

## FAO mini-series

### Podcast #4– “Agriculture and the global Climate debate”

**[Sandra]** Hello and welcome to episode four of FAO Radio’s four-part podcast mini-series on sustainability and agriculture.

My name is Sandra Ferrari, and I am your host.

#### **[Music bed]**

**[Ban Ki-moon SDG clip up]** Distinguished heads of state and governments. Excellency’s. Ladies and Gentlemen. We have reached a defining moment in human history. The people of the world have asked us to shine a light on our future promise and opportunity.

**[Sandra]** Over the past month and a half we’ve been rolling out this special series on sustainability.

Along the way we looked at the shift from the Millennium Development goals, which end this year, to the new Sustainable Development Goals set by world leaders at UN headquarters in New York this past September.

We explored how food and agriculture are at the heart of the sustainable development goals and we focused on a few specific issues and angles.

We went on to look at the relationship between the rural poor and food security. We got some insight into the direct and indirect benefits of social protection measures on rural agriculture communities....

**[Social Protection clip]** It is a direct strategy towards reducing or eliminating poverty and also mitigating their plight, the hardship that people go through.

**[Sandra]** And in the third episode we checked in with some of the young voices of the Zero Hunger generation who came to Rome in October participate in the 42<sup>nd</sup> session of the UN's Committee on World Food Security. The CFS aims to be the most inclusive international and intergovernmental platform for all stakeholders to work together to ensure food security and nutrition for all. And this was the first time since it was established in 1974 that youth working in agriculture around the world were given the space within the events that week to present their ideas on how to create sustainable food systems...

**[Zero hunger Generation clip]** And by the way, the youth have the answers to how you can solve their challenges, so you cannot talk around them; you cannot talk about them; and not involve them. So they have to be at the center of that.

That brings us to this week's podcast. In this fourth and final episode in the miniseries we will lead out with one of the most important issues facing the world and agriculture today: Climate Change.

How does climate change affect agricultural production and the sustainability of our food systems? And what are farmers and policy makers doing to curb it and adapt to the effects of climate change that can already be felt?

**[Theme music up]**

**[Sandra]** At the end of this month, the UN Climate Change conference – COP21 - will begin in Paris. And hopes are high that this will be the meeting where world leaders sign an international agreement to follow-up the Kyoto protocol -- with binding climate targets for 195 countries.

**[Mary Robison clip 1]** What we're asking for is a fair, ambitious and legally binding agreement in Paris to limit global warming as far below 2 degrees as possible. We will not have sustainable development goals unless we have a climate agreement that puts us on course to stay below 2 degrees of warming from pre-industrial standards.

**[Theme music out]**

**[Sandra]** That's Mary Robison, the president of the Mary Robison Foundation for climate justice and the UN Secretary General's Special representative of on Climate Change until the Paris climate summit in December.

She stressed how those who have contributed least to greenhouse gas emissions – like small island states – are bearing the brunt of some of the major impacts of climate change. We'll hear more from her on this later in the episode.

In the area of food production, she says, climate change is aggravating many existing challenges - such as natural disasters and limited access to water– and threatens to make those who are poor and already vulnerable even more food insecure.

This is one of the key warnings by the IPCC – which is the leading international body for the assessment of climate change impacts. Their latest report will inform policy makers in Paris. Out of the 8 major risks associated with climate change the report states that four have either a direct impact on agriculture or are closely related to it.

Apart from the risk that climate change will put further pressures on food security and global food systems, there is also the loss of rural livelihoods and income, impacts on marine and coastal ecosystems, as well as the livelihoods that depend on them, and the same goes for inland water ecosystems.

So, with all this in mind, are experts confident that agriculture will be given enough attention in the climate talks?

**[Frick clip 1]** Positively not. It's getting better slowly but for many years agriculture was seen as the sort of "toxic" issue. And that is changing dramatically, fortunately.

**[Sandra]** That's Martin Frick, Director of FAO's Climate, Energy and Tenure Division. I spoke with him about how agriculture and food security are being prioritized in climate change conversations at the international level, and about the main issues that need to be considered when it comes to the effects of climate change on agriculture.

**[Frick clip 2]** I think that it was a bit of a "toxic issue"- and I'm saying that with inverted commas, at the time prior to Copenhagen, where countries were basically afraid that a top down legal instrument would interfere with their agricultural policies. Since we are now based on INDC's (the intended national determined contribution), it's back in the hands of member states and it's quite encouraging to see that now in the about 150 INDCs that we've seen so far, agriculture does play a prominent role. So I do see that the space we are getting in the negotiations is getting bigger.

### **[Frick Interview in]**

**[Sandra]** Can you give me an idea of the types of pressures that climate change is putting on agriculture?

**[Martin]** Well, most of the world's agriculture is actually rain fed. When you think about climate change impacts, you think about tropical storms extended droughts, hail, all sorts of extreme weather events, and that's certainly true. More temperature means more energy in the system and more energy in the system results in more violent extreme weather events. That one is clear. But what few people do understand is that in order for a specific crop to grow and the yield to be what the farmers expect, you actually need a corridor over a certain period of time of specific climate conditions. And we are leaving this corridor. And its simple things, you know, like changing rainfall patterns that makes it impossible to work on the basis of traditional knowledge. What you learn from your mother or your father is just not valid anymore. Or we just understand that nighttime temperatures do play a crucial role. That's what I would call a silent crisis of agriculture, which you see in reduced yields, but you also see it in reduced nutritional value of your harvest and that is already happening today. IPCC, the international panel of experts supporting the UN negotiation estimates that by 2050, that we might see 8 percent less yields, and bear in mind that by 2050 the world population will be much larger than today, so this is alarming.

**[Sandra]** What's the connection between climate change, energy and land tenure in the context of building sustainable agriculture?

**[Martin]** Let me start with land tenure. Land tenure is one of the things where FAO has been working very successful over many years. And indeed it is the basis, I would even say, of human activity. How are you supposed to work on a piece of land, if you don't know who has the rights to work on this land, who has the rights to have the harvest. If you plant a tree it makes a world of difference of whether it's your tree or somebody else's tree. So adaptation, starts really with land tenure and let me emphasis particularly on the aspect of women in agriculture, because still in many countries of the world, women don't have the right to tenure, and yet they are bearing the brunt of agricultural production. And that is increasingly so with migration kicking in more

strongly. It's mainly young men who migrate, leaving more women behind and we need to particularly address women in the tenure questions. You also mention bioenergy. I think energy is at the core not only in fighting climate change but really of bringing development to the world's poorest areas. So how does that come together for sustainable agriculture? It really is about closing the loops.

**[Sandra]** And what are some of the key challenges happening at the intersection of these elements?

**[Martin]** I think the key challenge is to start with awareness. I said at the outset that agriculture was seen as a very difficult topic in the climate negotiations, but for me it's very clear that we cannot get a comprehensive climate deal, unless we really actively combine it with the sustainable development goals and with the fight against poverty. And for me, agriculture is the point of convergence, of these two biggest struggles of mankind in the 21<sup>st</sup> century. This is where you can invest a dollar and it gets results both in climate action, but also results in reducing poverty. So one of the big advocacy bits of FAO is really to raise awareness for that and to try funnel the billions of dollars that are now mobilized for climate change, to mobilize this money particularly for the benefit of small holder farmers, for investment in more clever and more sound agriculture, and not least – and I would be remiss not to mention that – to reach SDG2. It's quite remarkable that mankind now decides to eradicate hunger, one of the biggest problems mankind has had for thousands of years. We decided to eradicate hunger by 2030. It's not going to be easier with stronger impacts of climate change which we are going to see, but it's absolutely doable, and it's doable with the right investments right up front.

**[Frick Interview out]**

**[Sandra]** As Mr. Frick points out, climate change is expected to increase crop variability in regions all over the world, and with that experts are looking for ways to reduce vulnerabilities and build resilience against the negative impacts of climate change.

Investing in social protection measures to make people and their livelihoods less vulnerable to shocks is one example. Making agriculture more efficient by investing in mechanization and better crop production techniques is another.

But mitigating the negative effects of climate change also calls for stronger policies from governments at the local, national and international levels.

Part of FAO's work is to support governments in developing these policies, so I spoke with one of the Organization's senior officers about what has been done on this front.

**[Lipper Clip 1]**

**[Leslie]** My name is Leslie Lipper. I'm a senior environmental economist in the Agricultural Development Economics Division. And I lead a program called EPIC, economics and policy of climate smart agriculture.

**[Sandra]** According to Leslie Lipper, Climate smart Agriculture – or CSA – is a positive, focused approach to combating climate change.

However, CSA is an approach that has been criticized by some NGOs for its potential to be appropriated by organizations and institutions who use it to label particular agricultural work and practices that are potentially harmful to the environment.

**[Lipper interview in]**

**[Sandra]** Ms Lipper, some organizations argue that CSA will be used to greenwash practices that might actually be damaging to the climate and environment. What are your thoughts on that?

**[Leslie]** Yeah, that is a really big concern. The concept was launched. It's taken up by a lot of people. It's used now in many different ways with many different meanings and it's not the only concept that that's happened with. We see that with "sustainability", we see that with a lot of things. But it is a concern, so the main response that we think is important is to really clarify the concept and clarify how we at FAO are working on the climate smart AG approach. And what it means for us, so hopefully we can avoid this kind of problem.

**[Sandra]** Can you give me some examples of climate smart practices that farmers are applying in various regions?

**[Leslie]** CSA is really a focus on the policy and the institutional environment. I mean the argument is look, millions of farmers, millions of fishers, millions of foresters, we need to people to change the way they do things. You don't just go at the farm level you have to change the environment they operate in – that's policy, that's financing, that's institutions. So I think the best way to answer that is to give you a short summary of the example that we just worked through with partner countries – and that was Malawi, Zambia, and Vietnam. And the idea was ok – here you have a country with certain agricultural policy certain agricultural priorities, but you also have a country with high rates of poverty and food insecurity in the agriculture sector. They are very interested in agricultural growth to reduce poverty and food insecurity and they are being hit by climate change. What should they do? We started with the national priorities and with the national AG plans – because pretty much every country has one so you're not just coming in out of the blue and telling them 'here is something new you can try'. They've already spent a lot of time and effort and political capital in coming up with an agriculture sector priority plan and investment. We took that as a starting point and started looking at ok, what kind of climate shocks are we already seeing here? Ok – so the first piece is the evidence base is understanding, what is it that they are being hit with, and we are the practices already in their plan or on the ground that are showing effective under these different conditions. So for Zambia, for example, we found that legume inter cropping was a very, very effective way for people to have resilience in their production systems, in areas where there was this increasing variability of rain fall patterns. Ok – so you have an idea of "here's what's happening" and "here's some options on how to move forward". We found that fruit farmers in Malawi and Zambia using inorganic fertilizer and it had a huge positive impact on reducing vulnerability to poverty. But if they got the fertilizer in a timely way, the effect tripled. That's an example of what a climate

smart agriculture practice would look like and this would fit in the ongoing discussions say in these countries about how to reform their fertilizer subsidy program.

I think that a lot of the key things is that a lot of these practices, they require an investment up front and they will take some time to get the benefit. And that's a really big problem, especially when you're dealing with – let's say you're trying to build ecosystem services, it takes some time to build the quality of the soil. But during that time – let's say even if it's one year but it could be up to five years. But during that time, the farmers are making less money. And in some cases nothing. Well you can't have really poor people who are at the edge of food insecurity, getting that kind of reduction in income. So what do you do? You 'need an enabling institutional environment, which we'll have a lot of cash transfer programs now. Could we coordinate with them to facilitate this kind of transition. So that's when we go to the next phase of climate smart agriculture – what is the enabling environment? Because you know we have a lot of experience with projects that enabled farmers to make some change, they made the change and then five years later it's gone. Because the enabling environment, the institutions were not changed to enable this transition to sustainable agricultural systems, that will support food security now and in the future under climate change.

**[Sandra]** How are developing countries supposed to finance transitions to CSA approaches?

**[Leslie]** Developing countries are facing a pretty significant investment need in agriculture, for zero hunger and poverty reduction. How are countries financing it? Well there's a constant debate in the donor community and how to raise these kinds of funds. Now we have the climate change process, we have new sources of finance under climate change. What do climate change financing, what do they pay for? The pay for adaptation, which means building resilience in an agricultural system, is one example; and they pay for mitigation, reducing emissions from agriculture which you can get if you increase the efficiency of agricultural production. So, we think it makes very good sense to link this new source of financing for climate finance to AG investment financing. Because in a lot of cases you're talking about financing a major transition strategy that has adaptation benefits, and it will also have benefits in reducing emissions compared to let's say a business as usual. And therefore these new sources of financing should be linked in. It's also important to note though that you there's a very controversial thing about carbon markets. That climate smart agriculture is insisting and forcing carbon markets on farmers. Carbon markets are one source of mitigation finance. It's one way of paying for people to reduce emissions. It's not the only way. There's a lot of other ways, including let's say through public sector financing that could go directly into AG - let's say financing in extension programs that would be linked to climate information. So, carbon markets are not the most relevant source of finance for small holder agriculture. It's not really that big an issue in the climate smart agriculture [approach], particularly for small farmers in agriculture, particularly in developing countries. It can be in some cases, but in the climate smart agriculture approach we're implementing at FAO, we're very much looking at public sector finance, for mitigation that's coming through things like the green climate fund.

**[Lipper Interview out]**

**[Sandra]** Those are only some of the approaches that the UN, other international agencies and governments are exploring in their efforts to combat climate change.

But while this work is being done, there is one very important ethical issue at play and will be a large caveat for the conversations in Paris and that's: fairness.

Historically, it has been the growth of industrialized countries that have most contributed to climate change. So the one of the questions is now... to what extent should these countries offer developing countries support – both to cope with the impacts they already experience and to find ways to grow their economies in an environmentally friendly way, keeping in mind that the growth of their developed counterparts relied heavily on unsustainable practices.

**[Robinson clip 2]** We need to have an agreement which also recognizes that the world is faced with enough pressure and cost of adaptation, so there will be more emphasis on supporting adaptation and even, I hope, there will be reference to -- beyond adaptation- to loss and damage.

**[Sandra]** That's Mary Robinson again. She recently sat down with FAO Radio's Kim-Jenna Jurriaans on the sidelines of the meeting of the Committee on World Food Security in Rome to talk about climate justice and the Paris summit.

**[Robinson interview in]**

**[Kim-Jenna]** Can you explain the concept of climate justice and how it relates to food security and the right to food?

**[Mary]** Climate Justice very much comes from a human rights perspective, links human rights, development and the impact of climate change. The impacts of climate change are felt most by those who are least responsible and therefore it wants them also to benefit from the access to affordable and renewable energy. And that no one should be left behind this time. So when it comes to food security and the right to food we want to really implement the commitment that those who are furthest back should be prioritized, if you like.

I think we need to emphasize that the sustainable development goals are universal, they are for all countries and we need deep conversations in countries like Italy, in my native Ireland, in Europe generally, the United States, Korea, Japan so that we internalize. We need to have much less food waste, much less overconsumption, we must have agriculture that is less causing emissions because it's part of the problem at the moment.

**[Kim-Jenna]** There is a wide agreement that climate change is a major problem that needs to be addressed but it's also true that at least on the short term climate change is creating both winners and losers. Can you explain this in more detail and how it informs the current debate?

**[Mary]** I think it's true that in the very short term there may be a perception that climate change is actually helping us, is helping food production. It's actually a minority of countries. This is a very short-term view because the impacts of climate change on production of food, nutrition but

also health, shelter, life itself, displacement of people would be hugely negative if it gets out of control. And right now we're on track for it to get out of control.

I was in Fiji recently for a conference on small island states and I was talking to the president of Kiribas and comparing my situation as the former president of Ireland with his situation. As former president of Ireland I didn't have to think about buying land in Europe because Ireland was going to go underwater. He has had to buy land in Fiji, because he says "I have to think about the possibility of migration with dignity of my people." He shouldn't have to think that. We should be saying, "No leader should have to think about that -- we have to make sure that doesn't happen."

**[Robinson INTV OUT]**

**[Sandra]** As Ms Robinson pointed out, climate change threatens to derail global efforts to eradicate extreme poverty and hunger, two main objectives of the new Sustainable Development Agenda.

In fact, it threatens to compromise our ability to achieve all 17 SDGs -- and could even undo many of the development gains made over the past few decades.

This is a particularly dire prospect for the world's 50 Least Developed Countries, which, collectively, are estimated to be responsible for less than one percent of global greenhouse gas emissions.

So what happens now?

**[Theme music up]**

As Ms Lipper highlighted earlier in this podcast, investments in productive, inclusive and resilient agricultural development are key to guaranteeing incomes and food security for the poorest in the face of climate changes.

But these efforts will only be effective in mitigating the effects of climate change to a certain point, and the international community has to come to an agreement to prevent global warming from getting beyond a point of no return. And along the way, the international community will also have to overcome other points of contention around financing, responsibility and fairness.

I'll leave you with some final thoughts from my interview with Martin Frick, about what he hopes will come from the climate talks in Paris.

**[Frick clip 3 in]**

**[Martin]** I hope there is a solid result in COP21. We are at a really interesting time. The community of States just agreed on the sustainable development goals. And you know they are very detailed, 17 SDGs and 169 indicators, but for me the exciting thing about the SDGs as compared to the millennium development goals, from 2000 is actually that every country of the world takes on responsibility. So that means, even if you are a rich and industrialized country, the SDGs oblige you to more sustainable working, and I very much hope in Paris that we see the



same spirit, that yes of course there is a question of historic reasonability, and yes there is a need of climate finance to be lifted up by OECD countries but I hope that out of Paris comes the understanding that this is our common problem and even if you have a little bit to contribute you should contribute and you should invest time and energy and all of the governments activity to addressing climate change. For many countries of the world that means, first and foremost, adapting to climate change and for those who are in the direst need for adaptation to climate change, adaptation actually equals food security. So if we can establish this link and a bit of the political energy coming out of Paris going into food security, we'll benefit the world's poorest, and ultimately it will also look back as positive political energy into the climate process.

**[Theme music]**

Paris is not an end point; Paris is really a starting point.

**[Theme music]**

This has been the final episode in this special 4-part miniseries on sustainability and agriculture.

If you would like to hear or share past episodes you can find that playlist on our Soundcloud page under the UNFAO account.

For additional sound clips from today's experts, you can find their full, extended, audio interviews on our website.

I'm Sandra Ferrari for FAO Radio. Thank you for listening.