

Defining the Food Safety System for 2030 – a robust framework to deliver on a food and nutrition system of the future

The context:

In September 2015, at the UN Summit, countries adopted a set of goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda. On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development officially came into force and each goal has specific targets to be achieved over the by 2030.

For these sustainable development goals (SDGs) to be reached, everyone needs to do their part: governments, the private sector, civil society and academia - a partnership approach is required.

The SDGs require us to rethink how we grow, share and consume our food. Many of the Goals incorporate food safety into the targets of Agenda 2030 yet the role of food safety has received startlingly little attention in the debates on food security, nutrition and health outcomes. Food safety has a tremendous impact on all three. As the World Health Organisation says, "Food safety, nutrition and food security are inextricably linked. Unsafe food creates a vicious cycle of disease and malnutrition, particularly affecting infants, young children, elderly and the sick. Foodborne diseases impede socioeconomic development by straining health care systems, and harming national economies, tourism and trade." (HPLC Report¹).

The specific SDGs that relate to food safety or elements that underpin food safety are the following:

- Goal 2: Zero Hunger
- Goal 3: Health
- Goal 6: Clean Water and Sanitation
- Goal 12: Sustainable Consumption and Production
- Goal 13: Climate change
- Goal 15: Life on Land
- Goal 17: Partnerships to achieve the Goal

Many have said that a profound change of the global food and agriculture system is needed if we are to safely nourish today's 815 million hungry and the additional 2 billion people expected by 2050. And whilst the food and agriculture sector offers key solutions for delivering on these goals there is no market for unsafe food so now we need to stress the importance of funding for food safety science.

And whilst the SDGs have to be the basis upon which we develop our thinking, there are some key drivers for why we need to invest in food safety science.

- Climate change
- Globalisation

¹ HPLC REPORT Role of Food Safety in ensuring food safety, access to adequate nutrition, and improved health outcomes

- Traceability
- Consumer trends

Arguably the most fundamental impact of global **climate change** on the human population is, and will continue to be, upon food production systems. People need to eat and they need to eat safe and nutritious food. The ecological and social changes arising from global warming may be far reaching, but there is little hope of adapting to these changes if safe, nutritious and sustainable food supplies cannot be assured. The interface of climate change and food security which is about having “physical and economic access to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life, has understandably been the subject of much scrutiny. However, within this definition, the impacts upon food safety have received comparatively little attention.

The chemical and biological safety of food is a vast field - subject to a myriad of influences both natural and anthropogenic. Those influences may sometimes be global in their scope, but often will be highly localised, dependent upon changes in regional food production practices, legislation and microclimates. An increasing challenge to climate prediction scientists is to refine large scale predictions into progressively smaller regional scale predictions which can be integrated with truly localised conditions. This is not an easy task.

This difficulty in predicting regionalised changes from continental or global climate models has consequences. People think, and governments act, primarily on the basis of localised, personal threats. If the changing weather outside is shown to adversely affect the security and safety of the food on their table, people will be persuaded of the importance of both local and international mitigation and adaptation strategies in the face of climate change. Therefore, understanding the impact of climate change on food safety is key and strategically investing in food safety science needs serious consideration.

The growing **globalisation** of food manufactured, distributed and marketed across borders results in an increased risk of food incidents. It also requires robust food traceability systems to track back on potential risks and their eliminations when food incidents occur. The increased globalisation and free movement of food requires regulatory authorities to be ever vigilant but we will also have to rethink our food systems if we are to truly commit sustainability.

Food pathogens don't respect borders and thus every element of the food chain from farmer, manufacturer, distributor through to retailer need to ensure that not only do they abide by the law in how they source goods, but they must be satisfied that they are dealing with reputable suppliers and produce food to the highest quality standards to ensure it poses no health risk to consumers.

A regulator must base risk management actions on sound science and do so in a way that is clear and acceptable to all stakeholders. Food safety science of this nature and robustness of the evidence base requires higher levels of investment.

Alongside globalisation, the food supply chains are getting longer and more complex than ever despite a move towards shorter supply chains and locally sourced foods. Companies are sourcing ingredients from multiple countries and manufacturing products in one country and then

distributing those products nationally, regionally, and internationally. In a food safety incident or crisis, it is critical that those who are responsible for protecting public health can recall / withdraw products from the market very quickly to ensure consumers do not get sick or even worse die as a result of consuming contaminated foods. Therefore, it is important that robust accessible **traceability** systems are in place so that we can get product back quickly.

In Europe, all food businesses are legally required to have a traceability system in place. Understanding the supply chains and how the safety of those supply chains may be compromised is critical to regulators so that proportionate risk management decisions can be taken and that these decisions are based on robust risk assessment. This requires investment in food safety science

Consumers rely on regulatory authorities and governments to protect them – their health and their interests. They expect that the food they eat is safe and will sometimes knowingly expose themselves to foods which are inherently more risky than others. They now have access to substantial amounts of information through social media, the internet and word of mouth. It is the role of national food authority's to ensure that consumers have access to accurate and timely information about their food so that they can make informed choices. Consumers of today and tomorrow have and will continue to have very high expectations – but at the very least they expect that their food is safe, that it is trustworthy and that the authorities have their best interests at heart.

A recent study by Bord Bia, the Irish Food Marketing Board, identified a number of consumer trends in a number of export markets across the globe. The insights from the study are intended to be used by Irish food companies to develop new and innovative products for markets they wish to access.

However, some of these trends may give us insight into how we can deal with consumers perceptions of risk with regard to food. It may also help us to understand how to communicate with them. Communicating food safety risks is challenging and as we have seen from food incidents in the past, and I would suggest there is also a need to invest in the science on risk communication to ensure the risk assessments and risk management decisions provide assurances to consumers where appropriate or indeed communicate that a certain food poses them risks.

So with these challenges in mind, there is a need to think more carefully about the investments we make in the future in research and innovation and how that investment translates into value for all stakeholders. However an important element to this is to be clear about what and where investments should be made or structures need to be put in place. To inform this, the FSAI would like to bring together, at a future event, academicians, regulators and other stakeholders to help identify and define what food safety research (and other) investments are required to underpin a safe food supply within the context of the SDGs, Europe's Food2030 initiative and the proposed UN Centre for Food Security voluntary guidelines on food systems and nutrition. In advance of the stakeholder event, FSAI would like to ask you to complete a [survey](#) so that we can structure the event appropriately.