Host: Peter Andrée (Carleton University)

Guests: Helena Shilomboleni (CGIAR Research Program) and Sarah J. Martin (Memorial University)

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In this episode, we look at the state of food systems generally, and then critically analyze pathways towards sustainability for the food systems of Canada and Africa with our guests, Helena Shilomboleni, PhD, CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS) East Africa at the International Livestock Research Institute in Nairobi, Kenya, and Sarah J. Martin, Assistant Professor in the Department of Political Science at Memorial University. Together, they help us understand the relationship between different food systems and the climate emergency, as well as the opportunities and challenges facing farmers who are pursuing more earth-friendly approaches rooted in agroecology.

Episode 16: Pathways to Sustainable Food Systems

Sarah Martin: What is happening right now is we have a handful of global agrifood corporations that are really shaping the industrial food system. And that is constraining not only the food sovereignty movement, but that is constraining how we can imagine and how we can think about the future.

[00:00:23] Peter Andrée: Welcome to the Ecopolitics Podcast. This podcast series tackled some of the big questions in the field of environmental politics for university students in Canada. My name is Peter Andrée from Political Science at Carleton University. My co-host for the series is Ryan Katz-Rosene from Political Studies at the University of Ottawa, though he won't be joining us for today's episode.

[00:00:46] Today our focus is on sustainable food systems. Food issues, and agricultural issues have come up in quite a few of our podcast episodes so far, because they're a really important way that people interact with the environment. Food is also so important for people in terms of day-to-day sustenance. And so our livelihoods and how that interacts with the natural processes and with animals and plants and the natural world is a big ecopolitical question. And food systems have a huge impact on issues like biodiversity destruction, climate change, and a number of other environmental issues as we'll get into today.

[00:01:29] We're getting into these issues with two experts in the field of food politics: Dr. Helena Shilomboleni and Dr. Sarah Martin. Helena Shilomboleni is a PhD from University of Waterloo and she's now based in Nairobi, Kenya. She's currently doing a postdoctoral fellowship with the CGIAR research program on climate change, agriculture and food security. Welcome to the Ecopolitics Podcast, Helena.

[00:02:00] Helena Shilomboleni: Thank you, Peter, I'm delighted to be here.

[00:02:03] Peter Andrée: Great. Well, we're delighted to have you here. And with us as well is Dr. Sarah Martin from Memorial University located in St. John's, Newfoundland and Labrador. Sarah's research specializes in the global political economy of food and agriculture.

[00:02:19] It explores questions about the governance of food and agriculture at the local and global scale. She previously worked as a cook and a chef and a meat cutter in a variety of settings from institutional cafeterias to high-end restaurants, to remote logging camps. And all of that work led to a particular interest in how food politics is practiced in the everyday. And the tensions found within the global political economy. Welcome to the Ecopolitics Podcast, Sarah.

[00:02:47] Sarah Martin: Hey, thanks Peter. I'm really happy to be here and part of this conversation. Thank you.

[00:02:52] Peter Andrée: Great. Well, I'm really happy to have both of you here and I just want to get right into it. So Sarah, let me start with you. For students new to thinking about how food systems and the environment interact, how would you sum up the big picture of where global food systems are at? And to what extent they are sustainable as we know them today? And then what do you see as the major challenges affecting the sustainability of our increasingly globalized food systems?

[00:03:20] Sarah Martin: Those are great questions, and big questions. So let me try to break that down a little bit. First of all, there's lots of different food systems and they have lots of different capabilities or capacities for sustainability. And of course we can think about sustainability in multiple ways. So I want to talk about sort of two systems, two sort of food systems that have different capacities for being sustainable. So let's go from the least sustainable or I would argue the least sustainable to what I would argue is the most sustainable.

[00:03:57] The least sustainable food system is the one that most people who live in the global North are dependent on. And that's what we typically call the industrial food system. And increasingly folks in the global South are dependent on this system as well. So what is a industrial food system or what are the characteristics that make a food system industrial? It's I would say it's the same characteristics that make it unsustainable at multiple scales.

[00:04:28] So, first of all, an industrial food system is input-intensive crop monocultures, and industrial scale feed lots. So think about animals and those big feed lots we have, or thousands and thousands of

chickens in one barn. Those now dominate agricultural landscapes. And these agricultural systems are specialized, right? So they're single. They have like a single focus, like they just grow chickens or they just grow canola. It's a large scale commodity. It's usually internationally traded. So those are crops like corn or canola or palm oil. And industrial means that there's a uniformity to these processes.

[00:05:22] Second, an industrial food system, it centers uniformity in specialization, and there's a reliance on industrial and processed inputs. So for example, chemical fertilizers and pesticides, the use of processed animal feed, rather than grazing or chickens foraging for insects outside. And the intensity of this system, whether it's the inputs or the actual production, leads to water and land degradation. So for example, chemical fertilizer and manure flows into rivers and lakes.

[00:05:58] And there is a financial cost to all these inputs. So industrial agriculture requires large amounts of capital or money often in the form of credit debt to support its ongoing production model. So, large tractors, expensive seeds and other inputs, large tracts of land, which means it's limited. It's limited to those who have capital.

[00:06:24] So in the industrial food system, once the food is grown, it is processed and manufactured into food. And that has another number of sustainability issues as well. Highly- or ultra-processed foods is key to the industrial food system. Manufacturers just don't make much money by selling a single potato, but they make lots of money from selling a bag of potato chips. And these processed foods require high energy inputs in the manufacturing and transportation.

[00:06:59] Finally, I would say, well it's, I think this would be generally recognized. One of the most important characteristics of the industrial food system is that it's reliant on petrochemicals. From fertilizer, from chemical fertilizers to power retractors to manufacturing plastic packaging, to moving, distributing the food. It's estimated that these fruits systems contribute somewhere between 20 to almost 30% of greenhouse gas emissions.

[00:07:30] So that's the industrial food system. On the other end of the scale we have-- we can look at food systems. One that is diverse. One that is not wholly reliant on petrochemicals. And one that has more of a focus on human and animal labour rather than on machines. And we can turn to agroecology for that.

[00:07:53] So what is agroecology? Agroecology is a science of applying ecological concepts and principles to the design and management of sustainable food systems. Right. So sustainability is at the center of agroecology. It recognizes that there are ecological concepts, not just economic concepts and principles to managing food systems.

[00:08:18] So the characteristics of that are, a diversity, right? So there's multiple different crops grown at the same time. There's intercropping, there's mixed farming with animals and plants together. It's not specialized, it's not singular. And it's also labour intensive rather than capital intensive. It's often also local and small-scale. So those would be the two big ends of the scale of sustainability that I would want to describe.

[00:08:49] Peter Andrée: Thanks so much, Sarah, for kind of laying that out, to start with those two different paradigms, if you will, and two different approaches to agriculture. And before we go to Helena, I just want to ask you one follow-up question.

[00:09:04] We have spoken on one of our other podcasts with a senior vice president of a large food manufacturing company who I think would respond to what you've just characterized-- I don't know if he would completely disagree with it, but he would also point out that it's the large-scale industrial system which has allowed a lot of food to be available cheaply for people. And so if we think about sustainability as including that social dimension, a lot of the food security that we experienced in the world right now comes from arguably this large scale industrial system. Though it may not though it may have some costs associated with it, environmentally speaking and otherwise.

[00:09:46] I wonder if you can just comment on that, you know, cause he also said. I'm not sure you can expect the smaller niche small-scale operations that you're talking about that maybe are more labour and human intensive, the agriculture, ecological operations to supply the volume at price that people currently have say in the food system in Canada.

[00:10:09] Sarah Martin: Yeah, that's a great question. And So I think we can agree. I think we can agree if we look at California and the wildfires that climate change is an urgent issue. And we can't do things the way we have been doing though. And for sure, this productivist paradigm of the industrial food system has fed a lot of people. And yet it's also produced and contributed to the crisis, the environmental crisis we find ourselves in right now. And so, number one, we have to think differently about this.

[00:10:47] And then number two, there is research out there that shows the vast majority of people around the globe are fed by small-scale agricultural producers, or fishers, or pastoralists. So the estimates are somewhere around 70% of the global population are fed by small-scale farmers. And those small-scale farmers use around 30% of the world's resources-- or agricultural resources to do that. On the other hand, there is the same research shows that the industrial food system feeds about 30% of us, very well, I would say. But it uses up around 70% of the agricultural resources. And so yes, it is absolutely a fact that the industrial food system feeds people, but that I would say is the wrong question. Does the industrial food system feed people? Yes. A simple answer. Does the industrial food system feed people well? Not particularly. Does it sustain the environment? Not particularly well. Is there alternatives? Yes there are.

[00:12:00] Peter Andrée: So I think our hypothetical senior person from the corporation, I think would agree that there are a lot of problems with the industrial system, as we know it. And that there's a huge scope for improvement. And, the sense we got from our interview with, with him is that that's also where things are going. But I found it very interesting your second point about, that most people around the planet are actually not fed through that system, but through smaller scale production systems and local food systems. I think, you know, I came across an interesting stat a number of years ago that most food doesn't cross international borders.

[00:12:41] And so I think this is a good place to bring Helena in. Helena, your work has focused to date on food and agricultural systems of Africa. And I'm wondering if you could say what role do African farmers play in the industrial, the global supply chains talked about by Sarah? And then I wonder also to what extent they are part of the smaller scale agroecological paradigm, if you will, or maybe something in between. And of African farmers who are the smallholders? I know that a lot of your work focuses on smallholder farmers, so I wonder if you can describe that a bit and talk about what role that group of farmers plays in feeding people, in Africa and beyond.

[00:13:25] Helena Shilomboleni: Yes. Thank you so much for the question, Peter and I really listened to Sarah's insights with great interest. Maybe let me start by describing who are Africa smallholder farmers, as well as their role, they play in feeding people in Africa and beyond as well as the challenges that they face. First of all there are a few key factors that characterize smallholder farmers or more accurately, let's say small-scale producers. Namely that the size of the land they occupy is considered

small for their production and region. Their use of mechanization is fairly limited. And they mainly rely on family labour for production.

[00:14:13] So smallholder farmers in Africa do play an important role in Africa's food systems with some estimates showing that they meet up to 80% of the population's food needs. But while these smallholder farmers grow food to feed a significant proportion of the continent, they do so under difficult conditions, namely the impact of climate change, they have limited economic opportunities and they are often vulnerable to land disposition and other socioeconomic factors.

[00:14:50] So then the question of what role do African farmers play in global supply chains. It's relatively small and we do see small pockets of farmers participating in niche markets of the global food supply chains. For example, coffee producers in coffee or cocoa beans, or horticulture produce such as fruits and vegetables as well as fresh cut flowers.

[00:15:17] But while farmers grow a diversity of food. Most of their production is primarily dedicated to staple crops. So cereal crops, such as maize, roots and tubers, as well as rice in some regions of the continent, such as West Africa. And in fact, many countries on the continent have in place input subsidy programs to support increased production of this staple crops to feed Africa's growing population, particularly in cities.

[00:15:52] And we see in the, the last decade and a half, really, there has been a growing emphasis for Africa to modernize its agricultural sectors and to accelerate the adoption of improved technologies, such as hybrid seeds, fertilizers, irrigations, some of the industrial based models that Sarah was describing. And so this approach in Africa really entails integrating farmers into global supply chains, primarily as consumers of this technological inputs and services.

[00:16:27] And this has been evident with activities of the African Green Revolution, which has emerged in the mid-to-early 2000s, primarily as an agricultural development initiative, funded by donors such as the Bill and Melinda Gates Foundation and the Rockefeller Foundation. To address challenges of low productivity and to increase rural incomes through investments in technology transfer and integrating smallholder producers into market value chains.

[00:17:00] So since this time, multiple other initiatives under the African Green Revolution have emerged, with largely the same purpose and being implemented by a consortium of partners,

comprising African governments, the private sector and philanthropists, as well as multilateral institutions. Among them is the Grow Africa partnership of the World Economic Forum and the African Union development agency, which was launched in 2011 as well as the G7's New Alliance for Food Security and Nutrition, which was formed in 2012. So what is really striking or important about this initiative is that they are facilitating the entry of agricorporations into African agricultural markets, mainly to sell their product as well as to integrate African production systems into the global supply chain.

[00:18:04] So for example, agricorporations, such as Syngenta, which merged with ChemChina and Monsanto, which is now acquired by Bayer, have embedded themselves into these various agricultural development partnerships and frame some of the technologies that they are developing such as GM crops as pro-poor and as gifts donated to the agricultural development in Africa. So these agricorporations also increasingly label their products as part of climate-smart agriculture solutions, which can improve agricultural productivity, enhance farmers adaptive capacity to climate change, and contribute to mitigate agricultural effects of greenhouse gas emissions. So some companies are even rebranding their technologies, such as transgenics and chemical fertilizers and biochar and so on as not only climate smart, but really imperative to addressing climate change and food insecurity.

[00:19:07] Peter Andrée: Helena, there is so much to unpack in what you just said. And I just want to go back to where Sarah opened us up by suggesting there's kind of at least these two paradigms, with a lot in between admittedly: the industrial agricultural model of large scale, high-input, high-output, and often high consequences, environmental consequences, including in the industrial agricultural model and food system.

[00:19:37] And then we have what she presented as the small-scale agroecological, more eco-friendly but often local animal and human labour and so on. And what you began describing are that a lot of Africa's farmers, feeding up to 80% of the population, are more likely on that smaller scale and with the small-scale practices. And Sarah presented that as perhaps the more sustainable in the big picture for the planet.

[00:20:08] And yet what you're suggesting is that there's a whole move to have them move from where they are now to become more part of the industrial system. And I think there's a couple of things we need to understand in the middle there. One is that perhaps that small-scale system, for many of Africa's

farmers, is it perhaps not as sustainable or idyllic as the, you know, the sort of dualism that Sarah's set up would suggest? Are they having a lot of challenges, either meeting the food needs of the population and/or having sustainable livelihoods for themselves? Like what is the impetus that is leading all of these organizations to want to invest so heavily?

[00:20:54] That's the one question. And then the second one is, you also suggested that maybe some of the ways that these companies are characterizing their interventions is not exactly along the industrial model that Sarah was presenting. I mean, they're trying to create a pro-poor version of that model. And I just wonder if you can give us a sense of what that looks like. What's different in the model that they're proposing?

[00:21:18] Helena Shilomboleni: Thank you so much, Peter, again for these two questions and to go to the first question of what is the impetus to really move farmers to, say, integrate, be more integrated in the global food supply chain is really, we do have very compelling calls, both from African governments, from development research organizations, and many actors, yes. Who are in fact saying that African smallholder production system cannot meet the challenge to even first of all to feed themselves adequately, but even more importantly perhaps, to feed Africa's growing cities. And we know globally, either through the industrial food model that Sarah was describing, as well as the more agroecological models of food system, really, we still face significant challenges in the ability of people to access adequate food. And the challenge is even more pronounced for people to afford healthy diets.

[00:22:23] So according to the new State of Food Security and Nutrition in the World, which is the SOFIreport by the UN Fod and Agriculture Organization, together with the World Food Program, the World Health Organization, and other UN based agencies. Healthy diets are unaffordable for more than 3 billion people in the world. Now we know that most of the number of people who cannot afford a healthy diet are of course, in poor countries in Africa, in Asia and in Latin America as food access is so closely tied to income and people's ability to purchase it.

[00:23:02] So in Africa, for instance, the SOFI report that I just mentioned earlier, shows that some 965 million people or over 57% of the population cannot afford a healthy diet. But however, I want to emphasize that this is a global challenge and we see pockets of hunger and lack of access to healthy diets in Canada and in wealthy countries as well. So I think these compelling statistics that we have such inadequacy to meet our food needs really is also driving, as I mentioned, this impetus to integrate

African smallholder farmers, more into global value chains, not only to intensify their productivity, yes, through the use of improved technologies, improved inputs and so on, but as I've mentioned to be able to feed Africa cities.

[00:24:01] Peter Andrée: It sounds like the Gates Foundation and some of the other agrochemical companies that have all been getting involved in trying to increase productivity in Africa. You mentioned that they sort of have a pro-poor approach, and I just wonder, do you see any signs, maybe just put it most simply that they are suggesting some strategies forward that truly are pro-poor and maybe even climate smart, taking that at it's face value compared to the more intensive and probably more destructive and less sustainable model that Sarah was describing earlier?

[00:24:41] Helena Shilomboleni: These initiatives have arguably been pro-poor because we see greater investment and towards staple crops that African producers and consumers do eat such as orange-fleshed sweet potatoes, some roots and tubers and so on. But we also say that some, some other traditional crops have been neglected, such as millet and sorghum. But overall really, they, we also see critique that even then there is still a narrow focus on cereal and staple crops, but really less emphasis, or there has not been as diversified investment to really get us to this kind of healthy and nutritious diet that I was referring to that the SOFI report suggests.

[00:25:43] Peter Andrée: Okay, thank you very much. And I think it is getting clear for me in my head that you know, going back to the original dualism that Sarah set up - the industrial versus the agroecological model. It sounds to me like what you're describing is that small-scale producers in Africa are being encouraged towards the industrial model, albeit with some changes and with some attention to the particularities of their, you know, locally appropriate foods, which might not be maize and the wheat that has grown largely in the industrial food system, and the rice. And yet still the efforts don't go all that far. And there's still blinders towards an input-intensive, probably. Maybe output intensive ideally, System that is not fully ecological in the way that some of the advocates for an agroecological system would argue.

[00:26:45] I'd like to switch gears a little bit here because we are interviewing right now and recording this podcast in the context of the COVID-19 pandemic. And we've seen a lot of maybe the strengths and also the weaknesses of our food system emerge in the last number of months as we've gone through

the pandemic. Both of you have raised issues that speak to the resilience of food systems in the face of these kinds of external shocks in terms of the virus itself with COVID-19.

[00:27:18] And then we've also seen the effects on food system workers around the world. And in terms of the economic impacts of lockdowns and disruptions to supply chains. Helena, what have you seen a rise in the context of the pandemic that speaks to the sustainability of our food systems?

[00:27:34] Helena Shilomboleni: Again, the impact of COVID-19 on Africa's agricultural and food system is a great concern for the continent. The immediate impact is of course, that millions of people in major African cities, such as Nairobi, Lagos, and Kinshasa who rely on the informal sector for their livelihood, with estimates showing that this is up to two thirds of the population, have been left without income due to their abrupt loss of jobs that often provided daily earnings. And in some countries where informal markets really provide, you know, it's the source of food for most low income populations, these markets have been completely closed or saw reduced operating hours. This has really made it difficult for low income urban dwellers who depend on these systems to access critical food supplies.

[00:28:34] And in rural areas where agriculture is the main source of people's livelihoods, disruptions to the transportation systems as well as logistics have made it really difficult for producers, not only to get access to important agricultural inputs, but it has also disrupted their ability to transport their projects to more lucrative markets in cities. And they have also faced higher transportation costs. And we have seen these in Nairobi where I am.

[00:29:11] And so just to answer your question, really, the COVID pandemic has put a further strain on Africa's agricultural systems, which were already facing unfavorable climate change patterns, including higher frequency and intensity of extreme weather events such as droughts and floods as well as market and price volatility. And then even in the horn of Africa and East Africa, we have also recently seen desert locusts, which have completely devastated production systems.

[00:29:46] So I think so maybe speaking more specifically the question of sustainability, it's a really challenging, and I think this also gives us a chance to think about, okay, when, when we are cut off from say the global supply chain, what can we do in the local context that we have so that we are not so vulnerable so that when there is a disruption to the supply chains, and our agricultural activities do not come to a complete halt.

[00:30:18] Peter Andrée: I can hear from your response that it's a hugely challenging context. As you say the agricultural and food systems are already so vulnerable. They are now being impacted by climate change and other situations like the locusts and who knows how that fits in with larger environmental change. And then you throw the pandemic on top of that, which throws so many people out of their livelihoods, disrupts transportation systems. It sounds like a hugely challenging situation for the producers themselves and the policy makers who are trying to wrestle with it as well.

[00:30:59] Sarah. I'd like to turn to you. What have you seen arisen in the pandemic that shows cracks in the food system from a sustainability perspective?

[00:31:08] Sarah Martin: Thanks Peter. Again, it's a huge question. Yeah. So I think food systems are a reflection of two important dynamics. First, the political economic structures. And second the environmental infrastructures on which it depends. And together these two dynamics come together in a food system.

[00:31:27] So what I would argue is that the political economic systems really shape environmental sustainability. So many scholars who examine food systems, they think about the food system as a hourglass rather than a chain. And I think this is a really important way to think about food systems, especially in regard to the pandemic, because we see these headlines that say the food system is broken, the food chain is broken.

[00:31:57] And it's like, when we talk about the food chain, it sounds like it's a whole bunch of links that are equal. And it's not. If we think about the food system as an hourglass, we started thinking about these cracks differently. So how does that hourglass work? At the top of the hourglass where it's wide you have a lot of feeders, right? The producers, the fishers, the pastoralists, the farmers. In the middle, where it's pinched, you have a number of large corporations—often monopolies or oligopolies—that shape what the people on the bottom, who are the feeders, the consumers actually can have access to.

[00:32:39] And so, even though we talk about the food chain and we saw lots of headlines about this food chain being broken, I would say, who is producing this idea of the food chain being broken, especially in the context of the pandemic? The pandemic has just illuminated the cracks that were already there. And what happens is for example, Tyson, which is a large meat packer in the States, took out a full page ad in the Washington Post and said, Oh my goodness, the food chain is broken, we need support from the government. And when in fact what is actually happening is Tyson has a huge amount

of control, they make tons of profits, and they're putting their workers, during the pandemic on the line, and their health and the health of the animals that they work with is in question.

[00:33:29] I am concerned that the longterm, social and environmental policies that could slow environmental degradation and could assure worker safety are being set aside in this emergency, and the people who are being listened to are large corporations who have a particular interest in not necessarily supporting environmental policies and not necessarily supporting workers' rights, but in fact, exploiting those resources. And on the one hand, we have research that it shows that work, especially on environmental racism, that poor racialized people have less access to quality foods, and that is worsening. On the other hand, we have research that shows that the wealthy have a much higher impact and a negative one on environment. So while the pandemic is an emergency, it is also widening cracks that are already in the food system. And they're in highlighting inequality that has been on the go for decades.

[00:34:31] Peter Andrée: Thanks, Sarah, your response really brings into the forefront the political economy of the food system. I'd like to turn now, back to Helena. Helena earlier on, you did a great job of laying out the position of a small-scale producers in Africa and talked about how a number of actors, including the Gates Foundation and agrifood corporations or input corporations in particular have been working to "assist", we'll put that to in quotes, these farmers to develop a new direction. But I also know that in your work that you've examined other organizations that are also working with small-scale farmers and perhaps pushing them in other directions. And I'm thinking specifically of organizations associated with La Via Campesina, the world's largest social movement comprised of small-scale peasants and fisherfolk from around the world.

[00:35:38] I wonder if you can tell us a little bit more about, if you want, these two different trajectories that are being proposed for African farmers, how African farmers see them and how you think they fit in with the future that lies ahead?

[00:35:53] Helena Shilomboleni: Thank you for that one. That's a great question Peter. And first, let me just speak briefly to the work of La Via Campesina in Africa. This movement first came on the continent in 2004 when African based peasant organizations and movements have joined the movement. So we see this, for example, through ROPPA, which is the network of West African peasant organizations and producers as well as the national union of Mozambican peasants, which were really two of the first

Africa- based movements that joined La Via Campesina. But in 2011 Africa's food sovereignty groups consolidated to establish the Alliance for Food Sovereignty in Africa, AFSA. As well as to promote agroecology as their preferred production model on the continent. So today the Alliance for Food Sovereignty in Africa comprises 40 member networks who are active in 50 countries on the continent representing some 200 million people.

[00:37:06] So the African Food Sovereignty Alliance and its members really has made important contributions to raising the profile of food sovereignty and agriculture in Africa, particularly in some key regional and international policy spaces, such as the Committee on World Food Security, the Conference of the Parties to the United Nations Framework Convention on Climate Change, as well as to the Sustainable Development Goals Centre for Africa among others. However, the African Food Sovereignty Alliance really has seen limited access to critical policy spaces at the national level and regional levels in Africa where important agricultural decisions are made and implemented.

[00:37:55] And this really speaks to a broader challenge facing agrarian social movements in Africa, where we see that overall they lack political agency and financial financial autonomy needed to operationalize food sovereignty, let alone make this model an alternative to mainstream industrial agricultural models that some of its allies envision it to be.

[00:38:22] So earlier I was talking about initiatives from the African Green Revolution that are funded by organizations, such as the Bill and Melinda Gates foundation that really received massive amounts of funding, it runs into billions and billions of dollars, and really have that kind of political clout in Africa and really the kind of influence they have completely paled to what Africa's agrarian social movement or food sovereignty really can do have. And so then as a result of that, you know, some of we say that some food sovereignty groups in Africa really engage in actions and strategies that even run counter to the principles of food sovereignty, such as collaborating with some of these green revolution initiatives. Really again, due to that agency constraints that they face as well as the environments in which they operate, where the powerful actors are unconducive to the social movement's radical claims.

[00:39:34] And so the best thing they do really is to form these alliances that are largely apolitical and in some ways, even help Africa smallholder farmers gain access to agricultural inputs and technologies promoted by the African green revolution initiatives and so on. And this is even more emblematic to how Africa's own smallholder farmers are responding. Because when they are so constrained when they

have so little access to resources and such limited support from their governments and institutions, really, they would work with whoever that can give them support for that day, whether it's to help them increase their productivity, whether it's to help them link to markets, at the ground level for them is really about, okay, who can help us increase productivity who can help us gain access to markets, which are so, so important. You know, African farmers do have to increase their productivity and they do have to be linked to markets because oftentimes this is the only source of livelihood that they have, you know, so they do have to sell their produce to the markets because then they also have to end money to send their kids to school, to buy medicine, to buy all kinds of other materials. And there is really no way they can be entirely self-sufficient.

[00:41:00] Peter Andrée: What I hear you describing is limited agency and limited voice for Africa's small-scale farmers. And I think that their ability to shape their futures is quite constrained. They have a lot of people, the Bill and Melinda Gates Foundation, and many others on that track who are encouraging them to go into one direction, La Via Campesina and some of the social movements wanting to propose a different direction.

[00:41:27] And they seem. Sounds like they're a bit stuck in between, taking support where they can get it from day to day. And as a result, having a limited ability to shape their own futures. I'd like to turn to Sarah now. And if you can briefly talk about what does this move, this call for food sovereignty in the food system? What have you seen that it looks like in Canada?

[00:41:51] Sarah Martin: I think it's really fascinating. So I think that there's there's a political choice we can make. So I've talked a lot about powerful actors within the food system. Helena just talked about the food sovereignty movement being constrained in Africa. And I think we can make a choice to think about power in particular way. So when we think about the food movement in Canada, I would argue that it's actually made a fairly significant contribution in the sense that it has been going on since the mid nineties, 1990s, and it takes a long time for social movements to make an impact.

[00:42:34] But I would suggest that the food sovereignty movement has shaped public policy, national public policy in Canada, and contributed to the fact that we now have a national food policy. And that's a recent development. And I think when we when we look at social movements, we can make a choice to think about the power a little bit differently. We have to track the power over a long, long period of time. So that it can look insignificant to the 1990s. It can even look insignificant in the 2000s, but when

you actually shape national policy, I think that you can see how the food sovereignty movement has actually made a difference.

[00:43:15] So I think that there's a really powerful discourse of food sovereignty and Peter, you're very familiar with this. You've done tons of work in this area. That I think it's important as academics for us to illuminate the kind of power social movements have, how they operate and not only identify how they're constrained as Helena has done, but also identify the inroads and power that they have.

[00:43:43] Peter Andrée: As you've pointed out, Sarah, I have done some work in this area and I just want to fill in a couple of gaps for our listeners. One is this idea of food sovereignty, many will be familiar with it, others may not. The short form we might say is the ability of people or peoples to shape their own food systems, according to their own priorities, which often include environmental and social priorities rather than have that based purely in markets, which is the other guiding hand in our food system relations. And you also pointed that we Canada now has a national food policy in it, and it is worth pointing out this is a recent development as of the last year. What's significant about it, it is the first time that our Canadian government has tried to bring, and I would emphasize the word tried there, but nonetheless, bring an integrated view to the relationship between how we produce food in this country and who gets food and who consumes food and how healthy that food is for them.

[00:44:52] And along the way, there are a number of new programs that were created as part of the national food policy supporting Indigenous and Northern communities with their food production and processing and community freezers and those kinds of thing, supporting small-scale, local food efforts in other parts of the country. and you know, it's far from perfect, the first iteration of Canada's national food policy, but nonetheless, as you point out Sarah, it was pushed for by social movement actors and what's realized in federal policy in a way that's really a step different from what the government had been doing for the last 50 or 60 years.

[00:45:34] So we're nearing the end of this podcast. And I want to end with giving each of you a chance to talk a bit about what you see as the paths forward. What do you see as potential solutions to some of the food system challenges you've raised today? You're both critics of the systems that are in place, critics of some of the initiatives trying to improve the system from the point of view of some food system actors. And I just wonder where you see from your critical vantage point the brighter lights or

the possible solutions that you think needs more attention and effort. So I'll pass it to you first to Helena for this final question.

[00:46:16] Helena Shilomboleni: Okay, thank you, Peter. I think possible path forwards in Africa would really entail increased funding and investment towards national agricultural research systems. As this will be crucial to addressing some of the food system challenges that the continent faces that I have raised. So really there is no place for that, to have strong national systems that really take this work forward. But currently many of these institutions continue to face numerous challenges, including low levels of public investments, dependence on external donors and philanthropists who make demands or drive the agenda so on, as well as just generally volatility in funding flows. So really they cannot have a consistent agriculture and research development agenda that they can really drive.

[00:47:18] So anyways, even in a recent report by the International Panel of Experts on Sustainable Food Systems and biovision which really look at where funding flows go in Africa, really the authors have found that the amount of development aid channeled into agricultural research, education, and extension has stagnated over the last 10 years, representing only 14% of agricultural aid in Sub-Saharan Africa in 2017. But the report also found that agroecology, you know, and alternative forms of food systems that Sarah has described about that I've also talked about, really remain marginal within many funding initiatives by donors. One that of course, is agroecology, and we see that as many as 85% of the project funded by the Bill and Melinda Gates Foundation, and more than 70% of projects carried out here in Kenya's research institutions were limited to supporting industrial agriculture and increasing its efficiency via targeted approaches, such as improved pesticide practices, improved seeds and so on, livestock vaccines, as well as reductions in say post-harvest losses.

[00:48:43] This investment of course are important, I'm not denying that, but when we see such a huge discrepancy and such limited support to some of these alternative food systems that even Africa's own social movements and farmers are calling for is problematic. And really, we need to change this. But of course it's hope I'm hopeful that there's a handful of donors such as the Food and Agriculture Organization of the UN and the International Fund for Agricultural Development who are starting to explicitly recognize agroecology as a key solution for building sustainable food system. So there is some recognition there, which is important. And the important point to start the conversation but I think more than anything too, we also need research to continue to document the evidence that is coming from agroecology, as well as alternative solutions. I think the path in Africa is that really there's an

emphasis and there's a lot of support for agrobased agricultural models, which is fine if we can feed people more effectively and adequately, but there are also other models and I think those are the models that also deserve to be given a chance, they deserve to be supported. And I'm really glad that this conversation is starting to happen.

[00:50:09] Peter Andrée: Thanks Elena. So what I'm hearing from you is on the one hand. Invest in national agricultural research infrastructure. On the other hand, that research infrastructure has not always been pursuing a diversity of pathways. And what I'm hearing you argue for is that we need a wider array of paths being identified and pursued going forward. And particularly that those associated with this agroecological model deserve attention. They may not solve everything, but they deserve the time of day to really be worked through. And this is really something that even students in Canadian context can think about, you know, whether they might like to play a role in that moving forward in terms of their own research energies.

[00:50:57] So that's really helpful and inspiring. I'll turn it over to you, Sarah. What do you see as some of the pathways forward and do you have any advice for listeners who might be charting their own paths in all of this?

[00:51:12] Sarah Martin: Yeah. Thanks Peter. It's a great question. So I agree with Helena 100% on this. The way I'm thinking about it is that, you know, we need to reimagine and also carefully reflect on sustainable food systems that support health, that supports social justice and the environment on multiple scales. And so while I started out with this idea of like, there's this industrial system, and then there's this amazing agroecology, sort of a romantic view, that it's all perfect that, you know, of course it's not this kind of binary, there's multiple, multiple ways that food systems can operate.

[00:51:54] With the environment changing because of climate change, we need everyone to be re-imagining and thinking differently about our food and our food systems. Ursula Le Guin says to oppose something is to maintain it. You must go somewhere else. You must have another goal. And then you walk a different road. And here is the opportunity, not only within this environmental, this climate emergency, not only within the context of a pandemic, but we have an opportunity to have the industrial food system step back and let's see what grows.

[00:52:35] Let's see what Indigenous food sovereignty looks like. Let's see what Newfoundland Labrador food sovereignty looks like. Let's look at, what Toronto food sovereignty looks like. Let's have a

democratic system where we all have a voice and we can all use our imaginations to think about and work towards a better, more socially just food system.

[00:53:00] Peter Andrée: Thank you, Sarah. And thanks for those inspiring words from Ursula Le Guin. What I take as the key ideas from the two of you, you know, that the global food system is very complex. It has many systems. It looks quite differently in different parts of the world. In Africa, where Helena brought our gaze, we see the complexity and the challenges and how small-scale producers have the least control and least say in what those systems look like. And yet what I'm also hearing from both of you is around the world people are experimenting and exploring, and that we basically have to open that up in the context of a climate emergency. This is a time to keep exploring multiple alternative pathways and not just narrow in, on one narrow set of technologies, because almost inevitably in this day and age that suits particular players in the food system and it may not benefit us all collectively. And so I hear that to democratic plea at the end of your words as well, Sarah, so thanks for that.

[00:54:07] So I'd like to thank both Helena Shilomboleni and Sarah Martin for joining us today on the Ecopolitics Podcast. We welcome from listeners your feedback on this episode, check out the website to see the many other episodes in the series. And have a great day to our listeners. Bye bye.