

Healthy Lives from Sustainable Food Systems October 2022

Food Safety vs. Food Security

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Background

How safe is safe enough? The most basic human need is keeping hunger away. However, food and water inherently contain both microbiological and chemical hazards, and therefore there are constant decisions to be taken regarding what is or is not safe to consume. If we were only to allow food that is completely safe to eat, we would not have enough food to feed our constantly growing population. This is an example of when the different UN Sustainable Development Goals (SDGs) can be in conflict with each other, and frequently priorities and goals do compete with each other. Risk assessment is a systematic process aimed at informing the decision-maker about the risk associated with food and feed hazards and sometimes also the possible beneficial effects of the same commodity to the consumer. The decision-maker will also have to consider the impact at a societal level, for example, food security, economics, environment, and culture, and will often face conflicting goals and ethical dilemmas.

Communication is a crucial factor in risk management, which includes messages to the public and stakeholders, as well as the communication between decision-makers and the experts. Failed communication may have unintended consequences. For example, when a report on the presence of the toxin aflatoxin M1 in milk in Ethiopia was picked up by social media, it caused many consumers to fear drinking milk, which resulted in severe economic impacts and loss of nutritious food in a food-insecure country that may have had worse consequences for human health than the toxin itself.

Thus far, high-income countries have been spared food insecurity consequences due to potential health hazards. If consumers avoid a product due to a perceived health risk, such as dioxins, GMO, aflatoxin, heavy metals, PFAS or pesticide residues, they will have other products to choose from, regardless of whether the perceived risk was real. However, politicians and other decision-makers will face ethical dilemmas: Regulations aimed at protecting European consumers (and livestock) from risks related to food contamination may result

in shortages of safe food in poorer countries. And would we, for example, accept a higher risk from foodborne hazards if that could reduce our carbon footprint?

With growing populations and uncertainties in the world, there may be more crises (wars, droughts, floodings, pandemics, etc.) in the future, where European citizens as well may need to consider lowering our food safety standards to ensure food security. This may lead to difficulties with communicating messages. How would consumers react if they were left with only food that can be produced locally, and if they were told to increase consumption of products that they were recommended to avoid yesterday?

Approach

The task of managing the multiple facets of emerging threats is too complex to be grasped by a single person. To make the best decision, it is not enough to understand the nature and expected magnitude of the consequences of a decision. Besides the challenges of even quantifying and comparing the consequences, the decision problem takes us to the cutting edge of decision theory and requires a solid understanding of the human mind and the society in which the decision will be applied.

For this reason, a cross-disciplinary working group, involving decision-makers, politicians, scientists, growers, producers, stakeholders and consumers, may be necessary to discuss these questions if we are to have sufficient operative capacity when a crisis occurs. Once a competent working group is formed, the activities may range from the entirely theoretical to the practical. Building a theoretical framework would help us identify the key uncertainties to address in research and fact-finding missions, such as risk assessments, and to develop methods to support the work. Building an operative capacity may require more practical activities, including training, education and joint exercises, where participants with different roles and professions improve their skills by solving complex problems together.



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A key idea behind this workshop was thus to bring together people with different national and professional backgrounds, in order to increase awareness of the challenges ahead and hopefully seed new networks to work on the identified problems, as well as to inspire future research ideas.

The workshop aimed to discuss the conflicts between interests and sustainable development goals (SDGs) in relation to food safety, food security, economic development, and environmental sustainability. The participants also discussed potential research needed to find solutions and to change policies, as well as to create linkages and networks to minimize these conflicts and find potential synergisms. The goal was that the workshop would provide insights into the different aspects of food security and food safety trade-offs, particularly in relation to crises; that these conflicts of interest would be raised to the surface; that contacts between different actors and stakeholders would be generated; and that preparedness for future decision-making processes would be initiated and facilitated.

The workshop used group and plenary discussions to consider the following questions:

- How safe is safe enough, and how do food safety priorities change at different levels of food insecurity?
- What is the impact of food standards on global food waste and the unequal burden of foodborne disease?
- How can these questions be dealt with on a global level to promote reduced food waste and improved health for all?

Recommendations

The workshop attracted participants from many different disciplines and included many different actors, which helped the discussions. One conclusion was that there are many conflicts between the various SDGs, not only between food security and safety, but also conflicts with environmental goals, equity, poverty reduction, biodiversity and many others. Identifying solutions that would avoid conflicts was not easy. There are many topics that require research, especially how we can increase resilience in food production, ensure safe recycling of food waste, and understand what the risks in different populations are from the various hazards.

One key knowledge gap that was highlighted during the workshop was that often we lack knowledge on how safe food needs to be for it to be safe enough. The present risk assessment and risk-benefit models also need to be developed so that they can include other considerations, including economy, food security, equity, alternative uses and food waste.

Another topic raised was the lack of standards and regulations for sustainable production, and that there is no good way to

measure it. Sustainability has many aspects, and presently, it is not possible to measure these simultaneously in a good way. This would require research on how we best produce “planetary friendly” food.

The research suggestions from the workshop call for projects that would optimally include multinational teams of researchers from different disciplines, meaning that funding agencies would need to accommodate this by giving larger grant opportunities. However, not only research is lacking, but also the engagement of policy-makers and politicians in how the conflicts between goals can be resolved. In this connection, however, it is important that a global perspective be taken, so as to not simply move the problem from one country to another. In addition to the engagement in development of policies and regulations, it is also important to consider how the messages are communicated to the public, especially as social media have an important influence, and there are great concerns about food safety, especially regarding fears about chemical contamination.

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