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#MeetTopEnvEcon – Andreas Löschel

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homepage

I am very happy to present to you Andreas Löschel in this Meet Top Environmental Economists interview series. Andreas holds the Chair for Environmental/Resource Economics and Sustainability at the Ruhr University Bochum. Since 2011 he chaired the Expert Commission of the German Government to monitor the energy transformation and is a Lead Author of the Intergovernmental Panel on Climate Change (IPCC) for the Fifth and Sixth Assessment Report. He is a member of the German National Academy of Science and Engineering (acatech) and several times among the 50 most influential economists in Germany in the Frankfurter Allgemeine Zeitung (F.A.Z.) economist ranking. He published around 100 scientific articles in top journals, and is one of the most policy active environmental economists.

His impact on policy making in Germany and the EU, especially in terms of energy issues, is immense. He is one of the very few environmental economists who regularly appears in

national news, both the TV as well as newspapers and the radio. It is pretty amazing where he takes the time from to do all this policy work, and, despite all that, he still publishes many academic articles. There is much to learn from someone like him, and I would say a really vital lesson that any reader should take away is that it is possible for an environmental economist to bring one's ideas and knowledge into the policy debate. The path towards this may be rough and rocky, but, as Andreas shows, it is possible, given one is willing to put in the effort.

Express Views interview with Andreas Löschel

Here is the **podcast version of the Express Views interview**:

Podcast version of the Express Views interview with Andreas Löschel

And now I am very happy to present you the **Meet Top Environmental Economists interview**:

(Date of interview: December 2021)

Meet Top Environmental Economists – Andreas Löschel

Could you please tell me what motivated you to do research in environmental economics.

I had a very interesting encounter with Joe Stiglitz in 1997, just before I ended my diploma in Nuremberg. Joe was handed over a prize for achievement of the University of Nuremberg with a lot of money and my professor asked me to host Joe for a day and take him to Rothenburg ob der Tauber. Rothenburg is a very nice, medieval town. I had the pleasure the spend the full day alone with Joe Stiglitz and his wife. I was working as a tour guide at that time, explaining the city and making some extra money. So, I had this full day with Joe Stiglitz who was already very famous. That was all very interesting because he

asked me a lot about my own opinions, what my point is on this and on that. At that time, I wrote a master thesis on old age security and pension systems, and I wanted to do something with public economics.

But Joe kept asking me about environmental issues, environmental regulation, environmental problems and the likes because he was interested already at that time working on this topic. This was for me an important occasion because it was this encounter with somebody who was a world leader in researcher, and it was very inspiring to see how was he thinking about things, what he had achieved , what was he working on.

Then. a month later, I saw an advertisement of a position, which was the first PhD position on environmental economics, a graduated program at the University of Heidelberg in Manheim.

So I was coming out of this public economics perspective and had these ideas about environmental taxation which was something, let's say, new, and it was also the year where the Kyoto protocol was negotiated. Then I decided to apply, and I was lucky to get this position, which was basically the first graduate program of the German Science Foundation on environmental economics. My advisor, Klaus Conrad, brought me into the CGE (Computable General Equilibrium) modelling. He had just come back from a year with Dale Jorgenson in Harvard, and he was bringing back CGE models to Germany. Then I ended up getting in contact with Christoph Böhringer, who just started in Mannheim at the ZEW.

From there on we were just working on developing models for impact analysis. That was really an exciting time. Then I went to the European Commission, and afterwards got a leading position at the ZEW. This was a development without a lot of planning, in fact I never had a master plan to move into academics. The next step seemed to always have been a good decision for me, and it turned out that I ended up with this professorship first in Heidelberg and then in Münster and now in Bochum.

How very interesting. You seemed to have always met the right people at the right time.

Yes. I think everybody is probably meeting the right people at the right time, but it is probably important to take these chances as well and to develop from there.

You moved around a lot. What is your main motivation to move to different places?

Moving to another place is an opportunity to learn new things, to take up new questions, to meet new people and to build new networks. I think it can be very important for your own development. When I was working at ZEW I was doing a lot of quantitative analysis, I did my PhD, my habilitation on simulation modelling. When I moved to Mannheim, I started doing laboratory and field experiments. In Münster, I was working more on questions about energy (while before I was more working on climate and climate policy). I was more interested in bottom-up research on energy policy analysis with a lot of focus on energy demand behavior. When I moved to Bochum I again restructured my research agenda, looking a bit more into industry and mobility issues, building infrastructures and industrial transformations, which will be the next big thing in Germany.

I can totally agree that it is much more interesting to work on a variety of topics. But if you compare this to what most researchers are doing, then they work all their life on one very specific single idea.

Don't you find it is becoming increasingly more difficult to change the topic and to work in something new?

Yes, that is the case. But, I think, in terms of what you have learned in the past, you have built up knowledge on methods, you have built up knowledge on theory, and all of these are, of course, not lost. I've also never been a person that was doing classical research where you work over years to get a paper done. The reason is that I am not only interested in the academic quality, which I think it is important, but I am as well interested in the impact of the research in the policy arena. I try to develop a science-based answer to pressing issues, and here the time scales are often not years but much shorter.

Nevertheless, in academics I think you need both: You need the people that stick with the problem for decades, but there is as well room for other ways to do research.

What we have just been discussing is maybe not the best advice that one would give to students inour field. If you had to give advice to students in our field, what would it be?

I think for PhD students the ideal is really to try to get to the academic edge and try to integrate as far as possible and as soon as possible in the usual academic life. To be successful it is important to be in international networks, try to get in contact with people that are on the edge in these topics, to go to conferences and talk to the people that are the leading researchers in your area, understand what they are working on, and what are the problems they are concerned with. I think it is crucial for young researchers, to really learn how academics is done in an international competitive framework.

What kind of skills should they acquire? For example, on one hand, there are very technical skills, while on the other hand there are very interdisciplinary ones.

I am very big fan of the technical side, so I think it is important that you are very good in terms of methodology. This can be theory, it can be econometrics or empirical or experimental work, but I think you must have a methodological core, and you really must have the depth to publish in economics journal. This should be the direction to go.

You are not going to be very competitive if you become too interdisciplinary early on in your career, because there are other people that are in much better position, and many of the PhDs in Economics departments do this type of work. I suggest that later you can learn a bit better how to place your research in a broader context. I would always advice to be strong disciplinary, and to publish in leading economic journals and develop it from there.

What future direction would you then envision for environmental economics and what kind of obstacles do you see there?

I have just done an overview article where we look at the development in the field using the articles in the Journal of Environmental Economics and Management and I think one of the insights you can gain from there is that you have developments that are driven by certain areas (especially climate change and the energy transformation), and nowadays a lot of articles are moving from theory to empirics as well as to experimental approaches.

In the next years I think we will see a much broader use of newly available data that you have not seen before, which will be looking deeper at the temporal or locational differences in environmental impacts.

In terms of the field as such, we see as well that there are more publications in top journals. Until a couple of years ago there had been practically no publications in the top five journals in economics from the environmental side. This is changing now as well.

There is more demand for environmental work from editors in top journal, because before they did not see the worth or the potential. There is also the supply side, with many more researchers with very good education in excellent departments that are now working on environmental issues and writing high quality articles. I think what we are going to see is that this whole field is going to become mainstream in top journals.

In terms of the obstacles, I would see that we are going to be side-lined as economists from other disciplines. Think about climate change and think about the discussion about the pace of change and the need of quick transformation.

The usual approach of economists is to study policy responses in terms of efficiency, of the right policy mix, and addressing different externalities. But there is often a need of urgency in responses, so policy makers do not care necessarily about things that we traditionally are interesting in. They want to achieve as much as possible, as quickly as possible. In this case, efficiency and trade-offs are no longer playing a big role. I think that is a real danger for the field, and this will be a big obstacle for the economists to be heard in this type of discussion in the broader public.

You are one of the few environmental economists who has substantial exposure to the policy side. From 2007 to 2014 you were the head of the research department Environmental and Resource Economics at ZEW. You were coordinating over 20 full time researchers, and in that time, you regularly travelled to Berlin, talked to Merkel and other leading politicians. What do you take away from that time, what were your key experience?

Policy advise should be grounded in research, but in the end these are two different spheres. In your research, you must come up with a rigorous analysis of problems. and in the policy arena, you must come up with a good description of possible solutions. For policy makers you should give your assessment of pros and cons, which sometimes is based on your own research. Very often, however, the own research is going to be much more detailed while politicians are going to ask you bigger questions. Policy advice is a bit like the IPCC idea, which is synthesizing research. You are not going to sell your own research but your reading of the literature and the insights that you think now can be derived from this and can be brought into the policies spaces. It will be, to some extent, subjective, but you try as good as you can to be objective.

My point is, it's not that you're doing your research and then you come with your paper and show this to a policymaker. This is not how it is working and very often you're going to see that a lot of policy advisers are not at all familiar with the research in the field. They have basically no background in Environmental Research, and even many of the leading policy advisors have not published anything on climate policy. Still, they are making both claims on what the government should do in terms of environmental policy, and some are using their academic credentials to do so, but very often though they are from other fields.

For this reason, I think it's important to really understand the literature in the field that you're talking about, being capable of synthesizing academic research in a way that it is helpful for policy makers, and it's important to keep credibility with your fellow

researchers. This should be the foundation for doing science-based policy advice.

You have to understand what the problems are that policy makers want to solve. In addition, you have to have the capability of providing a bundle of possible answers, not just one, with some qualifications on likely consequences, and then you should be able to step back and let politicians decide. In the last two decades, I have seen a lot of decisions which I thought were wrong, and I would have done differently, but this is not my role. I can try to offer my advice as a researcher who specializes in this field, but it must ultimately be the policy maker who decides. This is a process that needs a bit of persistence and yields quite some frustration, but I still think it's worthwhile, over the long run.

Most politicians do not have the academic background that you have just been talking of, and they already have a certain view or opinion on topics. If you come to them with some advice that somehow does not conform with their view, but that you know is sufficiently well grounded in academic research will they ignore this?

There is always a danger that policymakers are going to pick just one argument that fits their agenda. That is inherently a danger that we are facing, and I always tried to circumvent this danger of just being used by policymakers for some decision that they want to push. There are of course many people that are bringing forward their wishes and their perspectives to politicians and academics are only one of these groups.

It depends a bit on the politician, how they are valuing these different inputs, and there are some politicians that are interested in learning about other perspectives that are not necessarily in line with their political intuitions. But this is not the rule, and I would say it's rather the exception. I think they often like talking with academics, but they are often hesitant to really engage in this type of argumentations, which are very often more nuanced than they can sell to their constituencies.

It's a difficult situation as well for advising policymakers as you have to take this into account, in the end you're one voice and there are many other voices. As academics we are, however, independent, and thus we have the luxury to come up with inconvenient claims and we should use this position as well.

Since 2011 you have chaired the Expert Commission of the German government to monitor the energy transformation. You have also travelled regularly to China and worked with the Chinese government. Do you see important differences how Europe and China handle energy issues? How do they approach academics who are trying to tell them what to do or suggesting them what do?

In Germany I've been doing this for 10 years now, under different governments, with different parties and politicians. In Germany we are not really embedded in the government, but we are side-lined a bit and we talk with politicians but it's not like in the Council of Economic Advisors in the US where you are really participating in drafting laws and so forth, where you have a direct possibility as academic to influence policy. In Germany researchers are not part of government, they are advising and that means the impact is much softer than the potential impact in the US, for example, where you see academics have leading roles, for example, in the White. Researchers in Germany can give opinions or give a perspective, but they are not involved in the legal process in a concrete way.

In China I have to say that I am seeing this from the point of view of an European economist in the end. I can only observe how the Chinese colleagues are advising their government and my role is not such an important one. The Chinese are very interested in understanding the German perspective on many of these transformational issues, such as moving out of coal and nuclear, and how we are transforming our industry. That sounds for them really revolutionary, and they are really interested in trying to learn why we are doing this and how this should be managed.

I feel foreigners who are going to China are trying to show that there are good examples of environmental policies, and that we have been able to balance economic development with environmental or social issues and I think that's an important message as well to deliver. In China, academics are again much closer to policymakers than we are here in Europe. I think they are doing a lot of direct work for the government but in comparison to the US probably with less possibilities to influence the decisions of the government. In the US researchers have more leeway, more possibilities to bring in their economic ideas into legislations. In China, academics are heavily woven into governmental issues but with much fewer possibilities to influence policy.

What do you think is the better way, the European one, the Chinese or the American one?

I have to say I have a big sympathy for the American way of policy-science interface. Personally, I like a lot the idea that you're a top academic and then you spend some time in the government and then you go back to university. We don't have this; we have these separated spheres and I see that's not very fruitful in terms of exchanging different perspectives. So very often academics are unaware of the way policy formation is happening, and policy makers are not understanding the quality or importance of scientific work. For example, for them, everybody who has a professor title is basically delivering the same quality of advice, simply because they don't understand the academic system. So, they cannot distinguish between a statement that they are hearing from X or Y, because they are unaware of how academics are checking quality and how quality can be distinguished.

Policymakers here in Europe don't really appreciate academics that are moving into administration and opening a little bit of thinking. I think Americans are more open to this interaction than Germans. However, academics in the US see it as the privilege to work in administration, while, for example, in Germany, it's seen as a bad thing. Moving from academics into policy for some time is seen as something you should not do. In contrast, in the US, academics from the very best departments are directly involved in policymaking and it seems that this is appreciated.

You were the lead author for the 5th and 6th assessment report of the IPCC. How does someone become an author for these assessment reports?

That was a miracle. You must apply for it and then there is a selection process, but this is behind closed doors. I think it's probably a combination of visibility, because in the you must be appointed by the government, which is the only direct interference of policy. In general, the authors are researchers that are visibly academically, of course, but as well visible in general policy discussions. Nobody knows why and how you are selected as lead author. It's a bit different for contributing lead authors, because then you have a big responsibility and people are interacting, and asking whether somebody wants to take over this role but besides you simply don't know, I mean you're applying and then you hear

from IPCC.

What positive or negative experiences did you walk away with from this experience?

It's a relatively intensive work over a long period of time and academically it's not very rewarding. In terms of citations, it might be OK because these are highly cited documents, but most academics will not value a lot the 120 pages that you have written. It's highly away from an economics point of view and a highly inefficient process because you're writing, and re-writing and you get thousands of comments, and you rewrite and rewrite again.

Sometimes you struggle to remember what was the idea that you started off with three years ago, because this has been maneuvered and rearranged for several times.

But I think it is an interesting experience to bring these different perspectives in one chapter. You must find a version where all authors agree, so you have to sometimes also compromise, you have to argue your own points. These things are very often discussed sentence by sentence with all the other colleagues and this is not a self-selected group of friends, but this is a group, a global group with very different perspectives.

As an example, for the chapter on energy in the IPCC report, you know that even between Germany and France there are quite some differences in how they think the energy system should look like and even more on a global scale. In the end, if we want to tackle these problems, we really must develop solutions that work for everybody or otherwise this is not going to function. Therefore, discussing with the IPCC authors from the US, from China, from the developing countries, Africa, South America, I think this is really rewarding because otherwise you'll stick to your own research bubble, while here you are confronted with these perspectives.

A slightly different topic. Do you know the concept of holidays, or do you take your papers to the beach?

I know the concept of holidays and from time to time you have to rest also a bit. But, if I am honest, while I'm not taking my papers to the beach I'm working on them in the evenings, for example. So it's very difficult to really stop for a few days; I think I've not done that in the last two decades. There are the papers that you want to work on, as well as doing a lot with the press and then you have to follow up what's happening in reality. I'm a big fan of relaxing and spending time on the beach, but letting go fully is difficult.

What is your favorite economic joke on anecdote from a conference?

When I started my PhD I went to my first EAERE conference. I personally have to say I always linked it up with football, because usually we have either European Championships or World Championships. Very often I'm linking this with watching football with friends and co-authors and having nice evening somewhere where we would talk about research, but then as we would sit together and cheer for our teams. I think that the deepest sad memory is 2006, when we hosted the world championship in Germany, and there was the world conference in Kyoto, and I was watching the semi-final Germany-Italy. There were many researchers from FEEM with Valentina, Massimo and Carlo and we were in this Japanese bar watching this game and the Germans lost in their home championship, but the

Italians were celebrating, so I have to say this took me some time to cope with, and I think I still must cope with this. But that actually a great experience even though the ending was bad. That's really what I enjoy most. In these conferences, being in touch with the co-authors, with people that you're interacting for a long time, that you know from their research, and then you find some additional personal connections, for example, via football.

Could you suggest someone who you would like to see in this interview series?

Well, obviously there are lots of great economists that you want to talk to. When you ask me about some people I really benefited from, then the one person I would like to mention is Malte Faber.

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