DS: Hello, and welcome to this podcast from Delmi, the Migration Studies Delegation in Sweden. In this episode we will discuss climate change and migration based on a new research overview from Delmi. My name is Daniel Silberstein.

AH: And my name is Anna Hammarstedt.

DS: And we are research coordinators here at Delmi. But over to the guests of the day, Rainer Münz, co-author together with Mathias Czaika of Delmis newest research overview, *Climate Change, Displacement, Mobility and Migration: The State of Evidence, Future Scenarios, Policy Options*. Rainer, can you tell us a bit about yourself and your background?

RM: Yeah, I’m currently teaching in Central European University in Vienna. Prior to that, I was migration and demography advisor to European commission presidential, Jean-Claude Juncker during his time in office. Before that I did have the research department of a large retail bank, and before that I had an academic career mostly in Germany, but [hör inte 0:01:34] in the US and in Switzerland and in Austria.

DS: Yeah, and what was the reasons for you and Mattias to write this research overview? What was important for you in doing this?

RM: In order to understand the intersection and interrelation between climate change and migration, one needs to develop an understanding of both fields. Why do I say that? There are predictions there is 25 million migrants, 200 million, half a billion, so plenty of numbers around. And most of these numbers are coming from climate researchers and not from migrations researchers, but migration researchers are them picking that up and then translate this into: “What would this mean?” In order to get an idea whether this is a in any sense realistic, you need to understand the models, not of the migration researchers, but of the climate researchers, how they came to that number. And that’s something that, I mean, took some time, but was an interesting undertaking.

And basically, what you can say is that figures are exaggerated in the sense, if you think there going to be 500 million international migrants in addition over the next two or three decades, that’s completely unrealistic. But when you ask yourself how many people are set in motion and are becoming mobile because of climate events, then 500 million is over a large period of time rather smaller than the actual number.

AH: Just as you touched upon now in you answer, research is obviously very important when it comes to context of climate induced migration. And you are talking a bit about the assumptions and the statistics that are kind of out there, existing at the moment,. So I was wondering, there are a lot of assumptions when it comes to the link between climate change, natural disasters and migration, but which assumptions are in your view problematic, and why?

RM: So, maybe lets first start with the assumptions that are not problematic. There is no doubt about the fact that natural disasters are setting people in motions. This is evident. People are either getting evacuated or they have to leave their premises in a situation where the disaster has already occurred. Now, 90 percent of disasters are related to weather and climate, and only 10 percent are related to geophysical events which is completely unrelated to any climate change, like a volcano eruption for example.

So, we know for sure that 342 million people have been displaced by disasters between the year 2008 and the year 2021, so we are talking about the past 13 years. So, in average, that’s a little less than 30 million a year. What we also see is that almost none of them is moving to another country, so the term: “International migrant”, does not apply to disasters. And what’s also a big relief is to learn that most of the people, 98 percent of the people who get displaced by a nature disaster, manage to return back home, or back to the region from which there were displaced.

The more difficult approach is when it comes to the effect of long term, gradual, slow-motion degradation of livelihoods. Regions getting dryer, or soil salination which reduces the possibility to grow crops, freshwater stress with the same effects, protracted heat waves that make survival in certain areas more difficult. Now, this without any doubt also translates into mobility and movement, most of this again within the same country, but there definitely over longer period of time, either seasonal or maybe permanent, or at least long term. And usually these are movements from the country side to cities, bigger cities. The number of people living in cities has increased by 2,4 billion people over the past 30 years, and part of this increase, which is mainly due to mobility rural to urban, parts of this rural to urban mobility is triggered by climate change, or by, let’s say, a degradation of livelihoods related to weather and climate conditions. We do not know exactly how many people, how many out of these 2,5 billion people, have been motivated by climate, and these people couldn’t even tell you themselves what motivated them, because when doing interviews with migrants and internally mobile people, we realize that many people, despite being exposed to the effects of climate change, have not heard about climate change. So, for them, a freshwater stress is not something that they relate to climate change. The climate literacy is not large enough in the general public in order to connect the dots, so even people affected by climate change often do not relate this to climate change, so they couldn’t tell you. This makes measurement of what proportion of the rural to urban migration is linked to climate change so difficult.

So, the assumption that a certain area is affected negatively by climate change in a severe way, it’s usually flood or drought, does not necessarily translate into the same number of people leaving the area. So, when you say: “500 million people are affected by that”, you cannot say: “500 million will leave the area.” I think that is the problematic part. We know what we know, for sure, but I think it would be more honest to say there are certain things that we do not know, instead of coming up with a precise number.

AH: In the researcher review, you make a distinction between the direct and the indirect impact of climate of migration. Would you be able to clarify for the listeners what that distinction is?

RM: Yeah, so a natural disaster obviously has a direct impact, but not everybody affected of a natural disaster is forced out of his or hers premises. So, part of the people affected by natural disasters stay where they are, and maybe they suffer then from, I don’t know, a black out, lack of freshwater something like that, but they survive in the place where they are. Others leave. Most of them leaving never get to another country, so the term: “International migration”, does not apply.

The indirect way is that you have a gradual change, let’s say less rain or a gradual increase of seashores, and this leads to a degradation of livelihoods. People can no longer sustain themselves through subsistence farming. That’s the best example. So, part of these people cannot survive, and there is a survival strategy in the sense of going to another place or maybe just sending one or two family members to another place, and then they would be sending money back home, and people would then start buying food with that money that is sent back home. The technical term is remittance. And through these remittances people can survive despite the fact that the subsistence base is gone, so maybe not the whole family is moving.

DS: So, we have talked about the uncertainties, but what if anything can be said about the future of climate induced migration?

RM: So, what we know for sure, it’s getting warmer, and we can be almost sure that the Paris Climate summit targets of caping the increase at 1,5 degrees centigrade over pre-industrial times will not be met. So, we have embarked on a trajectory that will get us closer to 2,5 if not 2,7 degrees centigrade by 2050. We do not exactly know for example what this means for the increase of sea levels. It could be 50 centimetres by the end of the century. It could be a meter. There is extreme scenarios if there would be an unprecedented melting of [hör inte: Arctic and the arctic ice? 0:10:46] that we could be above 1,5 meters.

Now, this is a huge range of uncertainty. When sea levels raise by a half of meter, much fewer people will be affected by that, then when the rise is 1,5 meters. And this is the kind of uncertainty that we have to live with, so this makes it almost impossible to predict the number of affected people. Now, if we do not know how many people will be affected, it is not very serious to predict how many people will be moving, because there are other ways of protecting yourself against rising sea levels than just moving away.

A good example is the Netherlands. The Netherlands have developed a dam and flood and tidal water management that allows them to live below sea level. Now, this does not exist in places like Bangladesh or Vietnam, where we have the Ganges- and Brahmaputra delta and where we have the Mekong delta, which areas where we have vulnerable populations. But it’s not excluded that Vietnam would manage to build a dam system in the Mekong river delta in order to protect people, instead of having them move away.

And this is, I think, the other very important side so say, that mobility and international immigration and not the only option when it comes to mitigating or dealing with climate change. There are other options in many cases. Not in all cases, but in many cases. The cases where there is no other option is unfortunately small, low elevated island states, like the Maldives, or like Tuvalu in the pacific where it will be very difficult, because there is no higher part of these coral reeves and atolls on which you can build a dam. So, this can be said for sure, there will be certain places which will have to give up, but by far not all people living below five, or below one meter above current levels will have to leave their premises.

DS: You show that there is a great deal of challenges regardless of the range and pace of climate change. What policy recommendations would you give to the decision makers?

RM: So, climate protection starts at home. We can reduce our carbon footprint, not without any problem, but we have clear ideas how this would be working by producing clean energy, by transforming our transport sectors. And in particular something that is not very developed yet, is in changing the way we are producing food. But including the important goods, Europe is responsible for at best 15 percent of all greenhouse gas emissions in the world. So, we definitely need to take a look at places outside Europe and to see whether we can support other countries, in particular middle- and low-income countries in their transition, in their green transition, and in also setting up protective measures.

So, the first thing is collective organized resettlement. As I said, small island states will be affected by that, but there is also other initiatives. If you see for example the Indonesian government has decided to move its capital from Jakarta, which is just next to sea level with already part of the population of the Jakarta living below sea levels behind dams, to a place to another island, from Java to Kalimantan and to a place where there is no danger of being flooded. But resettlement is only one among many options. So, the next option is to make population more resilient. People who are relaying on subsistence farming are particularly vulnerable to droughts, to protracted heat waves, but also to irregular flooding of their lands.

So, one way of making them resilient is to create alternative income opportunities that are not dependent on farming, or develop farming opportunities that are much less dependent on water or developing a possibility to have crops that can survive heat waves for example. Developing alternatives beyond farming gives people access to cash income where they can then earn money and buy food, which allows them to survive.

You can also manage domestic mobility rural to urban by developing cities, because it is important to understand that by moving from the countryside to a city, many people are not escaping the effects of climate change. They are just exchanging the risk to being exposed to slow on set degradation of their livelihoods, to the risk of being exposed to heat waves and floods. And so, I think that’s a management question. Very importantly there is capital market instruments that allow people to survive. There is so called catastrophic bonds which is a way of reinsurance the risk of being exposed to natural disasters. This is mainly an instrument that would allow insurance companies to become more resilient in the context of increasing numbers of people affected by natural disasters. There is crop insurances which exists in developed countries in Europe, in North America since way more than a 100 years, which could fairly easily be introduced in middle- and low-income countries, in particular if people start farming, not for their own subsistence, but for markets in order to make money, we can try to ensure the income by insuring crops. Or something that is highly developed in our markets by futures trading. You can by selling contracts in the future mitigate the risk of price chocks for example, so this can guarantee a more steady income for farmers to give you an example. So, there is plenty of ways how to deal with the outcome.

AH: So, last but not least, I have a question about asylum legislation. So, legally within Geneva convention and within European and national asylum laws, the category of refugee does not cover people who have left the country of origin because of climate change, environmental degradation, or national disasters. Therefore, as you state in the overview, from a purely legal point of view “climate refugees”, do not exist. So, what would be the advantages and disadvantages to adopting a legal framework that would recognize climate refugees? By that I mean climate migrants who would then apply for an official protection.

RM: First of all, we have to understand that this is a very rare phenomenon. I think it’s important to understand that people affected by natural disasters usually do not go to another country. This is at least the lesson of the last 20, 30 years. So, it’s a rare phenomenon. It’s more complicated with people coming from countries, we are talking about irregular influencers, people coming from countries that are subject to climate change and degradation of livelihoods. By that way, they are also going to a country that is affected by climate change, because if you come from North Africa to Europe, you are not escaping climate change, you are maybe escaping certain dire consequences. It’s however very difficult to prove that this is your main motive, because there’s plenty of people in the same region also affected by climate change that have not been moving to Europe so far.

So, I think the first problem is with proving that this is your main reason for your mobility, and that it’s not purely economic motives that you want to have a better life, which by the way is not … is also totally legitimate but has nothing to do with refugee status. My personal view is I would not touch up on the Geneva convention, because when we open the box, there is absolutely no guarantee that all the countries that all the countries that have been signing up to the Geneva convention in the past would do this again today. So, there’s danger of unravelling of the protection of people who have a credible fear for their lives and wellbeing for political, religious, or origin reasons.

But even there, we should still I mean stick to the numbers. There is only 22 million internationally recognized or registered refugees today on our planet, which is less than 10 percent of all people living outside of their country of residence. So, I think there is a great danger that by trying to open the Geneva convention to new categories of people seeking protection, one could dilute the existing protection framework in a sense that also the provisions for political refugees might be weakened.

AH: Thank you very much Rainer for an interesting conversation on a topic that will unfortunately continue to be relevant in the future and thank you so much Daniel Silberstein as well. In order to read this report by Rainer Münz and Mathias Czaika, please check out Delmis website, www.delmi.se. Thank you very much.

RM: It was a pleasure being with you.