbon pricing. There is a lot of infrastructure that is already being built through the PMR and other things, but now the decisions have to be prepared. The real cutoffs, how to define a cap, how to design the infrastructure that you need for a cap-and-trade mechanism to function.

Now going into that other gear is something that I paying a lot of attention to these days and I hope that the Chinese are going to make it. In fact, I'm confident the speed and the thorough nature of their preparations lately is just impressive and we should be in the back of our mind as well that China is a continent. It's not just a country, it's a continent that is composed of many provinces like the Member States of the EU and so in that federal nature a lot of questions came from the Chinese our way. How do you deal with the Member State that is more or less industrialized? Is more or less relying on the coal-fired power generation and things like that. So we had very mature discussions with them and I really do hope that they are going to succeed.

Rob Stavins: No, it's quite remarkable, everything with China, because of the size of the country, the size of the economy is always striking, but China represents about 30% of global emissions. If eventually, the new emissions trading system, which actually is a tradable performance standard as you know, not a cap-and-trade system per se. If that covers about half of the economy when it's both power sector and these other industrial sectors, then that's 15% of global emissions, which is exactly the amount that's currently covered by all carbon pricing systems, carbon tax and cap-and-trade combined worldwide. So it would double the magnitude. It's really quite striking.

The last thing I want to ask you is quite apart from what we've been talking about because we've been talking about policy, technical nature of many policy developments, which is very, very important, but there's something else that's happened in the past year and that seems quite new and that is the degree of the youth movements of climate activism and that's happening both in Europe and in the United States. Could you just say briefly what's your reaction to that?

Jos Delbeke: I think that movement has been very useful to bring the attention for climate change by the political decision makers, to make that attention clearer and more pressing and I think that helped a lot in putting the real perspective clear, that is, that over time we all have to go down to climate neutral economies. That is the long-term perspective. That's the Paris Agreement. And that change in perspective, from the short-term to the long-term, has been indirectly brought forward by these young people because they say, "It's about our future. It's not about your future, it's about our future. And 30, 50, 80, 100 years from now, how is the world going to look like?"

And this long-term perspective brought the carbon neutrality to life, and that provokes quite a new set of problems. The new set of problems that I see in Europe coming forward is: Give us an idea about the amount of investments that are necessary in which technologies? So as to bring forward that long-term objective. Once you have settled that out, then the question comes back, what is going to be the incentive for those investments and those innovations? And then you come back to the carbon pricing.

There is a raging debate in Europe about tightening up our cap. Tightening up our cap will lead to higher carbon prices. We know price ranges have been given, Stern, Stiglitz, and others, but I think that Europe is moving forward into those price levels, not overnight because sudden developments do more harm than they do good. So a gradual development is useful and that is what we have to tell to our young people. They were putting in, with modern systems, the long-term future, but we have to tell them as well, you have to give us a bit of time not to sit on our hands, but a bit of time to move the economy, that is in the end a tanker, in the right direction and I think that carbon pricing is an absolutely essential element into that.

Rob Stavins: That's a perfect place to end. Jos, thank you very much for joining us today. Our guest today has been Jos Delbeke. He is professor at the European University Institute in Florence and at KU Leuven in Belgium, and of course he served at the European Commission as Director General of the commission's DG Climate Action from 2010 to 2018.

Please join us again for the next episode of Environmental Insights: Conversations on Policy and Practice from the Harvard Environmental Economics Program. I'm your host, Rob Stavins. Thanks for listening.

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