



ILSI 2021 Annual Symposium Session 1: Food Systems Transformation

Transcript of the presentation, Thinking beyond Sustainability: The Need to Negotiate Food Systems Resilience, John Ingram, PhD, University of Oxford, United Kingdom

Thank you very much. Well, hello, everybody, and thank you so much for the invitation to speak to you all today. What I'd like to do is talk about some of the issues in food systems, particularly in relation to resilience, and the need to think beyond sustainability.

My first point to make is the fact that there are no conflicts of interest [inaudible 00:00:28] this presentation. So, I will just proceed. Let me start with a question. What do we actually want [inaudible 00:00:37] in these three ways? So, food utilization, access and food availability, but of course, we also want a whole range of other issues from the food system.

John Ingram:
Okay? I'm getting an echo now; can people still hear me?

Speaker 2:
Mm-hmm (affirmative).

John Ingram:
Yes. Good. Okay. So, we need a whole list of other things from the food system, not least income and profit for businesses, but employment and environmental concerns and issues. Other areas stretching across animal welfare and the like. So, what do we want? We need to think about the what I call, the activities and the outcomes. And we need to balance the what we want, with the what we do, and the what we get. And the what we do is in this caption at the top, this diagram. Many people will be familiar with diagrams like this, showing the range of food system activities from producing food, through processing, packaging, where many of the audience will be involved, I know. Wholesaling, retailing, right the way through to consuming. So that's what we call the food system activities. The what we do.

And these give rise to the what we get. Food security in the middle, of course, but also these other issues, the socioeconomic outcomes and the environmental outcomes. So, what we need to do is balance the what we want, with the what we do, and the what we get. Of course, there are tremendous trade-offs across this diagram that we need to be aware of, but so too are the tremendous synergies. And there are new opportunities to exploit the synergies to maximize the benefit for businesses, for society-at-large, and for the environment. So where are we today in terms of global food security, or arguably insecurity? In very round numbers on the left, we've got about a billion people who are hungry. The middle red circle, perhaps three billion people who aren't [inaudible 00:02:49] hungry, but they certainly don't have enough nutrients.

The right-hand red circle, perhaps two-and-a-half billion of us with excess calories. Many of whom also have insufficient nutrients. And so, the green circle on the extreme right is the sweet spot, if you will, where we want to be. And you can add up the numbers as you wish, but it's arguable that perhaps only half the global population has actually got a really, really good satisfying and healthy diet. So, what determines which circle any of us fall into? Well, it's what I call the constraints on dietary choice and the drivers of what we have to eat. And now the words in italics are very important. Affordability, preference, skill, convenience. Preference and the like all come arguably from the FAO food security definition. And it's important that these are the things that determine what you or I have for lunch. But of course, many of the people in the audience and throughout the ILSI programs are involved in what might be called the food chain.

And here we have a range of post-farm gate activities, the processing, the packaging, the trading, the advertising, et cetera, et cetera, which give rise to the final calorie and nutrient quantity and price at the shop. Now, as you well know, the people involved in those activities are getting their material from the farm or from the ocean. And this is what actually is the basic calorific or nutrient quantity and price at the farm gate or at the harbor dock. And the people involved in farming, and fishing, and aquaculture and the like are all ultimately dependent on the productivity, and the diversity and quality of the natural resource base upon which they depend.

So here we have a very linear system, but the point is, by thinking about what people eat, rather than what we grow, we have a much closer handle on why it is whoever it is, is in which of the circles at the top. But oh, so simple. No, it isn't. There a massive feedbacks in the system. And these feedforwards and feedbacks are very much governed by a range of environments, the social political, the business environment, the science and technology, et cetera. Now here is one of the many diagrams of the food system. And what we also know is that it is exposed to stresses and shocks. And those stresses and shocks can affect any of these three major compartments. And we will think a little bit about that in due course.

So, there we are with the food security situation, but we also know, of course, that the food system impacts the global environment. Soil degradation, over exploitation of aquifers, a big issue to do with biodiversity loss, marine resources, tremendous overfishing, many of the resources are fully fished. And of course, there's also pollution, chemicals, pesticides, litter and those sorts of things. And last but not least, arguably a quarter of all anthropogenic, greenhouse gases emanate from the food system.

We have a paper came out just middle January '19. Big paper in The Lancet called The Syndemic, which is really the paramount health challenge is for us in this century, the syndemic of obesity, under nutrition, and climate change all coming along together. But we've also got some concerns about animal and human interactions as well we know. First up on my list would be anti-microbial resistance, and the way that the profligate use of prophylaxis in animal husbandry is actually leading to this. Now, a lot of the use of animal antibiotics in animal husbandry is extremely sensible and well-targeted, but I think we should question the amount. And then the second point is this increasing risk of disease emergence from the rapid changes in the animal-human interface. And here we are, of course, with one of the biggest pandemics of the hundred years. And this is arguably to do with that very point.

We also have a host of ethical concerns. You can write what you like on this list, but here are some of the things which I think about. The order of them depends on your worldview, the size of the font on each of these depends on your worldview. But nonetheless, there is this ethical dimension to the food

system that we need to think about. Now, for many people, we've been using the phrase, "We therefore need to aim for sustainable diets." I personally don't care for the phrase sustainable diets." I much prefer the phrase, "Let's aim for healthy diets from sustainable food systems. Now let me explain what I mean. A healthy diet has to satisfy a number of these characteristics. It's got to have the right quality, and diversity, and it's got to be safe, and affordable and all those sorts of words, but it's also got to be sufficient. And sufficient doesn't just mean a bit more if you haven't got enough, sufficient means a bit less if you've got too much. So sufficient is the right amount.

The sustainable food system refers to the food system activities. Healthy diet is one of the food system outcomes. The food system activities, the what we do, have got to be environmentally sound and socially acceptable, but they've also got to be viable from a business point of view. And it's often easy to think of sustainable only meaning, environment. But if we're talking about the whole food system, it has to cover the economic dimension of the practitioners, big, small, or medium that are operating in the food space. So that's what's going on today, but I think we can ask the question, what's coming down the track and for whom? What does the future hold? If we just start by looking at the World Economic Forum, Global Risk Reports over the last three years, 2019, '20 and '21, we see that there's been a increase in issues. We see the arrival of infectious disease on the list.

We still see extreme weather as the top of the list for global risks in terms of likelihood. But if we also look at the risks in terms of impact, we see that the weapons of mass destruction, which was top of the tree only two years ago, has year-on-year gone down. And it's been replaced by climate action failure. And now this year, of course, by infectious disease. So, I think it is very interesting to observe how the perception of risk, and the likelihood, and the impact has changed over recent years. My question is, where is it going? What will this list look like in a year, year-or-two's time? So, I don't think anyone would disagree that we need to enhance the resilience of our food system in order to satisfy societal needs. And to do that, we need to think about four questions.

And one of the big programs we have in the UK is called Resilience of the UK Food System, which I coordinate. And this has gone a long way down the thinking about food system resilience, which I'd like to share briefly. We start with four questions. Couple of obvious questions. Well, resilience of what? And resilience to what? Really important questions. But there's a third question, from whose perspective? Is it from my perspective, is it from a farmer's perspective? Is it from a supermarket managers perspective? And the fourth question is over what time period? So, it's all very well to say, we need to be more resilient, but do we mean over the next day, or the next year, or the next decade, or what? Because depending on the answer to these four questions, we will be able to set the boundary of the conversation that we have, and hence, the boundary of the area of interest. And it's really important in resilience discussions to agree what the boundary is, answer the four questions. So how do we do that?

Of what? Well, is it actually the food system functioning, that is to say the activities, the machinery of the food sector, where many colleagues on the webinar will be working. So, is it the functioning that we're interested in maintaining, preserving the resilience, enhancing the resilience of, or is it actually the function, which is what I call the outcomes? And I would argue from a societal point of view, we're really dealing with the outcomes. Most people are interested in their food security, and their job, and they want clean water and all that sort of stuff. And for many people, they don't really mind about the machinery, as long as the food is on the shop and it's affordable. So, of what? We've got to be very careful to get that right.

To what? Well, we can talk about stresses. Stresses are pressures that exert themselves on the system. They're slowly ramping up. They're powerful. They need attention. They're not in themselves a surprise. Or are we dealing with shocks? And these are surprising things by definition, examples on the list here, you see, we had quite a big shock in the UK a few years ago, as you can imagine with the referendum, but there are food scares that come and go, as many people will be aware. Extreme weather events, geo-physical, volcanoes and the like. And of course, here we have the pandemic. So, these are shocks.

Then we need to ask from whose perspective? Well, is it the people who are working in the food sector? The people doing the doing words? The farmers, the traders, the food industry, et cetera, ourselves as consumers, of course. Or is it actually from other people's perspectives? Is it from a policy perspective, or a private interest perspective, or a society-at-large perspective?

And then the fourth question, over what time period? We could either have some short-term interruptions, for instance, an IT malfunction might be really, really serious for just-in-time delivery, or food scares can concern the shoppers and they stop buying broccoli or whatever it is. As opposed to the longer-term disruptions, which might be these stresses, which are happening over arguably decadal time periods. And do we need to have resilience in the short term or the long-term? So four questions really important to answer. So what do we do once we've answered our questions and we've set our boundaries so we know what we're talking about, well, what do we do about it?

So, in our program in the UK, we think about three strategies for enhancing resilience of the food system outcomes. Interested in the food system outcomes, the what we get. Robustness, fairly common understanding of the word aiming to resist disruption. You've got a nice big, strong wall all around everything, and that's going to be just fine. We're going to resist disruption to the existing food system outcomes, because we like what we get. The second one is the notion of recovery, where we're aiming to actually return to the food system outcomes that we know and love before the shock or the stress hit them. And that's what we might call a bounce back to the status quo. The third one, and this I think is a really interesting one is what we call reorientation. And this is where we aim to accept alternative food system outcomes either before, or after disruption. And this is actually very synergistic with sustainability. So, thinking about the environment, the animal interactions, the ethical issues, and of course, the food security dimensions in terms of the metrics we use to measure those.

And we actually think about enhancing those in terms of reorientation as well. Can we be satisfied with different food system outcomes? Now, whatever it is of these three we wish to do, they all involve reorganization of the food system activities. We need to reorganize the way the food system activities happen. Now, another word for reorganizing is adapting, and adaptation is a key word in resilience circles. So, we either adapt the food system activities to maintain or return to the status quo, which is what one does for robustness or recovery, or we adapt the food system activities to transform the food system outcomes into something else, which is the reorientation.

So, the argument goes that we adapt an activity to transform an outcome, whatever it is, they both need what we call systemic innovations. And these are innovations that require collaboration across the chain of between multiple actors. And it's really important to think of the food system as a system when discussing these adaptation strategies, because there will be unforeseen consequences somewhere else in the system that need to be enlightened and discussed. How do we do it? Well, first of all, we can reorganize the food system activities. We can do the doing words differently. We can farm differently. We can process differently. We can consume differently. Absolutely.

Or we can reorganize the food system environments, the drivers, which are affecting the way the food system actors are undertaking their work. And there's a range of options here. Third thing we can do, of course, is to reorganize our views of what we want from food system outcomes. And the InterAcademy's panel put out a big report few years ago which says, "Requires a radical transformation of the system." We need to transform what we're expecting from the system. And three things they highlight, different farming, better farming methods, changing diet. And perhaps the third one is really important as well is, valuing food for its nutritional value rather than cheapness. And this I think is a very important set of recommendations from the report.

So, how do we enhance food system resilience given these points? Well, some of you might've seen this short piece it was in Nature Food a year or so ago, myself and a couple of colleagues put in a piece to say, well, we really need to answer the four questions in the first instance, the of what, to what, from whose perspective and over what time period, absolutely important to do that. Here they are. And what we need to do is get that nailed down. But the answers to those questions are themselves a matter of perspective, and quote, "The pursuit of resilience by one actor may undermine the resilience of another and lead to contestation."

So, it really does need a negotiation. So, in order to negotiate food system resilience, we need this, what we call a new dynamic by decision-makers at all levels in the food businesses need to be guided by their understanding of the food systems they shape. Answering the four questions will help enormously. Need to be aimed towards helping a new balance of power working with and through more inclusive institutions. More people, more institutions. Needs to be grounded, recognizing the power of interactions between the stakeholders and the system actors. This is the negotiation territory. And it really needs to be thought of as a negotiation. We need to think about negotiating food system resilience, not just doing it, not just overlaying it on our current actions. And to close, there's two points that are necessary. First of all, we need to begin to shift from a, what I call, a historical adherence to shareholder capitalism, to a widening acceptance of what's been termed stakeholder capitalism. And this is going to require a call for all the stakeholders to come to the table and to negotiate that resilience.

So, in summary, we have a complex system, there are a series of activities; the what we do, a series of outcomes; the what we get. If we wish to enhance the resilience of the food system outcomes, which is arguably what society is after, we need to understand how to adapt the activities so that we can transform the outcomes in a way that is better for health, for business, and for the planet. Thank you very much.