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Emerging Issues: Addressing Food Monitoring as a Foundation of Food Control Systems

Professor Chris Elliott, OBE

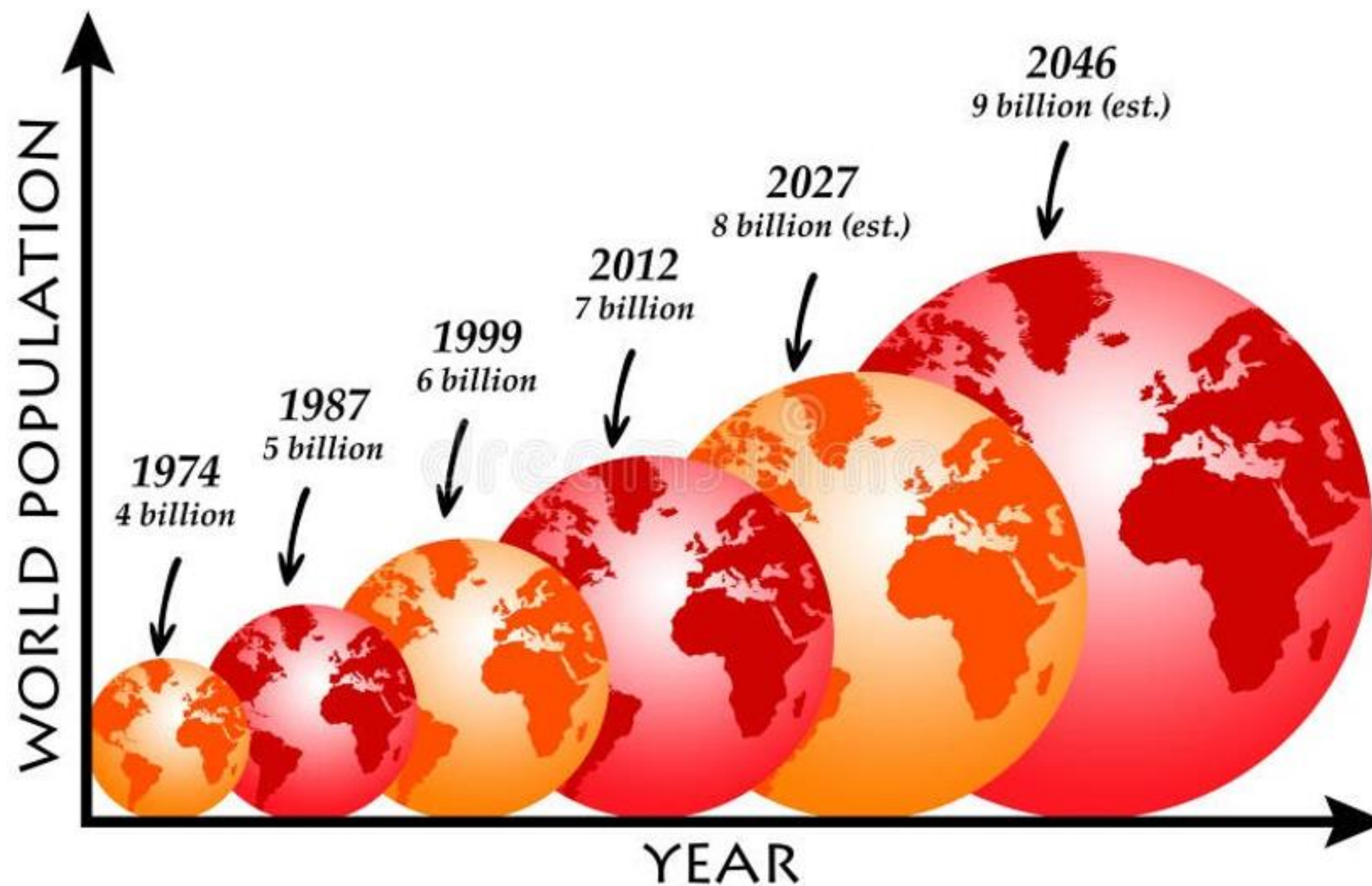
Professor of Food Security, Thammasat University

Institute for Global Food Security, Queen's University, Belfast





Food Security by numbers





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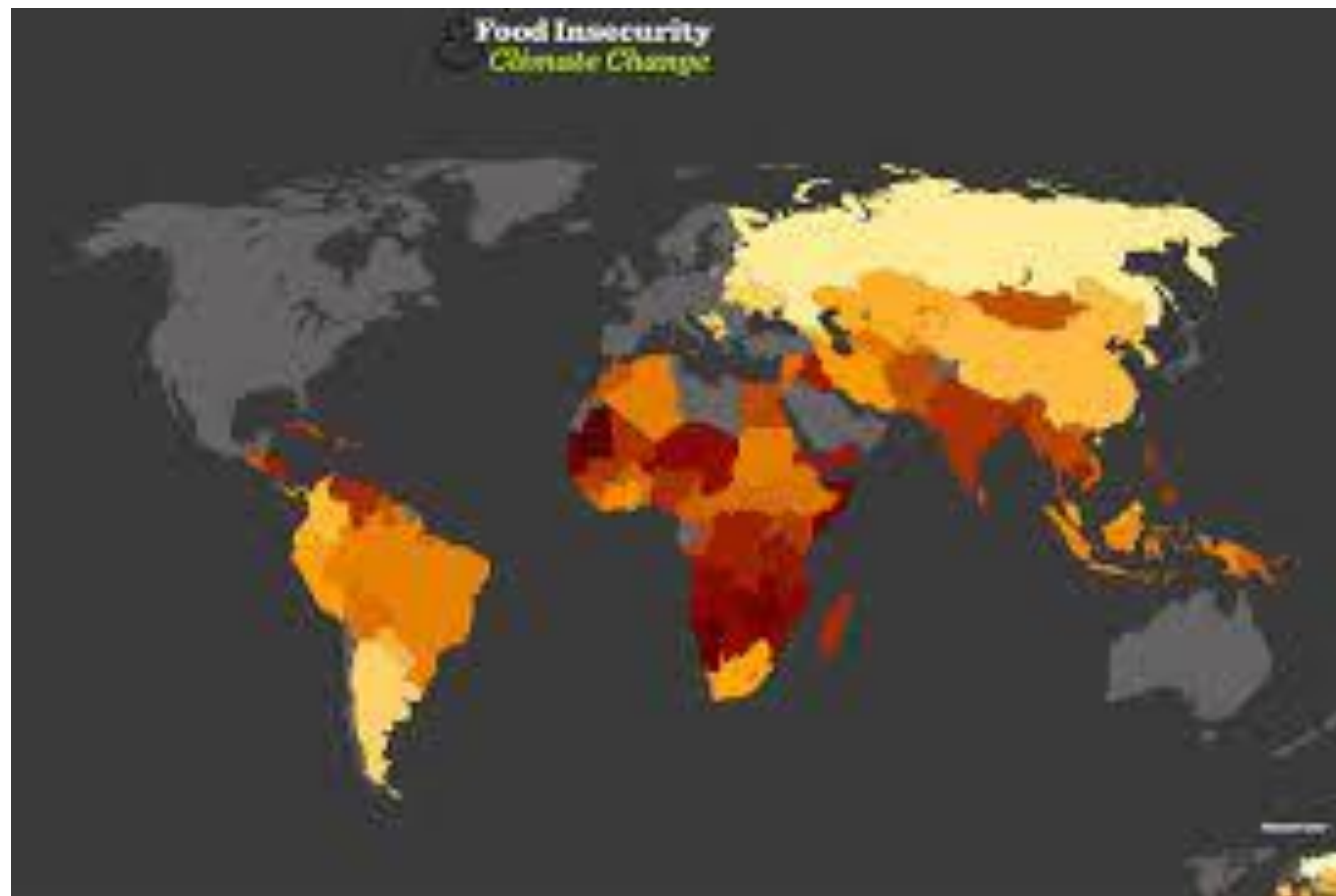
The four big drivers of changes to the global food supply system.





Food insecurity linked to climate change is a complex and multifaceted issue

- Extreme Weather Events:
- Shifts in Growing Seasons:
- Temperature Increases:
- Water Scarcity:
- Sea-Level Rise:
- Reduced Fisheries:
- Displacement and Conflict:
- Rising Food Prices:
- Reduced Food Nutrient Content:
- Food System Vulnerability:





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Supply Chain disruptions





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Japanese customers brave the rain to line up for cheap, stockpiled rice





Wheat

2022 Data - 1

Summary Forecast Stats Alerts Export

Wheat (USd/Bu) 759.00 -125.00 (-14.14%)





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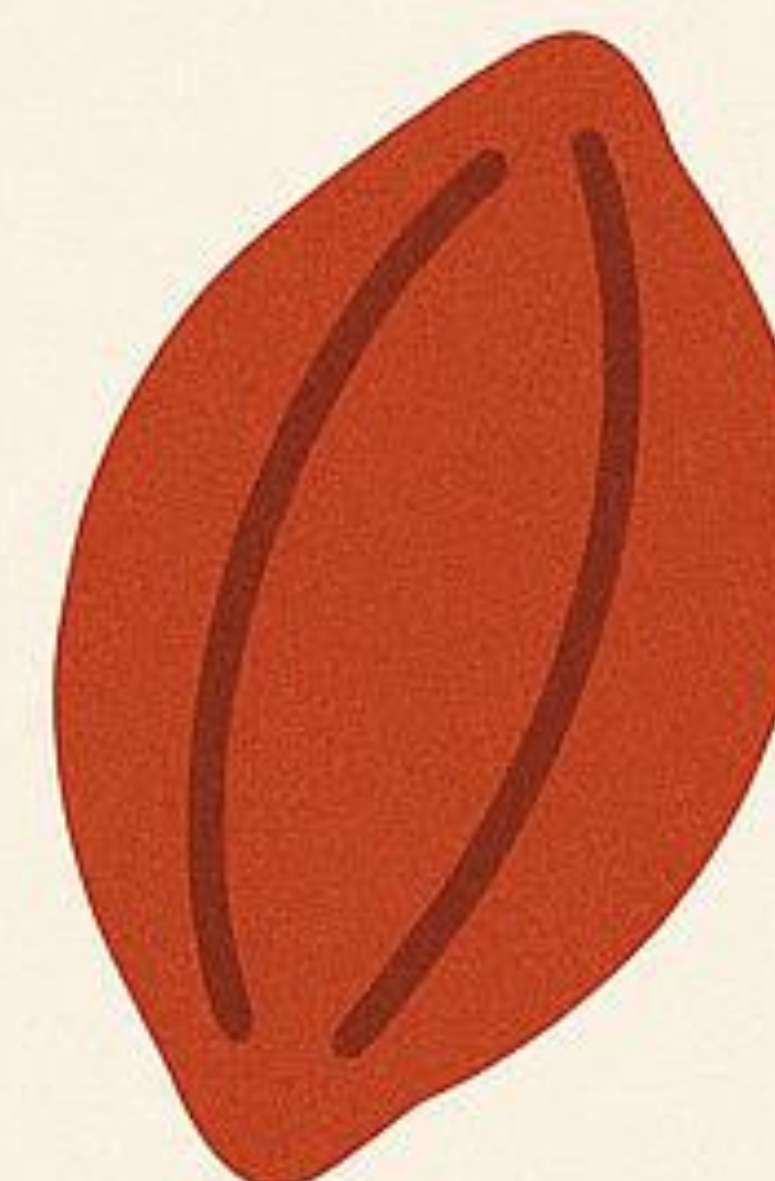
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FEED AND FOOD COMMODITIES LISTED IN THE EUDR REGULATIONS



SOYA



CACAO



PALM OIL



MEAT



COFFEE



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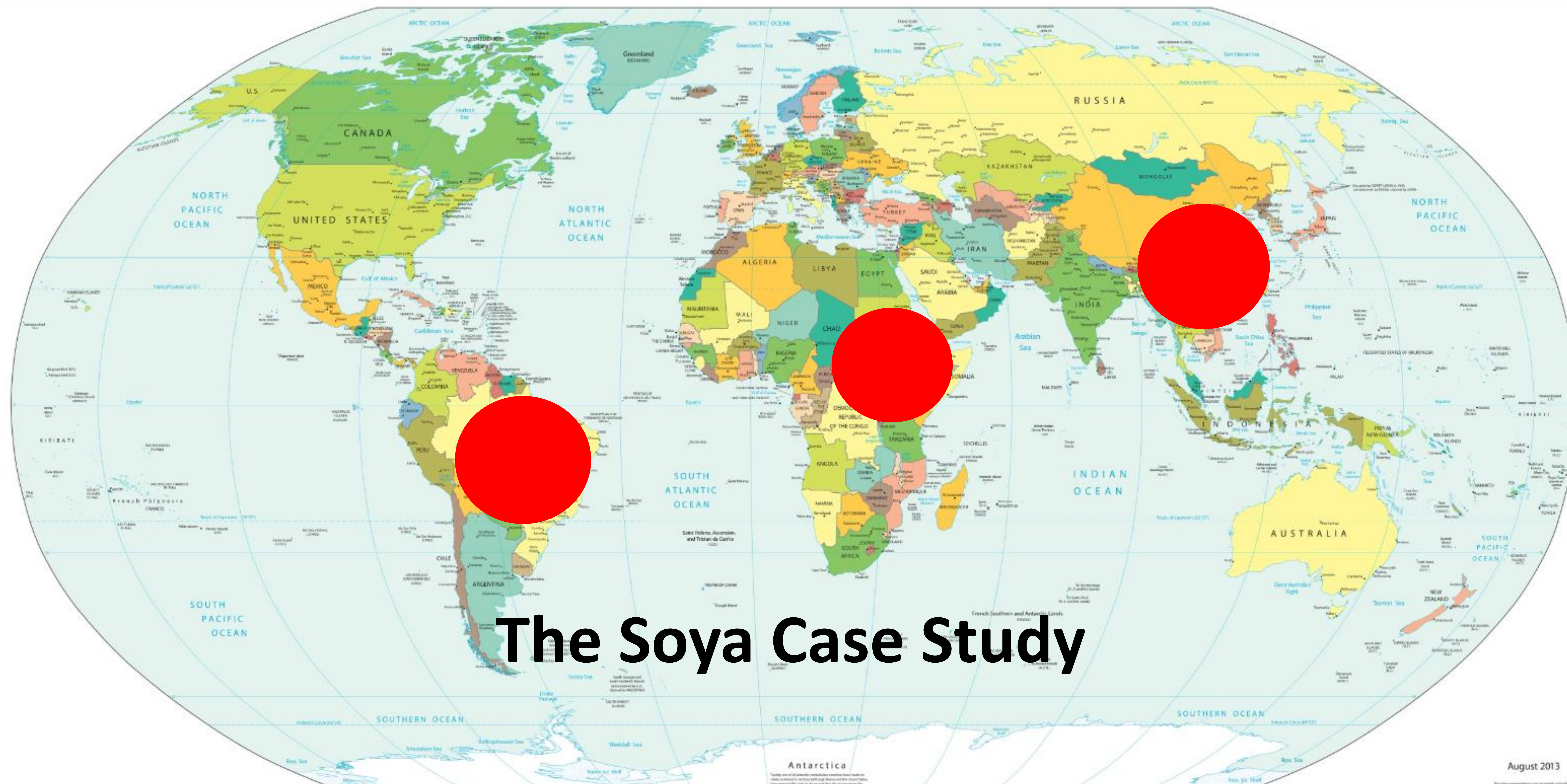


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A slide from 2017.....





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Let's talk Olfactome

- Sensory Directed Analysis
- Finding key Aromas / Odors
- GC-MS/O Determination

ARTICLE

Is deglobalisation a good or bad thing?

Professor Chris Elliott examines the ongoing deglobalisation of our food system and analyses its potential impact.





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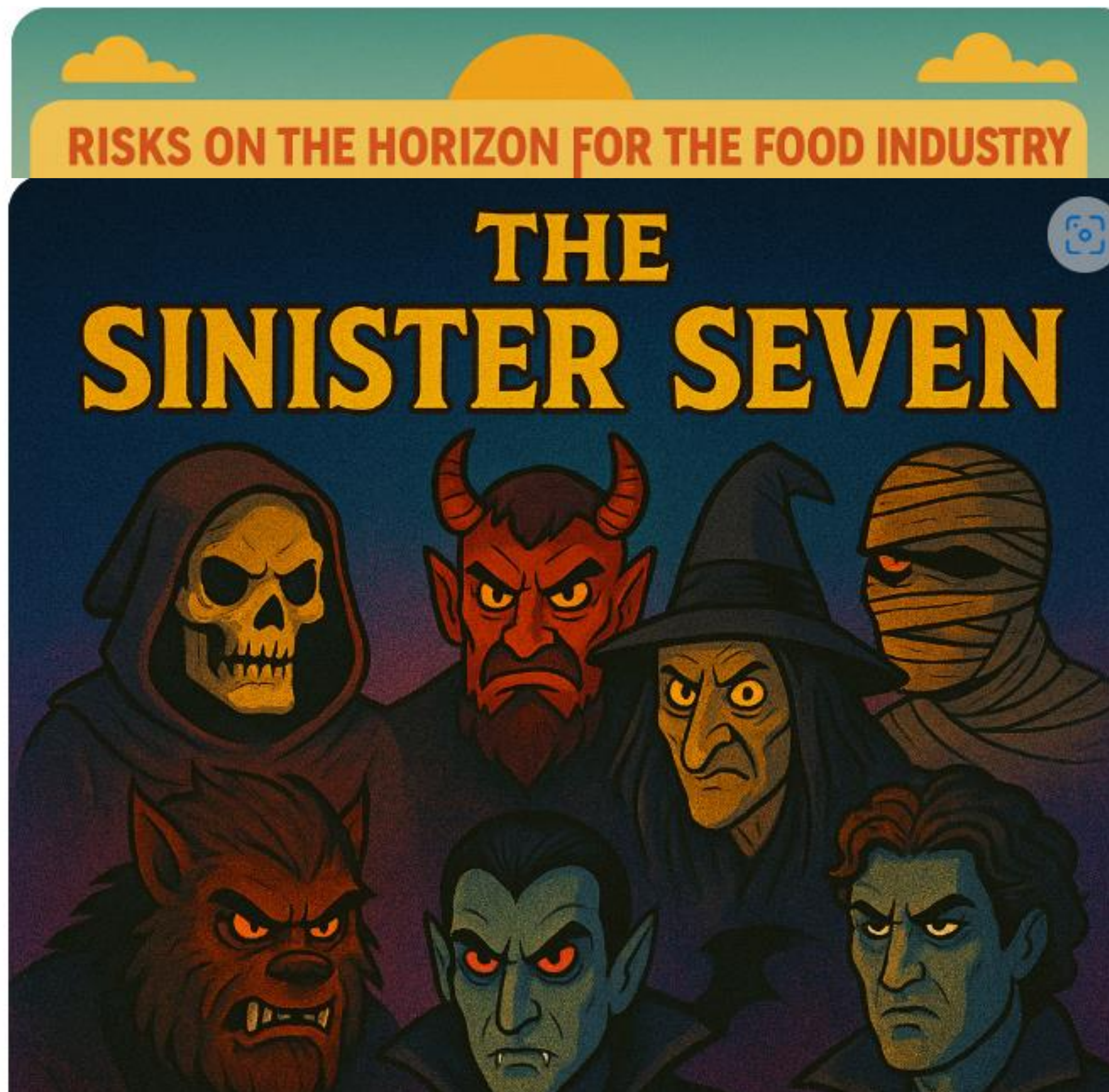


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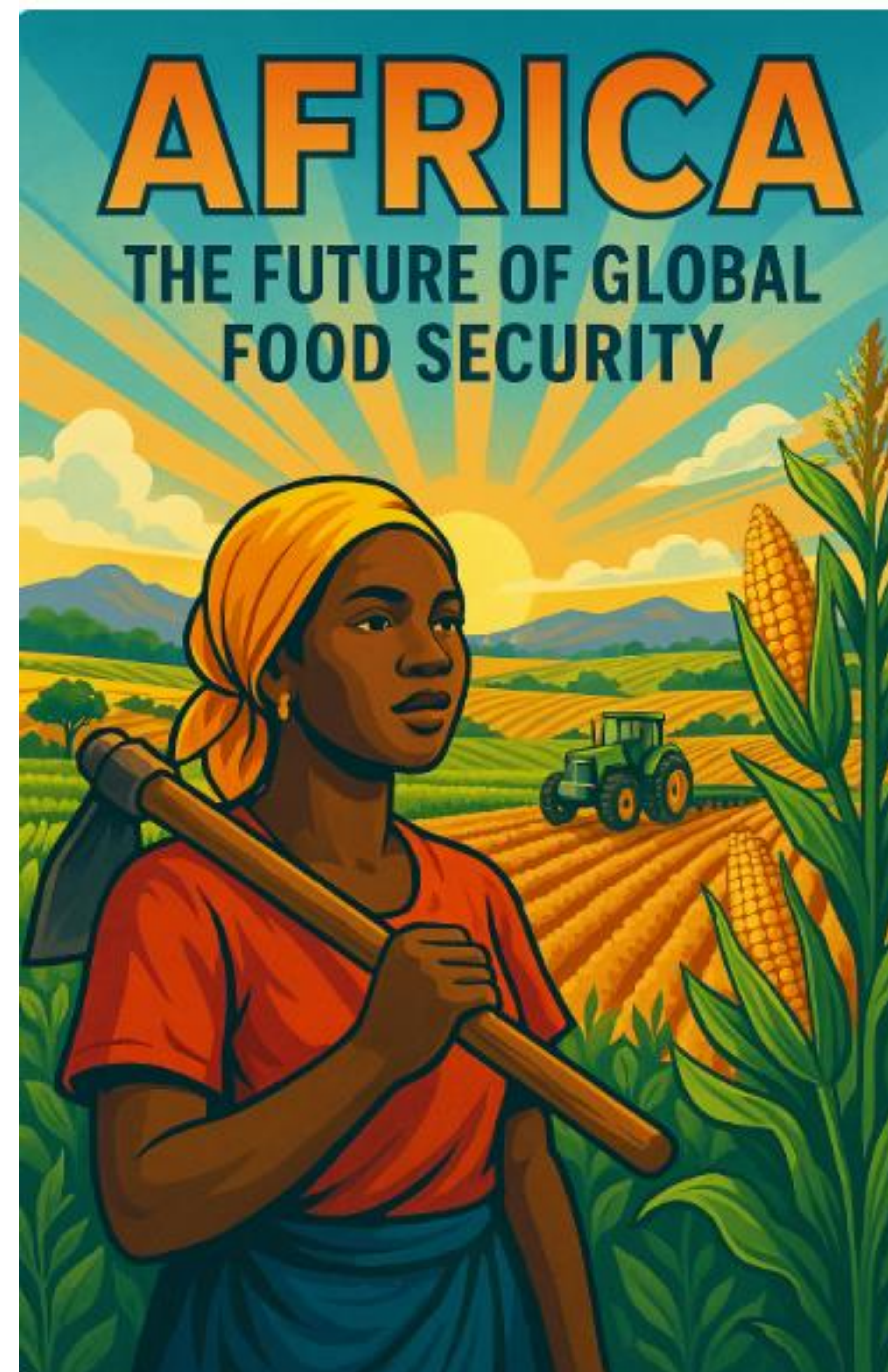


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Out of Africa – the future of global food security

Africa is often seen through the lens of food insecurity, but a quiet revolution is underway. Professor Chris Elliott explores how the continent could become a global food powerhouse.





Top 5 Opportunitites for Africa to Become a Global Food Security Powerhouse



Vast Untapped
Arable Land



Future Global Food
Export Leader



Rising Investment in
Agriculture &
Infrastructure



Transformation to
Modern, ind-
ustrialiseed
Agriculture

Top 5 Barriers to Delivering this Vision



Low Agricultural
Productivity



Climate Change
and Environmental
Degradation



Inadequate Access
to Finance



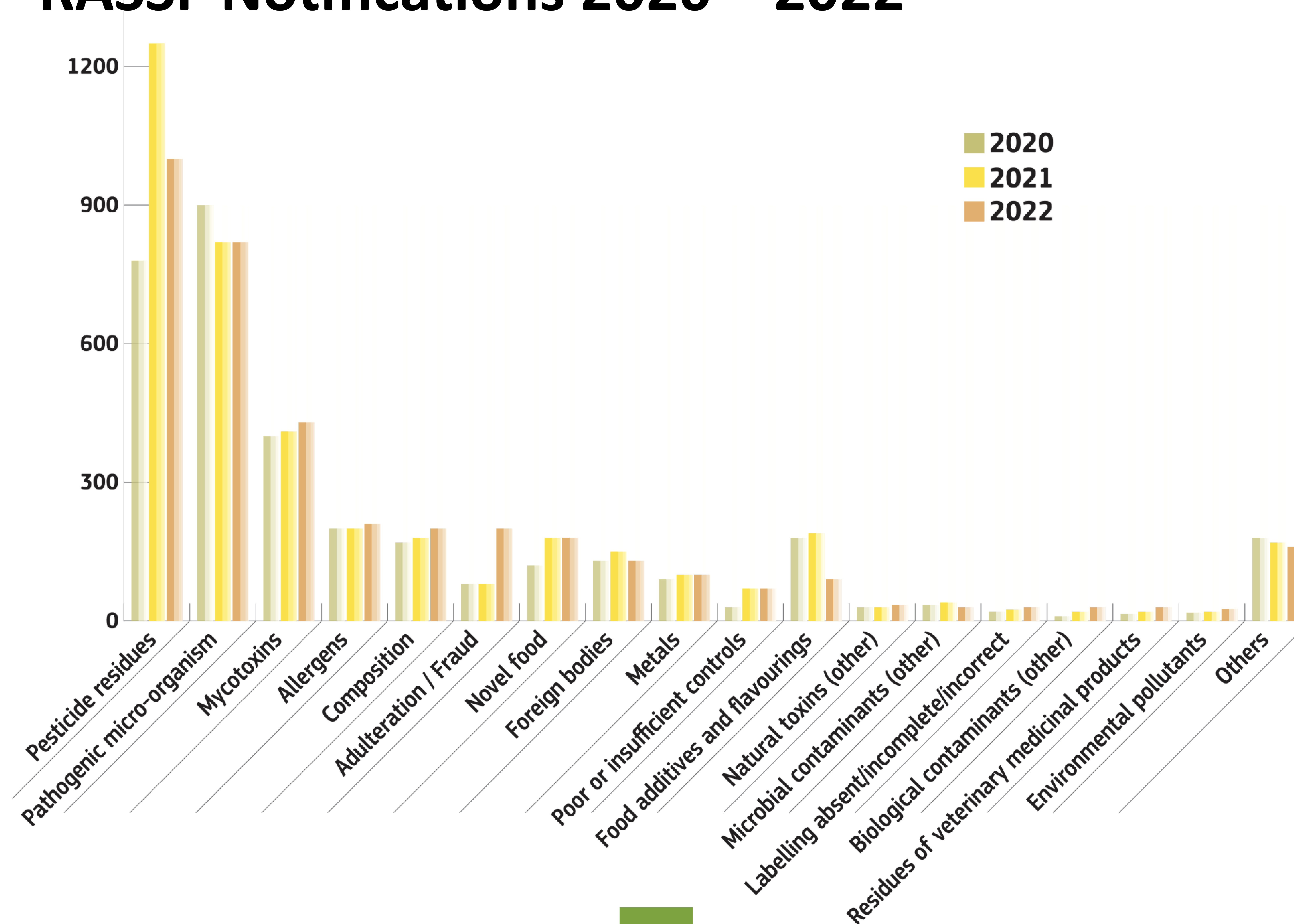
Poor Infrastructure
and Logistics

Need for
Improved
Food Safety
Regulations
and Compliance





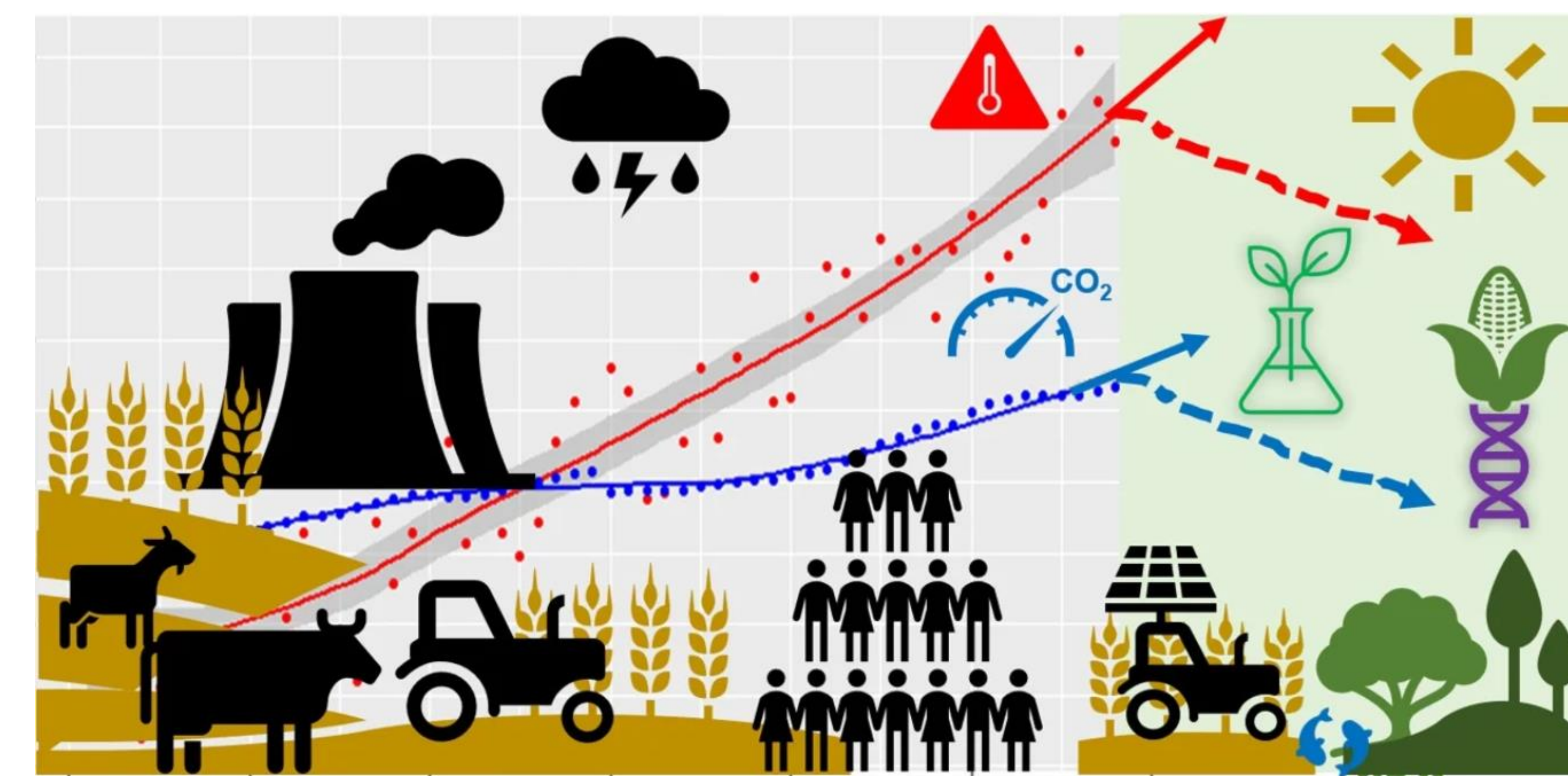
RASSF Notifications 2020 – 2022





The hidden chemical burden of modern food systems

- Per- and polyfluoroalkyl substances (PFAS)
- Toxic heavy metals (e.g. Cadmium, Arsenic, Lead, Mercury)
- Alternaria toxins (AOH, AME, TeA) in tomato products, spices, cereals
- Tropane alkaloids (e.g. atropine, scopolamine)
- Micro and Nanoplastics





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Harmonisation of food safety and quality regulations
Strengthening regulatory capacity and technical competence
Not only preparing for the present but also what the future will bring

