



Episode Title: The Delicate Balance between Food and Climate — A Conversation with Katherine Meighan of IFAD

Episode Number: 20220106

Publication Date: January 6, 2022

All Things Chemical[®] is a podcast produced by Bergeson & Campbell, P.C., a Washington, D.C., law firm focusing on chemical law, business, and litigation matters.

This podcast transcript has been lightly edited for accuracy. It is an approximation of the podcast audio, and the audio recording remains the definitive record.

Let us know about any topics you would like to hear about in future episodes at podcast@lawbc.com.

A full recording of the podcast is available at <https://www.lawbc.com/podcasts/the-delicate-balance-between-food-and-climate-a-conversation-with-katherine>.

Lynn L. Bergeson (LLB): Hello, and welcome to All Things Chemical, a podcast produced by Bergeson & Campbell, P.C. (B&C[®]), a Washington, D.C., law firm focusing on chemical law, litigation, and business matters. I'm Lynn Bergeson.

This week, I was delighted to sit down with Katherine Meighan, Associate Vice President and General Counsel of the International Fund for Agricultural Development, otherwise known as IFAD, a United Nations (UN) agency headquartered in Rome. We spoke with Katie in the summer of 2019 after an International Bar Association webinar on Sustainable Investment in Agriculture, which I helped to organize in my role as Vice Chair of the International Bar Association Agricultural Law Section. I was so impressed with Katie's work. We decided to do a podcast shortly thereafter. Since then, much has changed, and IFAD's role in eradicating poverty and hunger by investing in the rural poor has intensified greatly over the past two years. As the world now looks past the major climate conference that just wrapped up in Glasgow, there has been a lot of discussion around the inherent dilemma between greening the planet, decreasing emissions, and the need to feed people and support their livelihoods across a broad range of populations. Katie discusses the delicate balance between food and climate and the essential role IFAD plays in addressing this challenge. Now here is my conversation with Katie Meighan.

LLB: Katie, thank you so much for joining me today. Perhaps to get our discussion going, you can tell us a little bit about what you've been up to at IFAD the last couple of years, since we last chatted.

Katherine Meighan (KM): Thank you, Lynn. It's my pleasure to be here with you today. I'm really honored to work at IFAD over the last few years. As I had mentioned to you when we last spoke, IFAD is a UN specialized agency as well as an IFI [international financial institution], and it's the only one to have the specific mandate to eradicate poverty and hunger by investing in the rural poor, and investing in the rural poor through financial and technical assistance to agriculture, really in the remotest parts of the world. It's deeply unfortunate that one in ten people go to bed hungry every night. And the perverse irony is

that many of these hungry people in the world are the very farmers who put food on our tables. And I think that when you look at the 3.4 billion people living in rural areas of the developing world, they're nearly 45 percent of the population. And yet 80 percent of the extreme poor are those who live in these rural areas, generally earning two dollars or less a day. And so we really feel that the work at IFAD is so compelling. It's safe to say that the starting point for a world without hunger and poverty is the rural world, which is exactly where IFAD is focused.

LLB: Excellent. Thank you for that. Well, as we look past the recently concluded Climate Conference in Glasgow, COP26, there was a lot of discussion around the inherent dilemma between greening the planet, decreasing emissions, and the need, the global imperative to feed people and support their livelihoods across a diverse range of populations. In your view, Katie, is there a fundamental mismatch between feeding the world's population, in all of its diversity, and the necessity of reducing carbon dioxide and methane emissions to prevent the world from overheating?

KM: No, I don't think there's necessarily a mismatch. To the contrary, I think we need to do both. We need to cool the world and feed the people. While there are definitely competing tensions and tradeoffs, my view is that global agriculture not only can, but it must, contribute to solving the climate crisis. You know, COP26 showed us many things in relating to agriculture. I think it's well accepted that current food production practices are unsustainable. By improving those practices, we can go a long way in ensuring nutritious food for all while producing within climate and planetary boundaries. So the focus over the last 70 years or so has been a focus on producing food, but really producing calories at low cost. And that's unfortunately been accompanied by growing malnutrition and increasing food waste. This comes at a high environmental cost. The food system alone is responsible for 37 percent of greenhouse gas emissions, and if we step back, we really live in a world of plenty. Studies show that we produce enough food to feed the world. In my mind, it's the *way* we produce and consume food that is the core issue.

LLB: It sounds like food loss and waste do come into play here, meaning food loss being food lost on the farm or in processing through to sale to the market and food waste being waste by consumers. In other words, letting food spoil in their refrigerators, shelf life expiration dates, and expiration issues like that.

KM: Yes, that's exactly right, Lynn. Food waste is a critical piece of the puzzle. One third of food that is produced is never consumed. It's a shocking figure. One third of food that's produced is never consumed due to food waste or loss. And this wasted food then contributes to climate change through greenhouse gas emissions. I think we often forget the scale of the damage that's being done in the process of wasting precious food. An estimated 3.3 billion tons of CO₂ is released every year due to food waste, and this includes methane emitted from landfills. I think that focusing on solving the problem of food loss and waste will itself have a huge impact on tackling two of the biggest threats faced by the next generation: first, a steep rise of food insecurity, and second, the growing and environmental damage that accompanies that.

LLB: These are just mind-boggling statistics. One third of the food produced is never consumed due to food loss or waste. This is just shocking. You also mention food security. What do you see as the impact of climate change on food security and small-scale farmers?

KM: Unfortunately, the impact of food security and climate change on small-scale farmers can be simply devastating. Droughts and floods are becoming more frequent and intense. Crop

failures and livestock deaths are causing economic losses and really undermining the food security of rural people, especially across sub-Saharan Africa. Many small-scale farmers, as you know, Lynn, produce on small tracts of land. It's often marginal, rain-fed land, where water is increasingly scarce. In some areas, the decline in yield could be as much as 50 percent. At the same time, climate change globally could reduce crop yields by up to a quarter by the end of the century. We are focusing on how to support small-scale farmers because climate change could push more than 140 million people to migrate to other countries by 2050. We also expect food insecurity to drive food prices themselves to become more volatile. I think we've seen time and time again as we open the newspaper or go online each morning that a natural disaster in one part of the world is easily capable of causing the price of grain or another food staple to increase -- sometimes by more than 50 percent -- in another part of the world. I can't reiterate enough there's an urgent need to ensure that the people who feed us -- often the small-scale rural farmers -- are themselves fed and in this area of climate crisis can adapt to climate shocks without each crisis completely wiping out their livelihoods.

LLB: Understood. Katie, can you give us some specific examples of these climate challenges that IFAD farmers are facing around the world?

KM: Yes, of course. These can often be due to extreme weather changes and rising sea levels, as well as growing populations and overexploitation, which cause a serious degradation of forest, soil, and water resources. So I'll give you a few examples in different areas of the world. First, turning to Africa in the semi-arid region of eastern Kenya, dry seasons are getting longer, and rains are getting more erratic. Traditional crops like maize are failing. Only two percent of the people have enough food to last them all year round. That's another shocking statistic, Lynn: two percent of the people have enough food to last them all year round. IFAD is working with these farmers and rural peoples to adapt to the changing weather by encouraging a shift to growing crops that require three times less water than maize; that's an example of climate adaptation.

Maybe Latin America would be an interesting example as well. If you turn to northeast Brazil, which is a vast dry area, cash crops like beans, maize, and cassava have been decimated by the lack of rain. We're supporting farmers to turn actually to more traditional indigenous crops, which are far more resilient to erratic weather. Similarly, in Bangladesh, the issue there is 80 percent of the country is concentrated on floodplains, less than five meters above sea levels. So there, we're seeing rising sea levels and storms becoming increasingly severe. And millions of rice farmers are losing their crops because once a rice field is flooded with saltwater, the rice is often not able to survive.

Another example of climate adaptation work is that IFAD is working with these rice farmers to support the development and distribution of more salt-tolerant rice varieties that can potentially be less impacted by seawater with the sea level rise and flooding of rice paddies.

LLB: This is just stunning, but very helpful examples to bring into focus the severity of the problem. You know, as COP26 finished very recently, what do you see as some of the major takeaways from the conference?

KM: In my view, there was actually a lot achieved at COP26. Of course, we always hope for more, but we did achieve deforestation commitments, methane commitments, a commitment to keeping temperatures below two degrees Centigrade, a big nod to adaptation financing -- which I'd love to talk about more later -- and a commitment to inclusion, talking about indigenous peoples and equity, among other initiatives. There were 4,800 participants

globally. More than 200 of them were with the IFAD Pavilion, where we had a big delegation and really tried to focus a lot of the discussion on the urgent need to focus on climate adaptation, not just climate mitigation, to really realize we are in the middle of a climate crisis and we need to help people adapt to it now. In sum, another major positive takeaway is that 196 countries have pledged to speed up the end of inefficient fossil fuel subsidies and reduce the use of coal.

LLB: There has been a lot of discussion, both before the COP26 conference, and you've just referenced it here, and that is the core distinction between climate mitigation and climate adaptation. And I appreciate that both are critical to tackling the global climate crisis. But for the benefit of our listeners, can you help us explain the difference between the two?

KM: Yes, it's an important difference between mitigation and adaptation. So mitigation is focused on reducing the emissions of greenhouse gases. These are the gases that trap heat in order to prevent global warming. Examples of mitigation include moving away from fossil fuels and using more green energy. Adaptation, on the other hand, realizes that we're in the middle of a climate crisis and we need to adjust our social or economic systems to respond to the impacts of what's happening right now on the ground. When it comes to farming, climate adaptation basically means finding solutions to keep farmers producing food, even when the weather is erratic. This could be achieved by growing different crops, like the examples I mentioned earlier, changing farming methods, and creating flood barriers. Although the Paris Climate Accord of 2015 provided that equal amounts of finance should be given toward climate mitigation (reducing greenhouse gases) as to adaptation (adjusting to the impacts of the climate crisis) sadly, right now, for every 18 dollars spent on mitigation, only one dollar is spent on adaptation. So we were supposed to have a one to one financing ratio, but we have an 18 to one ratio. And while I agree that efforts in mitigation are essential, we must appreciate that they will take decades to bear fruit, so investment in climate adaptation is the need of the hour. It's really a question of survival, Lynn.

LLB: Understood. That was very helpful. It sounds to my ear that adaptation is more social or economic systems based. It probably would be helpful for our listeners to have some real-world examples from IFAD's work of climate adaptation and why it is so critically important to rural, small-scale farmers. Can you help us with that, Katie?

KM: Indeed. I think you've put it exactly right. Adaptation work really focuses on preventing the livelihoods of small farmers from being completely wiped out due to one adverse climate event. I'll give you one example in Africa and one in Asia. In Africa, over the past 25 years, there's been a shocking 500,000 hectares of mangroves lost due to drought and deforestation. And this has a very negative domino effect. This deforestation has led to soil erosion and put marine ecosystems at risk. As you may know, mangroves are trees that grow their roots into the saltwater, often in barrier villages and islands. And they not only provide a home to sea life, like shellfish, but they also act as a protective physical barrier between the land and the sea. And given the potential scale of devastation, IFAD has been working to invest and support projects that reforest mangroves at a massive scale, really involving thousands of acres of these forests. And this helps local farmers protect their jobs, both fishing, creating new jobs such as working with oyster farming, and it also protects the farmland behind the actual mangrove forest for growing traditional crops.

A second example is using kind of high tech in Vietnam. We talked about heavy rainfall and rising temperatures drastically increasing the risks of floods and typhoons. In Vietnam and in other areas, sea levels are expected to rise by one meter by the end of the century. And this has had a major impact on the low-lying Mekong Delta, which produces more than half

Vietnam's rice. When seawater floods rice paddy fields, it can be severely damaging, often wiping out whole crops of rice. Would you believe me if I said that through an IFAD-supported project, rural smallholder farmers in these remote areas began using smartphones and sensors as an early warning system. It's a pretty simple technology. Basically, sensors were put on the irrigation drains, and alerts would go to farmers' smartphones so that they could detect and respond to saltwater and rising sea levels, and basically just shut the gates in the irrigation channels and canals so that as the seawater rose, it would not go through those canals and flood their whole fields of rice paddies. This has literally saved already hundreds of thousands of hectares of crops. I think it really shows the power and reach of simple technology solutions.

LLB: Oh, that's amazing. Who knew the smartphone could be put to such incredibly good use there? Wow. Let's pivot for a minute away from COP26 and circle back to the original Paris Agreement, which was signed in 2015. It focused on the need for climate adaptation as well as mitigation. But as I understand it, Katie, in the intervening six years since the Paris Agreement was penned, there's been a very significant underfunding of climate adaptation. Is that right? Or is that just my misunderstanding?

KM: No, you have got it exactly right, Lynn. The Paris Agreement in 2015 called for equal funding, but instead the world has seen a dire mismatch in current global finance flows. So as I mentioned before, instead of a one to one ratio, it's an 18 to one ratio with 18 dollars going for mitigation, with only one dollar going for adaptation. And this is one of the alarms that IFAD sought to raise at COP26: the critical need for major finance flows *now* to support developing countries' adaptation needs. It is important to invest in mitigation, but it's not enough. Investments that help farmers adapt to climate change *now* will help ensure that these farmers can keep growing food, that they can earn incomes, and that they can bounce back from severe climate shocks, which unfortunately we're seeing all too often. It's really a global issue, not just an agricultural or climate issue, because the ripple effects of what happens in rural areas are felt across the world through, for example, migration and instability.

LLB: Got it. Turning to some of the policy implications of COP26 and the many, many government representatives who attended the conference, in your view, Katie, what do you see as recommended actions for policymakers to respond to climate change?

KM: I see four key things for policymakers to respond to climate change. The first we've talked about is the increased finance for adaptation. The Global Commission on Adaptation has estimated that investment of \$1.8 trillion in early warning systems like the Vietnam example and climate resilient infrastructure, mangrove protection, different seeds, etc., can generate \$7.1 trillion in avoided costs and benefits. That's a pretty good return on your investment, investing \$1.8 trillion to have \$7.1 trillion in benefits. But yet, we need to seriously ramp up the investment in adaptation.

The second key thing I would say is policy reform, to encourage climate-resilient investments that produce low emissions. I think market prices should reflect the full cost of production, including the costs related to climate and environment. At the same time, small-scale farmers must be incentivized and rewarded for the crucial ecosystem services that they provide. They are often the stewards of our forests and other rich sources of biodiversity that are crucial for regulating the climate. In many ways, large parts of the world are free riders on the positive climate effect that small-scale farmers and indigenous people provide in these ecosystem services. So first, financing for adaptation, second policy reform.

Third, I would say greater investment in infrastructure is needed to guarantee things like clean water, clean energy, efficient transportation, and flood defenses.

And fourth, I would say that another important target area is capacity building, so that we can generate quick and relevant climate information, develop credible measurement of adaptation and resilience. And together, these will encourage increased financial commitments, and what I would hope to see is a virtual cycle.

LLB: I understand that IFAD launched earlier this year what it intends to be the largest climate adaptation fund for small-scale farmers, and I think it's called ASAP+ [Enhanced Adaptation for Smallholder Agriculture Program]. Can you tell our listeners a little bit more about what IFAD hopes to achieve with this new program?

KM: Indeed. ASAP+ seeks to address the huge financing gap for rural agriculture adaptation that we've been discussing today, really to scale up efforts to support rural communities in low-income countries to adapt to climate change. As the largest climate adaptation fund for small farmers, IFAD aims to raise more than \$500 million to support adaptation for nearly 10 million small-scale farmers. Given its clear, razor-sharp focus, ASAP+, I think, is uniquely positioned to channel climate finance to smallholder farmers and help them reduce poverty, enhance biodiversity, increase yields, and lower greenhouse gas emissions. Without a dedicated climate fund for small-scale farmers, these food heroes, who ensure that we do not go to sleep hungry, are certainly at the risk of being left far behind.

LLB: You certainly have your work cut out for you, Katie. 500 million. Wow. Well, how specifically does ASAP+ focus on addressing the climate change drivers of growing food insecurity, for example? And could you give us some examples of what its investments support?

KM: Yes. In terms of the drivers, ASAP+ is focusing on two key elements to support adaptation while at the same time tackling food insecurity. The first is increasing resilience, so increasing resilience of vulnerable communities to frankly, the uncertainty caused by climate change, on food security, but also important things like nutrition. The second area is climate change itself, so reducing greenhouse gases. These are the two key elements, really, that support adaptation. The goal overall is to support investments that focus on access to climate information, so things like early warning signals, as well as natural resource management and governance, things like women's empowerment and equity of indigenous peoples and rural populations. Also, traditional focus on greenhouse gas reduction, carbon sequestration, building markets, and frankly, enhancing the resilience of smallholder farmers to climate change, while promoting and supporting ecosystem restoration.

LLB: Katie, another big theme of COP26, biodiversity, is a critical issue that is affecting climate. Agriculture is ironically the number one driver of biodiversity loss. How do you reconcile this with IFAD's work?

KM: In our experience, small-scale farmers tend to protect natural resources. When biodiversity is protected and ecosystems are healthy and diverse, farmers are more productive and more resilient to climate change. For example, since our inception in 1977, IFAD has supported indigenous peoples, thanks to its targeted approach to rural development and key innovations in its financing strategy. While indigenous peoples are a small group of peoples in the world -- about six percent -- they are 18 percent of the extreme poor, and yet their lands sequester about 25 percent of the carbon globally. So they are doing a huge positive job supporting climate, while at the same time being among the poorest and most vulnerable

people in the world. This is one reason IFAD has a big focus on supporting indigenous peoples, and we've approved over 245 projects targeting at least 42 million indigenous peoples in our history. We currently have projects supporting about 6.7 million indigenous people. And indeed, we brought some community representatives to COP26 to be able to discuss the issues and the key benefits, frankly, of what the work, the positive work supporting climate that indigenous peoples are doing to COP26.

Overall, if you look at biodiversity, it's clear that it supports food production, particularly on small farms and in traditional farming methods. So biodiversity, for example, supports food production through soil formation, land productivity, pest and disease control, replenishing groundwater and pollination services. Supporting natural biological features, like the mangrove forests we discussed earlier in Senegal, and coral reefs are barriers that reduce the risk of natural disasters, and they do so in a natural way. We strongly believe in the importance of biodiversity and that improving agricultural biodiversity on small-scale farms results in healthy, productive soils, which sequester more carbon and make an important cumulative contribution to carbon storage.

LLB: Katie, every time we chat, I am so impressed by just the statistics that you offer up, the hundreds of projects that you have ongoing, the millions of people that you are providing financial support to, and the extraordinary work they are doing to help fight climate change. Just kudos to you and your team. But before we conclude today, do you have any final thoughts on IFAD's time at COP26?

KM: First, I want to give a shout-out to the IFAD team because I think they just did an amazing job at COP26. The main aim of the team was to put the plight of the rural small-scale farmers and their vulnerability to climate change impacts at the center of our discussions, and I really believe they were successful in doing so. As you know, Lynn, I'm particularly focused on the struggles of smallholder farmers because they're often neglected and constantly at risk of being left behind. Rural communities, I would say, have done the least to cause climate change, and yet they have the most to lose. I think it's really important that we remember that these are the men and women who put food on our tables, and a threat to them is a threat to all of us and to the next generation.

We really wanted at COP26 to sound the alarm on climate adaptation. We feel the world is at a turning point. More investment needs to be committed *now*, and the very *survival* of these small-scale farmers and rural communities in low-income countries is at risk. While it might be too late to reverse completely climate change, mitigation is indeed important, and equally important is adaptation. At COP26, the spotlight has been on the unfulfilled commitment that wealthier countries made six years ago to mobilize \$100 billion a year in climate finance for less developed countries by 2020. This commitment needs to be fulfilled and much more, and it must reach places where it's needed the most: really to support adaptation and small-scale farmers, who are among the most vulnerable people in the world. And I just repeat it again: of all climate finance, only 1.7 percent goes to small farmers. We feel this is unacceptable, and this is really what we want policyholders to change. I really appreciate your inviting me to speak with you today, Lynn, to talk a little bit more about IFAD's really compelling work supporting small-scale rural farmers. And I think the work post-COP26 remains with the focus on helping small-scale farmers adapt to the current climate crisis.

LLB: Thank you so much, Katie, for joining us today and talking about the important work that you and your colleagues at IFAD are doing. This is an important message. Your success at

COP26, I think, will be hugely beneficial in the years to come. We'll have you back soon to talk about the progress you've made in achieving your goals. Thank you.

KM: Thank you, Lynn.

LLB: My thanks again to Katie Meighan for speaking with me today about IFAD's role in eradicating poverty and hunger through financial and technical assistance, and the climate change's outsized impact on food security and what IFAD is doing to help farmers around the world address climate challenges.

All Things Chemical is produced by Jackson Bierfeldt of Bierfeldt Audio LLC.

All materials in this podcast are provided solely for informational and entertainment purposes. The materials are not intended to constitute legal advice or the provision of legal services. All legal questions should be answered directly by a licensed attorney practicing in the applicable area of law.