



Food and Agriculture Organization
of the United Nations

The Future of Food Safety: an overview on FAO's foresight programme



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of the United Nations

Food safety
is central to
FAO's work



Access to trade is critical to alleviate poverty

Trade

Food Safety

Food Security

Public Health

If it is not safe, it is not food

Food safety is essential to sustain a healthy life

A diagram illustrating the components of Food Safety. At the center is a large orange circle labeled 'Food Safety'. Surrounding it are three smaller circles: 'Trade' at the top, 'Food Security' at the bottom left, and 'Public Health' at the bottom right. These three outer circles are connected by a thick orange line. The background of the diagram is a collage of images: a person in a green shirt and a straw hat holding a basket of produce, a hand exchanging money, a person holding a white container, and a table with various dishes of food.



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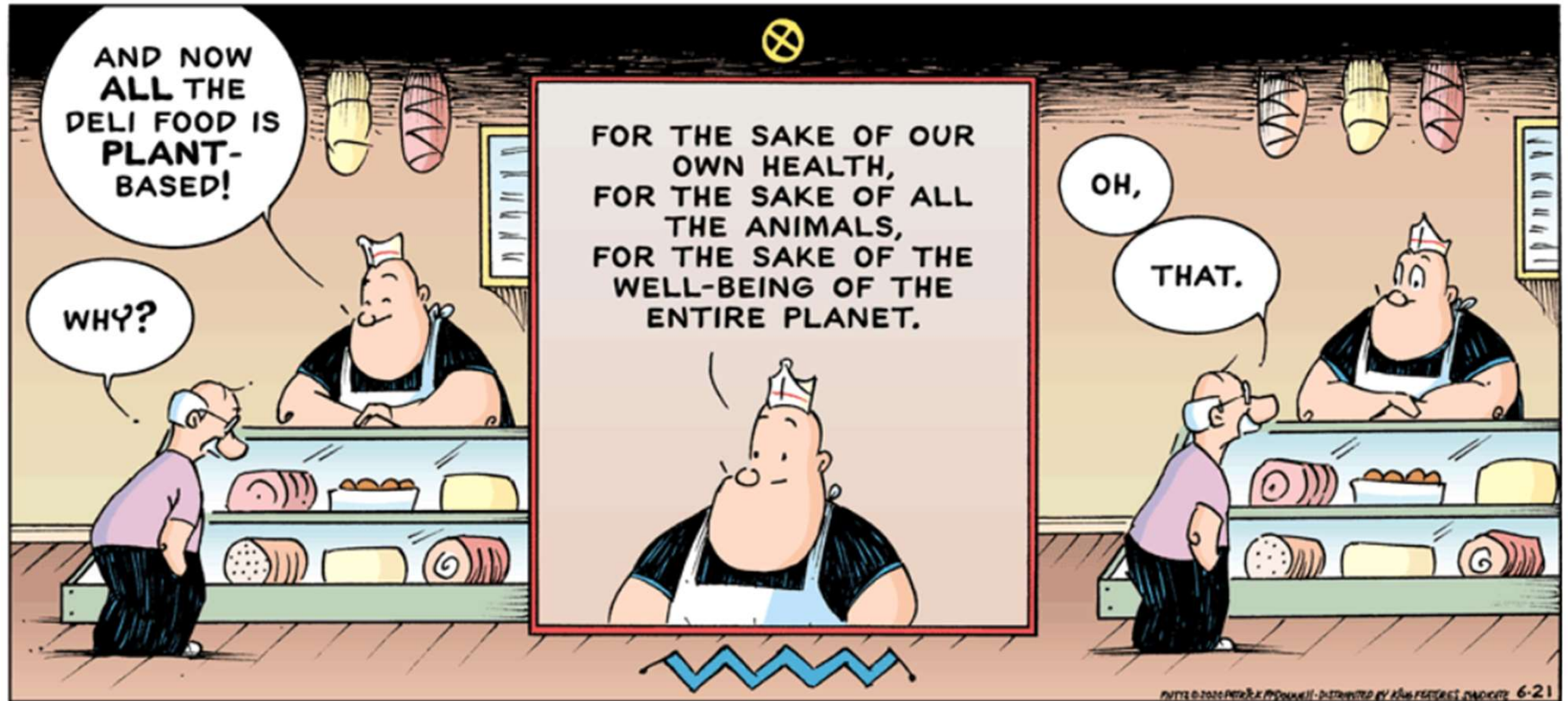
Global
agrifood
systems
operate
within a
constantly
evolving
landscape

- ✓ Globalization of trade and changing markets
- ✓ Climate change
- ✓ Population increase
- ✓ Need for sustainability
- ✓ Urbanization
- ✓ New food consumption patterns
- ✓ New technologies
- ✓ Scientific progress
- ✓ Etc.....





We need to
keep pace
with the
changing
times





Foresight is important, but what is?

Foresight does *not* predict the future.

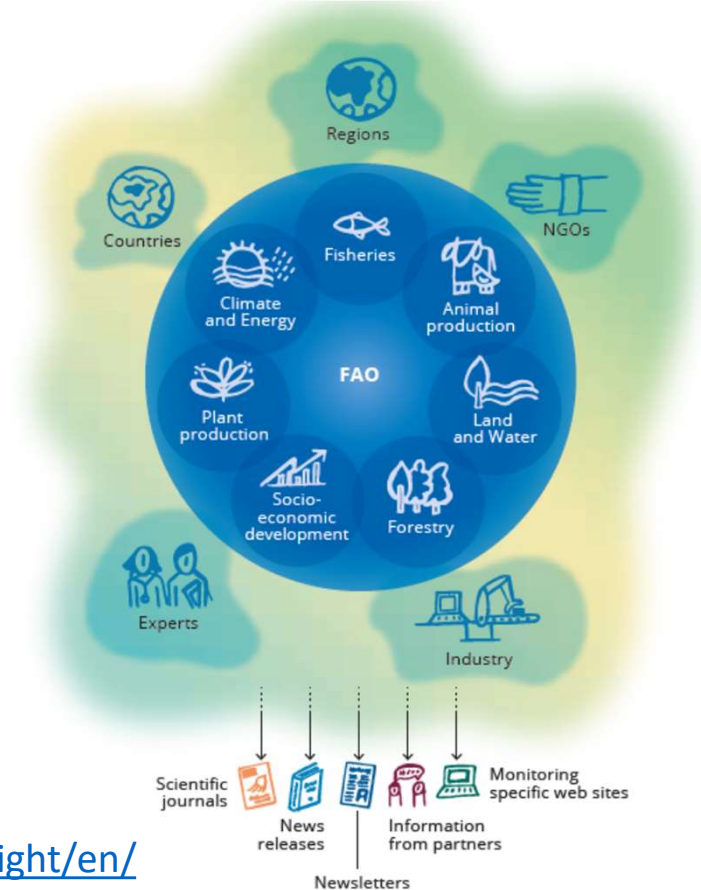
Structured set of approaches for gathering and interpreting intelligence. Leads to the development of proactive strategies/plans to identify and address emerging issues in advance of their occurrence.

Supported by a collection of 'forward looking' techniques (e.g. horizon scanning, scenario building, trend analysis, etc.) that can be used to support decision-making.

For more info see:

<https://www.fao.org/food-safety/scientific-advice/foresight/en/>

Foresight requires input from a wide range of stakeholders





Our foresight process

I FIND

Multiple sources



- Scientific journals
- News releases
- Newsletters
- Information from partners
- Monitoring specific web sites

COLLECT

Repository



II ANALYSE

Prioritization criteria



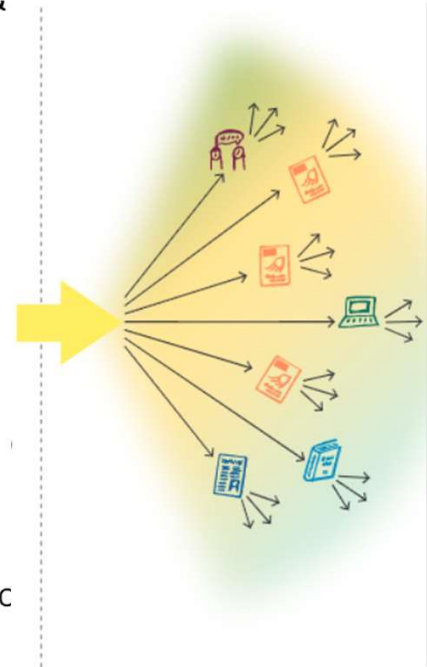
Repository



Further analyses & streamlining

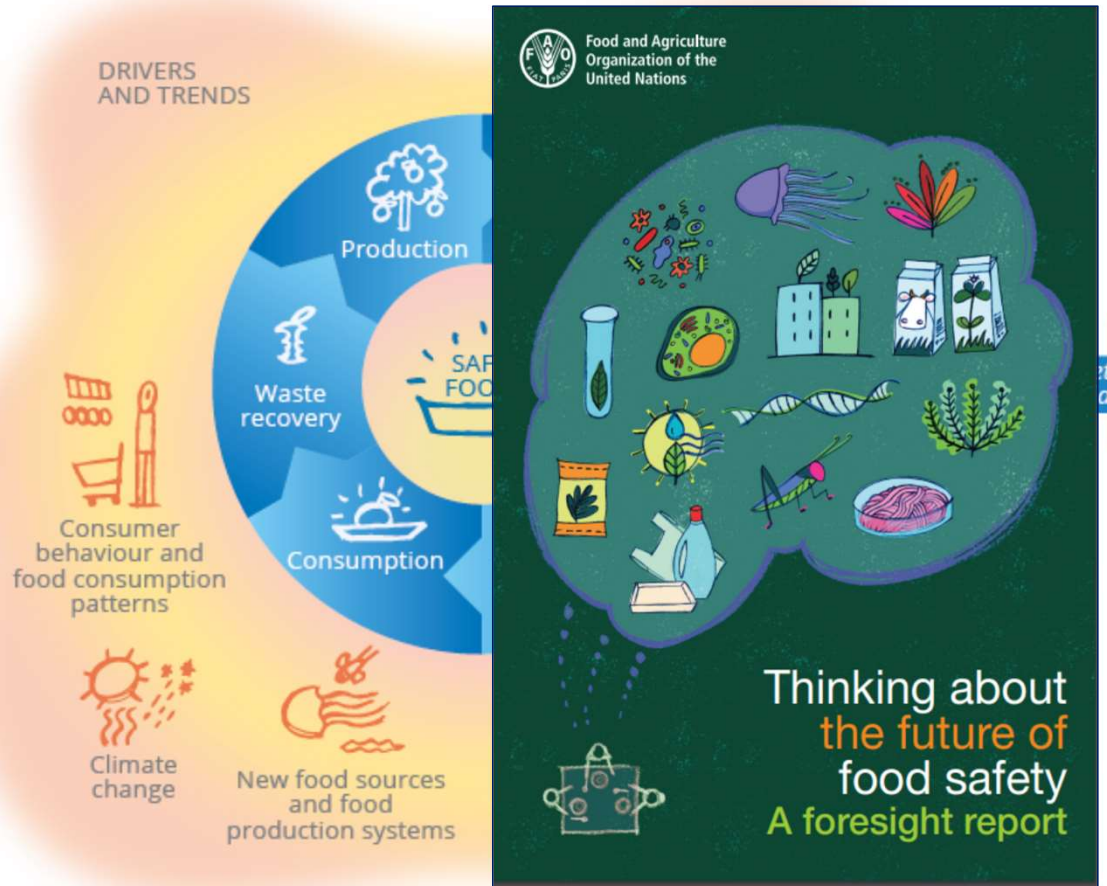
- ✓ Identification of issues of interest
- ✓ Prioritization of resources
- ✓ Evaluation of impact on future food safety risk assessments
- ✓ Development of policy recommendations
- ✓ Facilitation of future work of FAC

III COMMUNICATE





Changing agrifood systems invites more complexities in food safety



Foresight vs Early Warning in Food Safety

<https://doi.org/10.4060/cb8667en>



Changing consumer preferences and food consumption patterns

Changes in food purchasing habits and consumption patterns of consumers trigger changes in dietary risks arising from potential contaminants found in food.

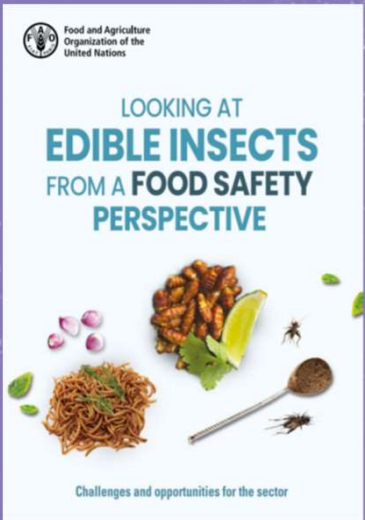
Consumer preferences are constantly evolving in response to a multitude of different factors.

Consumers' food safety awareness is shaped by how they search for and share information. Importance for trusted sources of information.





New food sources and food production systems



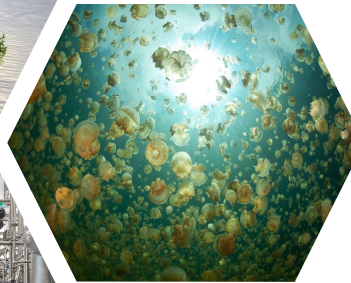
Plant-based alternatives



Seaweeds



Edible insects



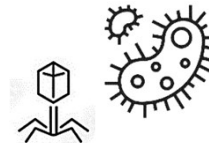
Jellyfish



Cell-based food production

Food safety implications

Microbiological hazards



Chemical hazards



- allergens



Regulatory aspects



Technical Meeting on New Foods 2023

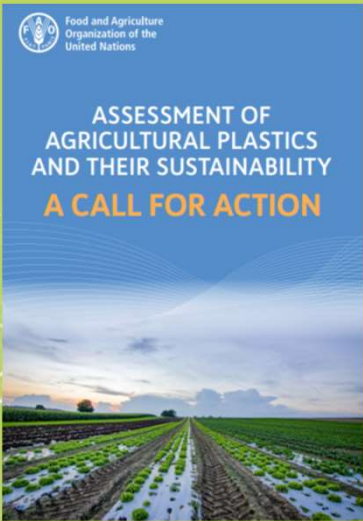
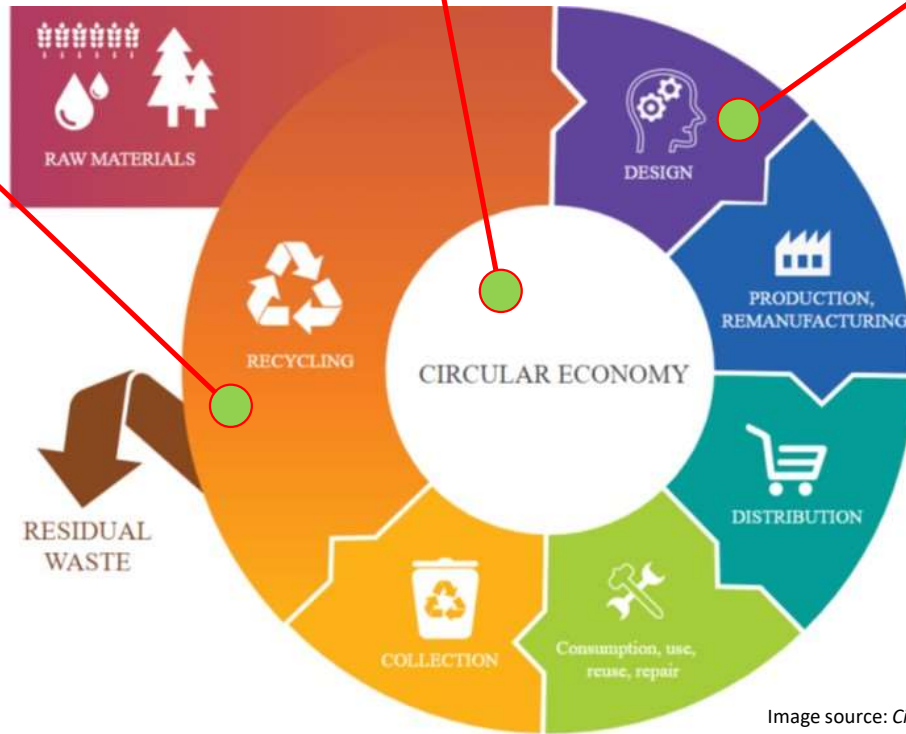


Exploring circular economy through plastic recycling

Recycling and reuse of plastic food packaging require careful considerations

Increased emphasis to overcome our linear way of consumption of resources

Knowledge gaps need to be addressed





Microbiomes, a food perspective

The growing understanding of the microbiome-environment-host

Understanding the relative role and underlying mechanisms of the

of all bacteria, and fungi in our guts. Some is transmitted through genetic

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A FOOD SAFETY PERSPECTIVE

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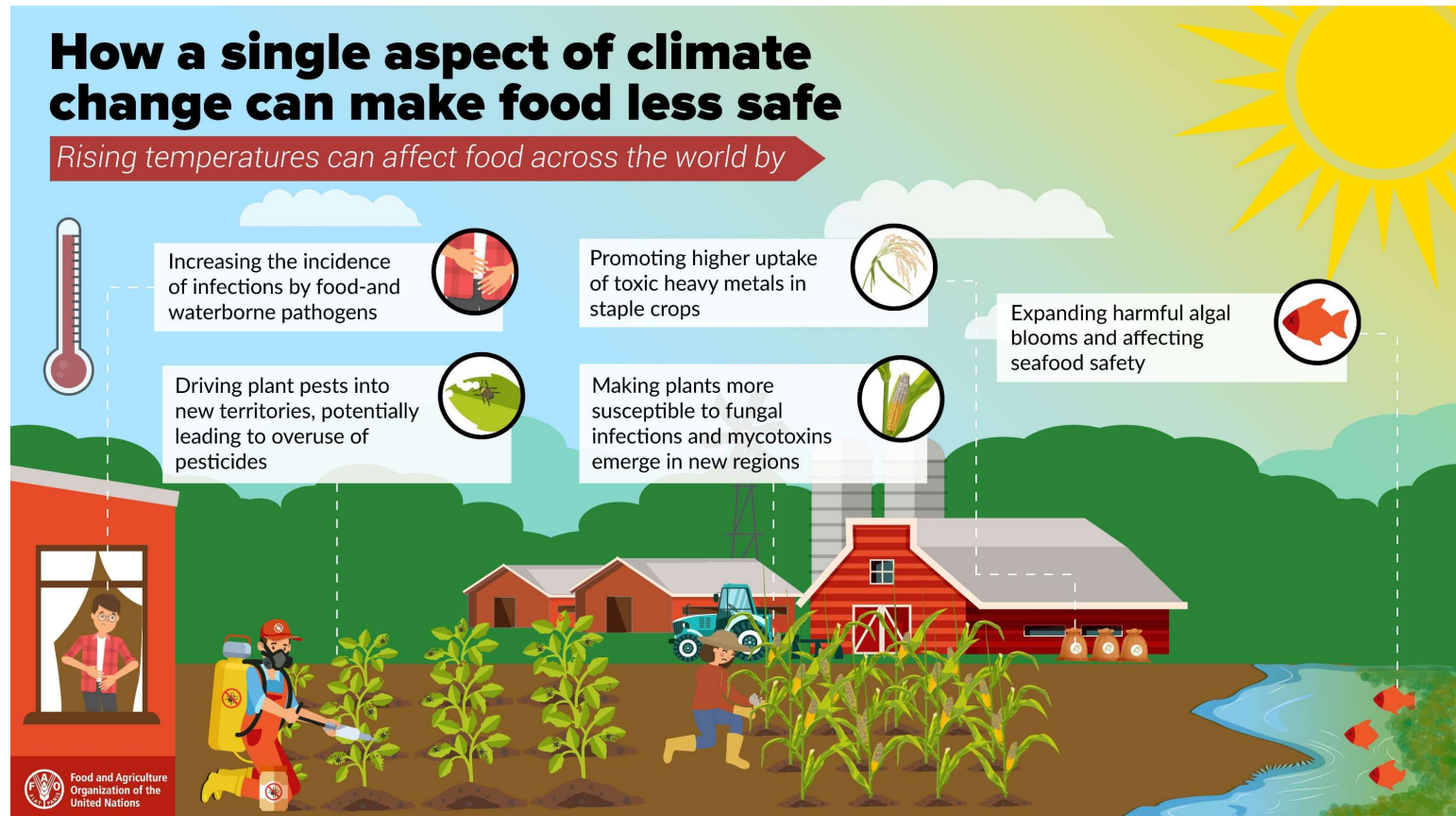


Climate change and food safety impacts

CLIMATE CHANGE: IMPLICATIONS FOR FOOD SAFETY

CLIMATE CHANGE: UNPACKING THE BURDEN ON FOOD SAFETY

Climate change has serious implications for both biological and chemical contaminants in food and water by altering their occurrence and severity.





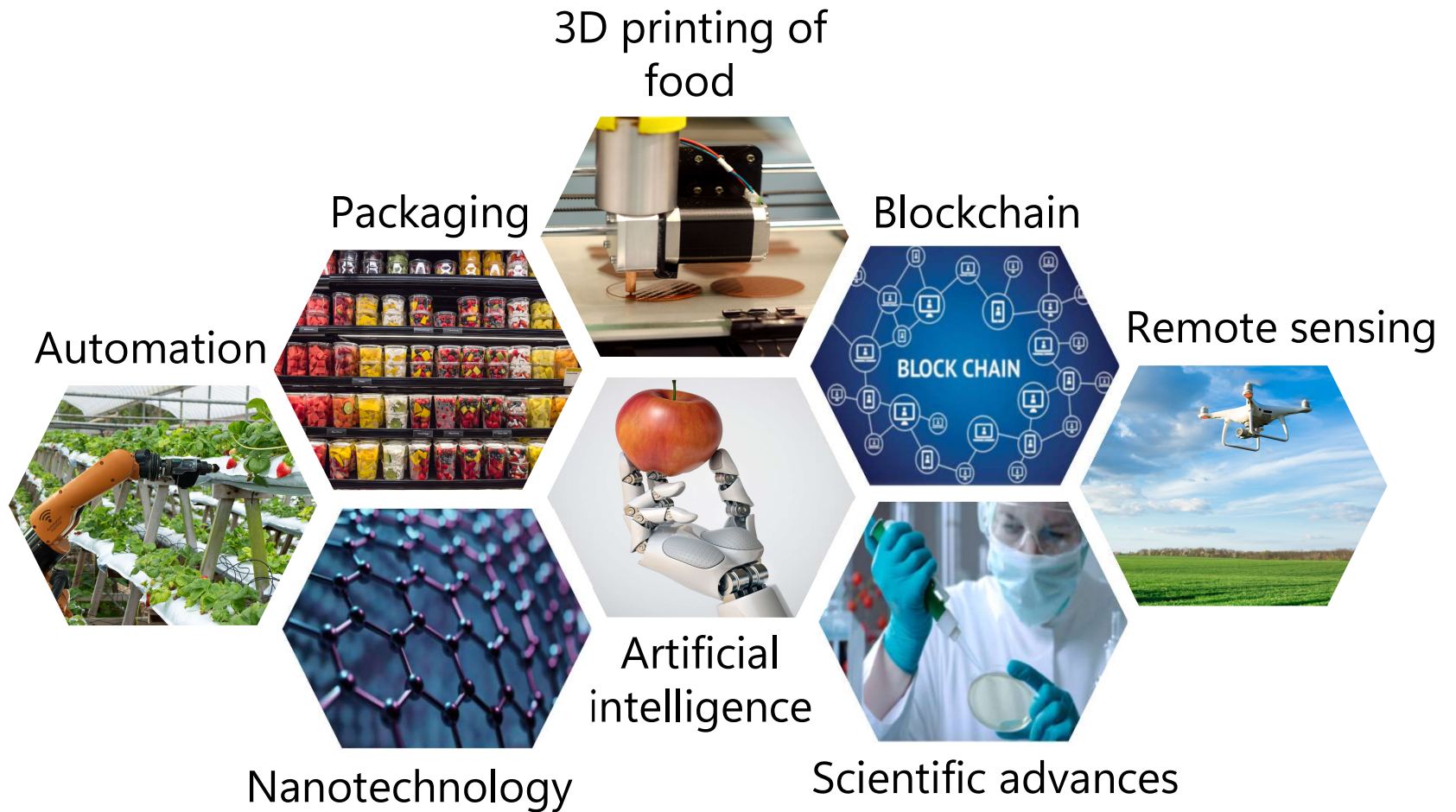
Food safety considerations for agriculture *within* urban spaces

- ✓ Various innovative food production approaches within urban areas are gaining attention, such as indoor vertical farms
- ✓ Agriculture within urban areas can meet local food and nutrition security concerns, and reduce food miles
- ✓ Multiple food safety implications can be considered:
 - Soils
 - Water sources and circular economy
 - Air pollution
 - Others
- ✓ Good governance mechanisms (capacities, policies, financial support) specific to urban food systems will be needed for safe and sustainable urban food systems





Technological innovations and scientific advances





Conclusions

- ✓ Foresight plays an important role in identifying emerging food safety challenges and opportunities that will continue to arise as the global context evolves with ongoing transformation of the agrifood systems
- ✓ Foresight can help bridge science and policy by informing a range of food chain-related decisions
- ✓ FAO is well-placed to collect, analyze, and disseminate information on various emerging issues from numerous fronts, while also providing support to countries in implementing their own foresight activities
- ✓ Effective foresight approaches rely on information gathered from a wide range of sources and this endeavour will not be possible without collaborations with our various partners, both in-house and outside. Continue to seek partnerships...





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Thank you

<https://www.fao.org/food-safety/scientific-advice/foresight/en/>