



مؤتمر عُمان الدولي السادس
لسلامة وجودة الغذاء
Oman 6th International Conference
on Food Safety and Quality

FUTURE OF RISK ASSESSMENT FOR FOOD SAFETY: *A Critical Role in Ensuring Sustainable, Safe and Healthy Food for All*

Dr. Moez Sanaa



World Health
Organization





**World Health
Organization**

ABOUT US

The Nutrition and Food Safety (NFS) Department is addressing the burden of disease from physical, chemical and microbial hazards in food and unhealthy diets, maternal and child malnutrition, overweight and obesity.

Joint FAO/WHO Expert Committee on Food Additives (JECFA), Joint FAO/WHO Meeting on Pesticide Residues (JMPR), and Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment (JEMRA).



LEADERSHIP



NORM SETTING



**GUIDE POLICY
CHOICES**



**SUPPORT COUNTRY
ACTIONS**



**MONITORING &
SURVEILLANCE**

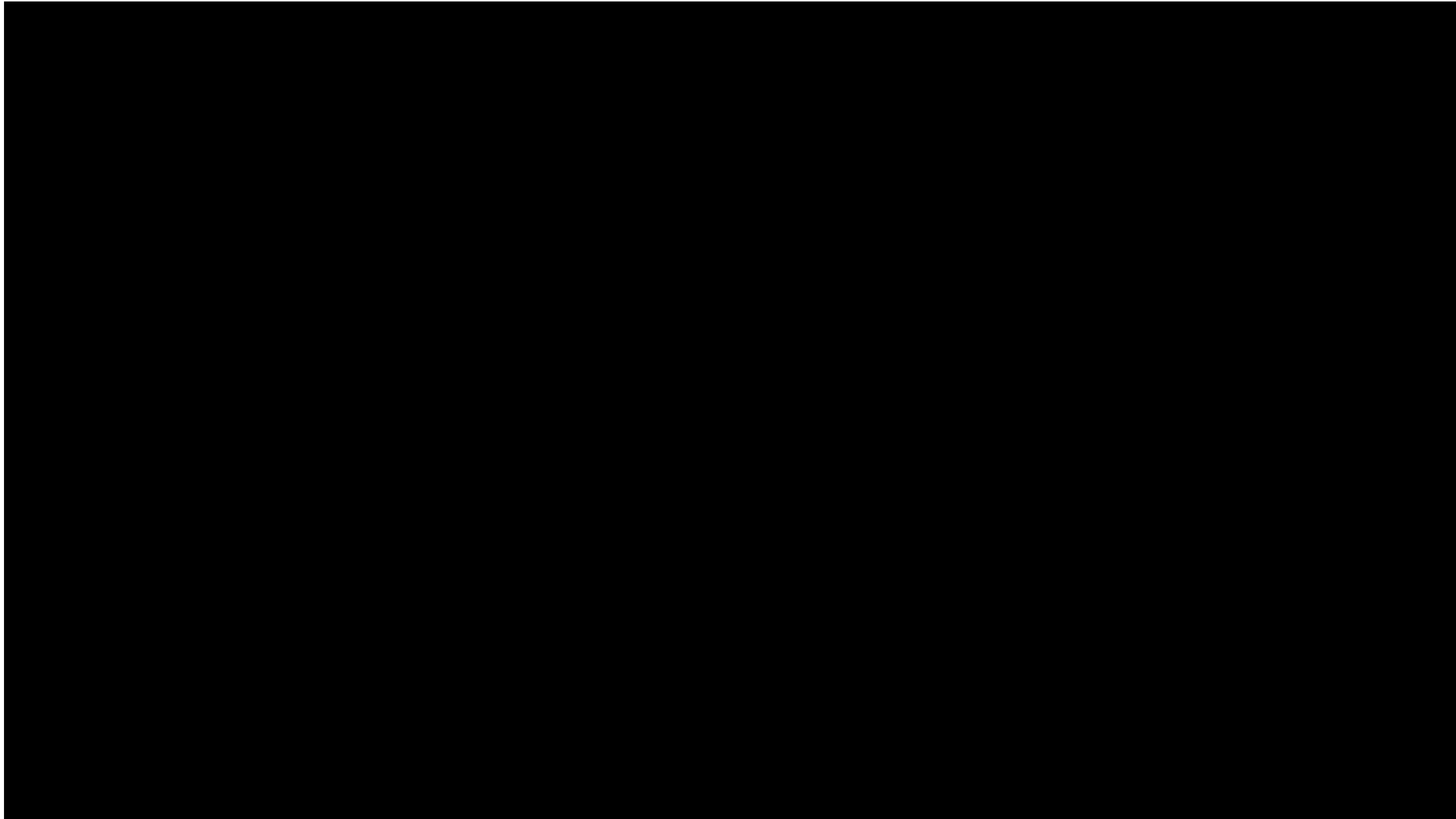




World Health
Organization

Food systems
transformation for better
nutrition and health







World Health Organization

Food systems affect health in many ways. For example, worldwide **690 million people are hungry, 2 billion people have micronutrient deficiencies** and there are **677.6 million adults with obesity**; each year **zoonoses** are responsible for **2.5 billion cases of human illness** and **2.7 million human deaths worldwide**; at least **700 000 people die due to drug-resistant diseases**; **44% of farmers are poisoned by pesticides**; and at least **170 000 agricultural workers** are killed.



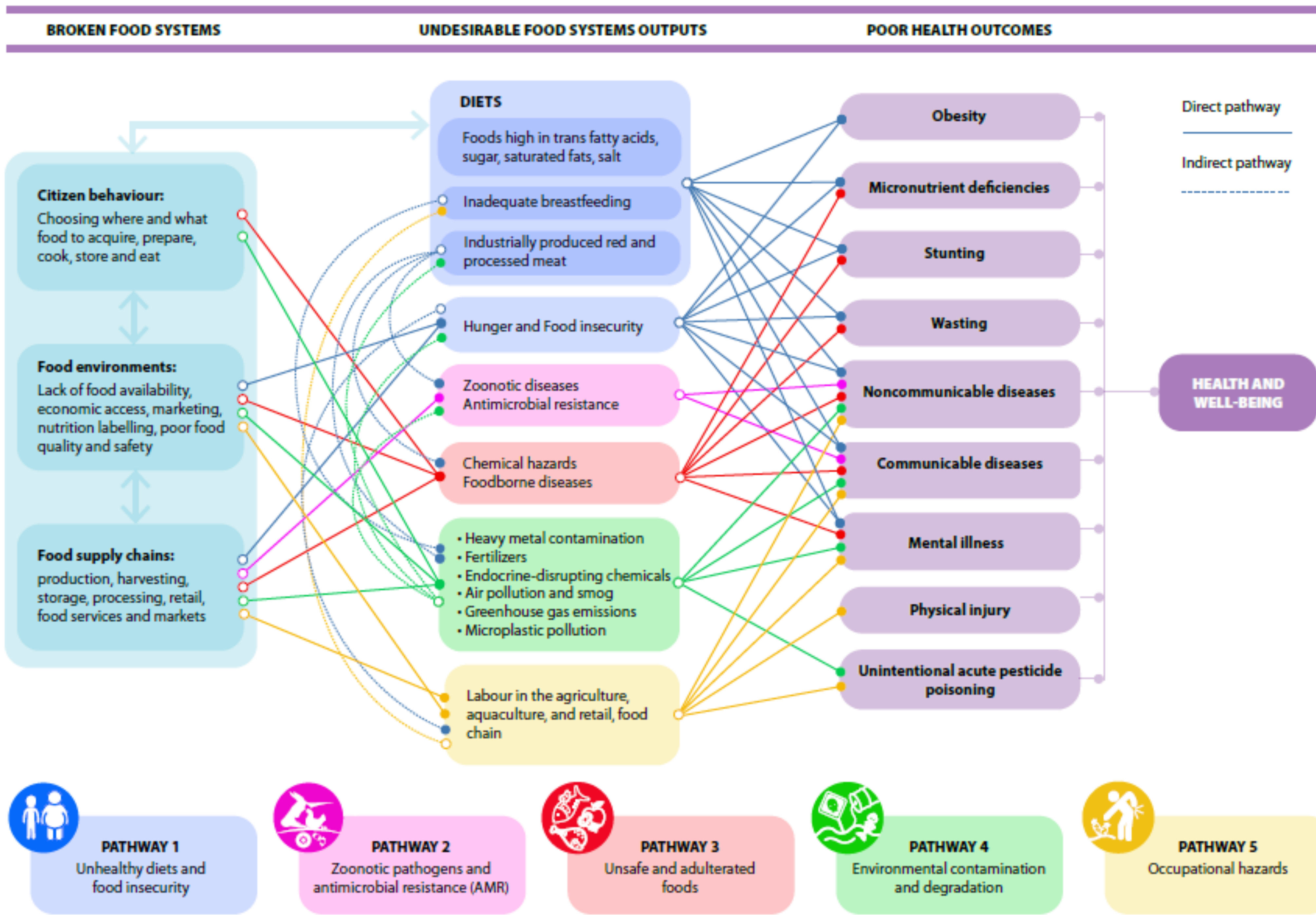
8 YEARS TO MEET THE SDGS

MALNUTRITION

Malnutrition in all its forms is a leading cause of death and disability worldwide, undermining social and economic development, and disproportionately impacting on the world's most vulnerable populations. No country is immune.

**Today, 3.1
billion people
cannot afford a
healthy diet**
(SOFI, 2022)





Current trends in food production and consumption are causing the ecosystems which support humanity to collapse. But it is possible to make the shift to a more sustainable food system; all it needs is political will, and science and evidence-based action.



Significant dietary changes will be necessary to transition to sustainable healthy diets



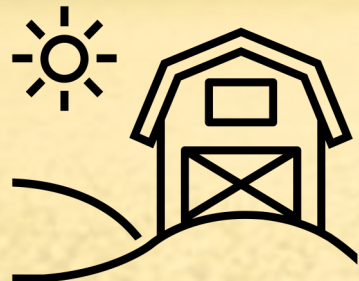
More sustainable agriculture practices



Decreasing food waste



Circular economy



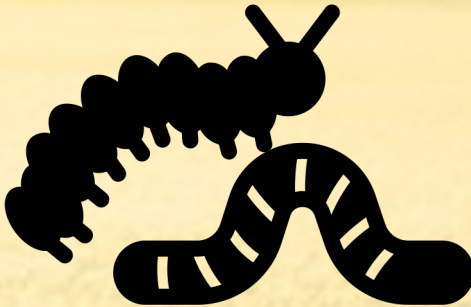
More sustainable farming practices



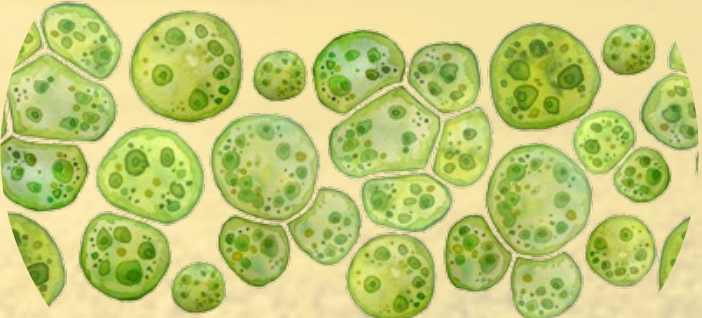
Plant based food



meat produced in bioreactors



Insects



Microalgae

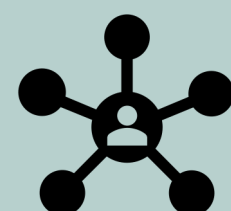
SCIENTIFIC EXCELLENCE



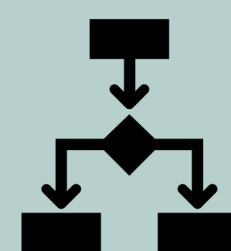
TRANSPARENT



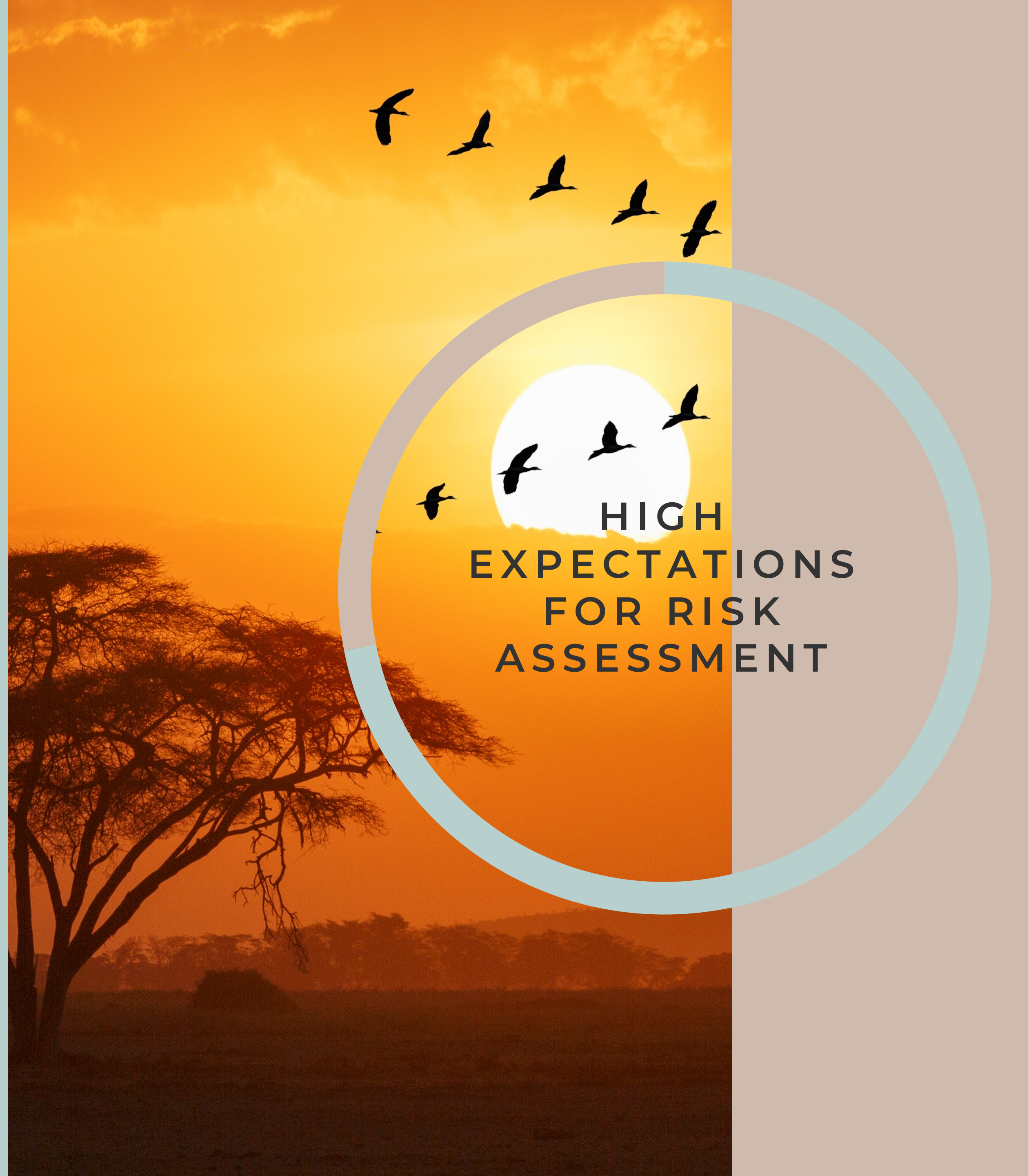
INCLUSIVE



OPERATIONAL

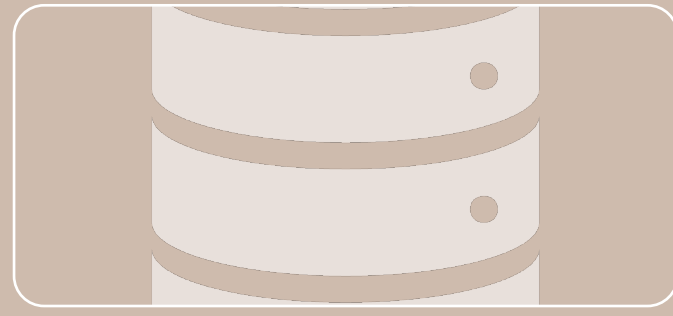


RAPID RESPONSE



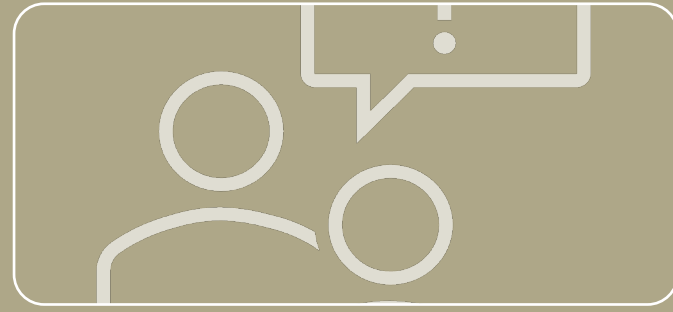
RISK ASSESSMENT

CHALLENGES

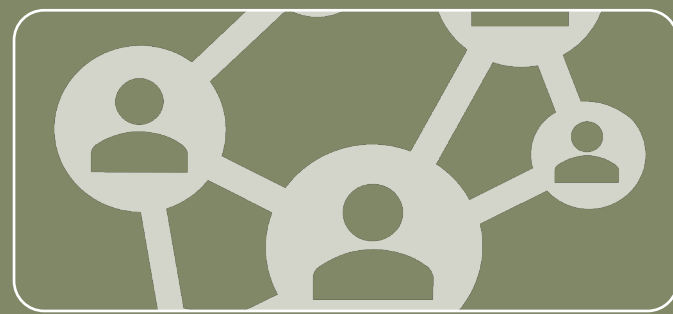


Data Access and Sharing

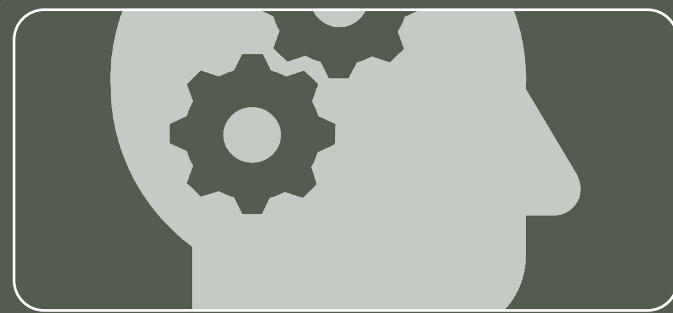
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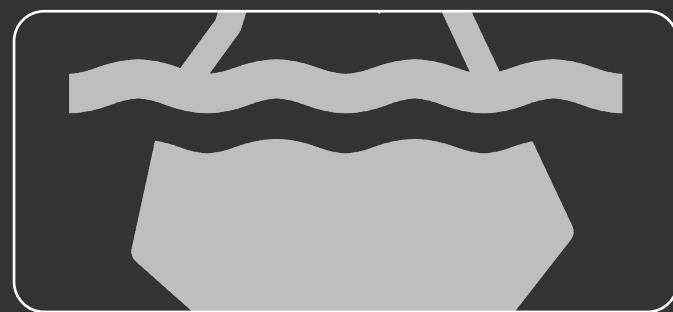
Uncertainty & Strength of Evidence



Cross-disciplinary approaches



Scientific Experts



Increased complexity





INFORMED DECISIONS

DATA-DRIVEN

The capacity to collect, process and draw relevant conclusions from different sources data is vital to developing effective policies..



“Today’s speaker is an expert on distribution.”

**“IF WE HAVE DATA,
LET’S LOOK AT DATA.
IF ALL WE HAVE ARE
OPINIONS, LET’S GO
WITH MINE.”**

Jim Barksdale
CEO of Netscape Communications



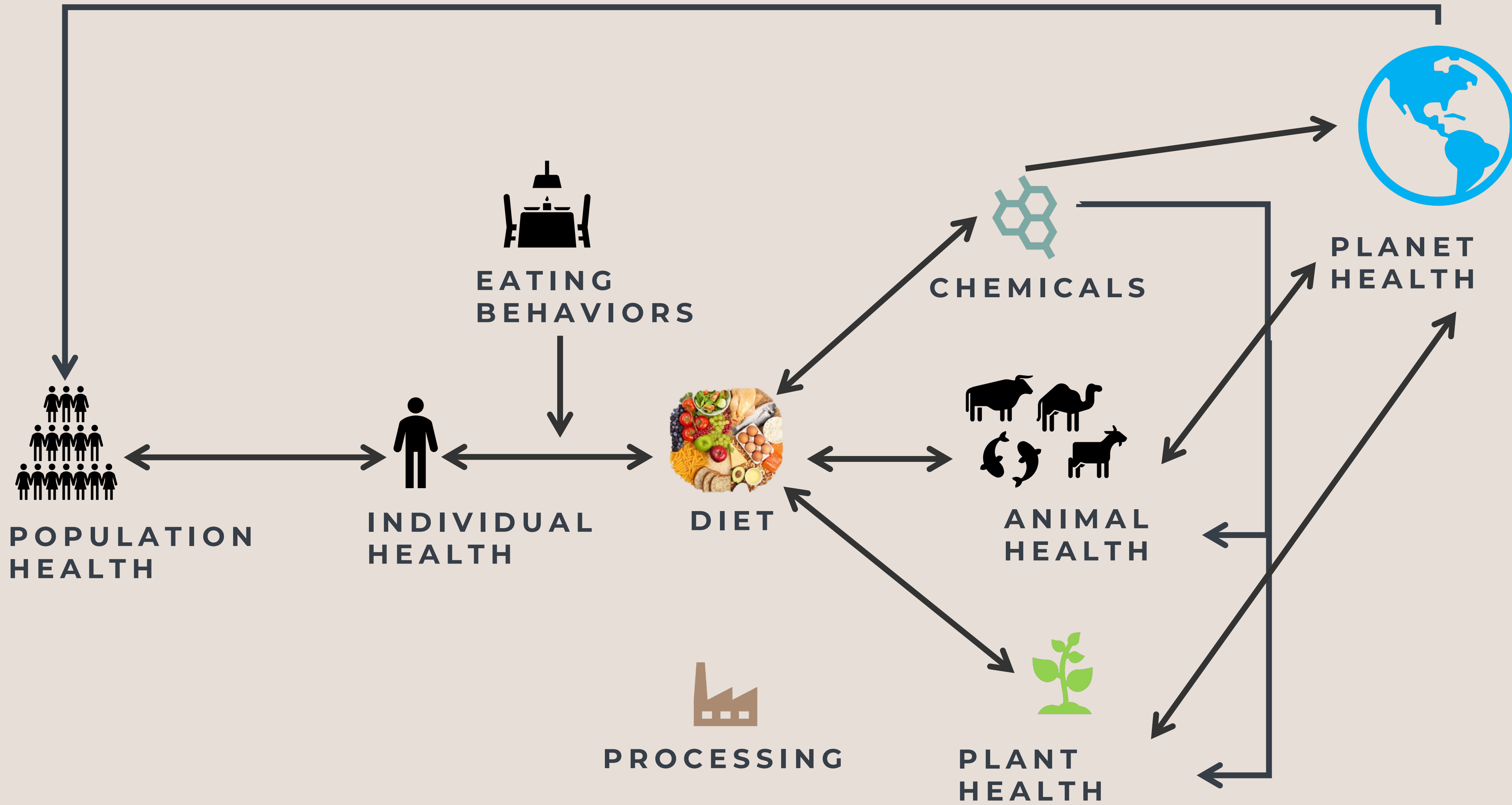


SAFER AND HEALTHIER FOOD

HEALTHY DIET

- HIGHEST LEVEL OF HEALTH AND WELL-BEING
- HEALTHY GROWTH AND DEVELOPMENT
- PREVENTS NON-COMMUNICABLE DISEASES
- PREVENTS FOODBORNE DISEASE
- PROMOTES WELLBEING (culturally acceptable, social relations, mental health)

Global health impact of diet. Individual diet choices can collectively impact all aspects of global health through highly connected pathways



ONE HEALTH



Emerging and advanced technologies such as gene editing, synthetic biology, and animal cell culture technology

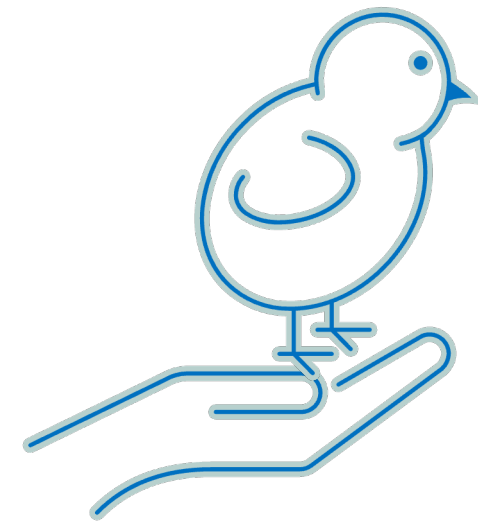
Are our Methodologies for Risk and Safety Assessment Equipped to Support the Regulatory System?



The Promises of Cell Culture-Derived Foods and Food Ingredients



**Nutritious
and healthy**



Animal Welfare



**Sustainable
production**



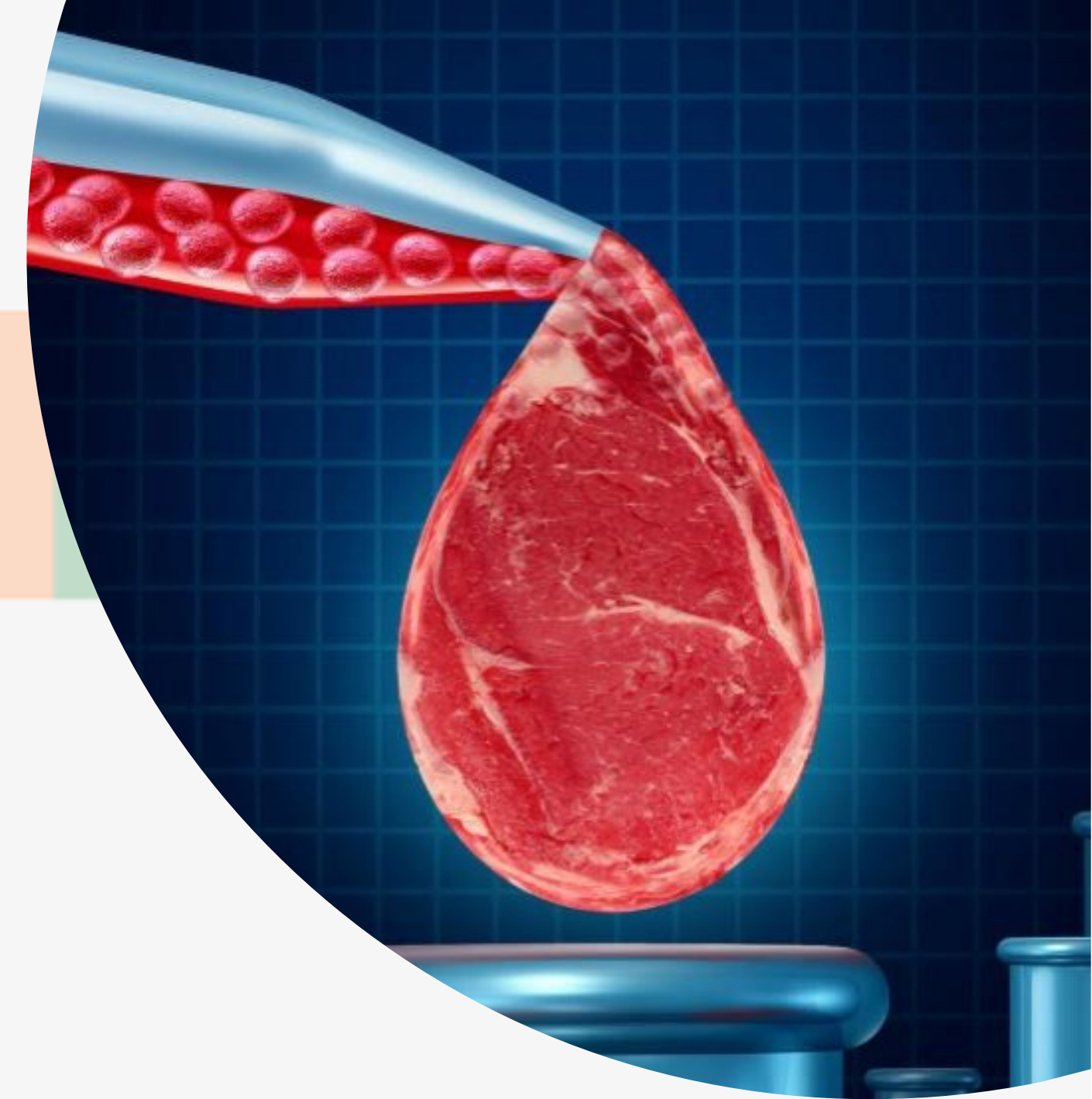
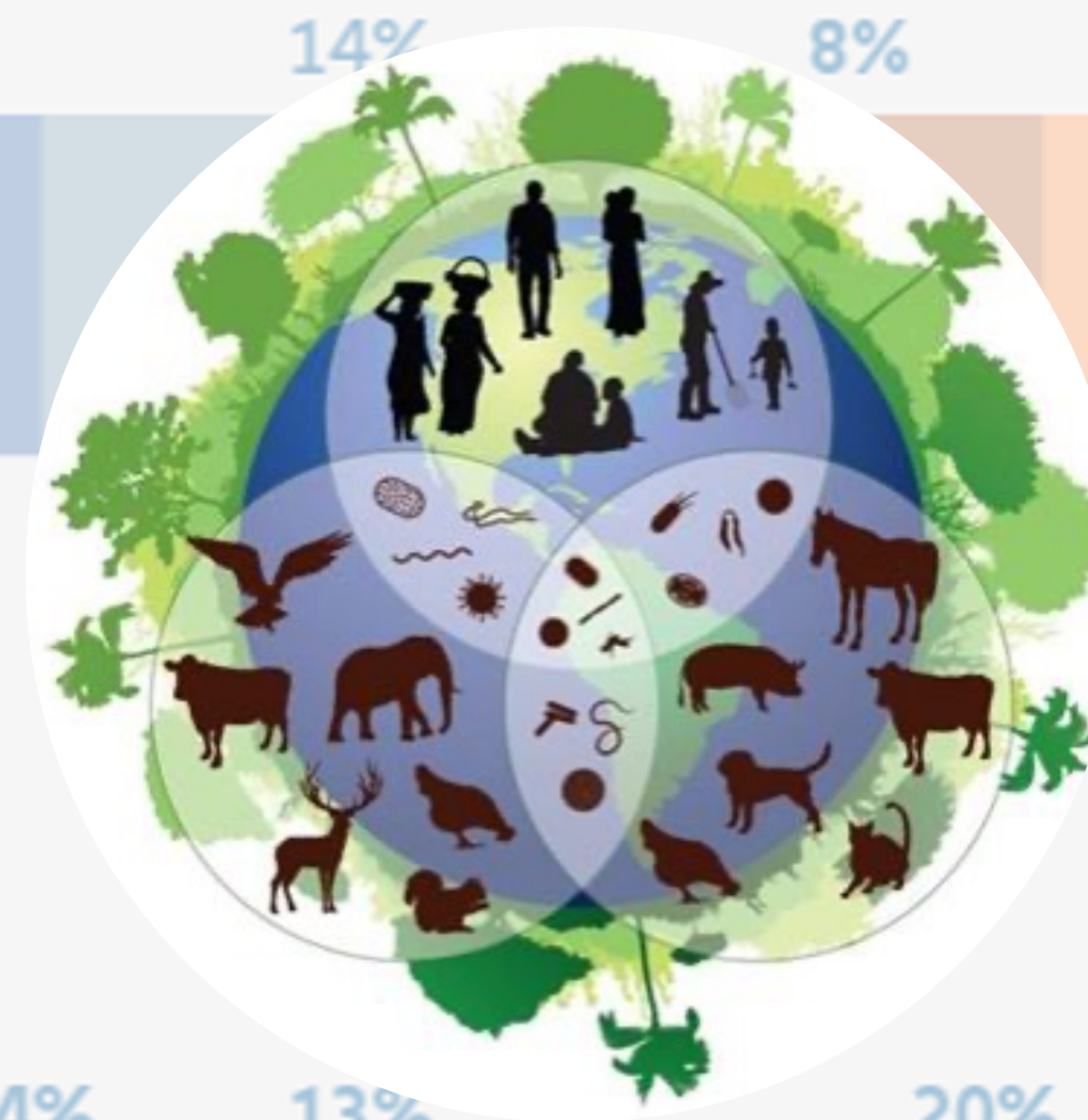
Food Safety



**Consumer
Experience**

Existing frameworks struggle to strike a balance between health, safety and the environment, as well as food innovation.

Current global diet*



Global shifts in food consumption and diet towards healthy and sustainable diets

Sustainable healthy diets recommendations

Integrated Approach to Risk Benefit Assessment



Total = 2503

The change in diet profile requires

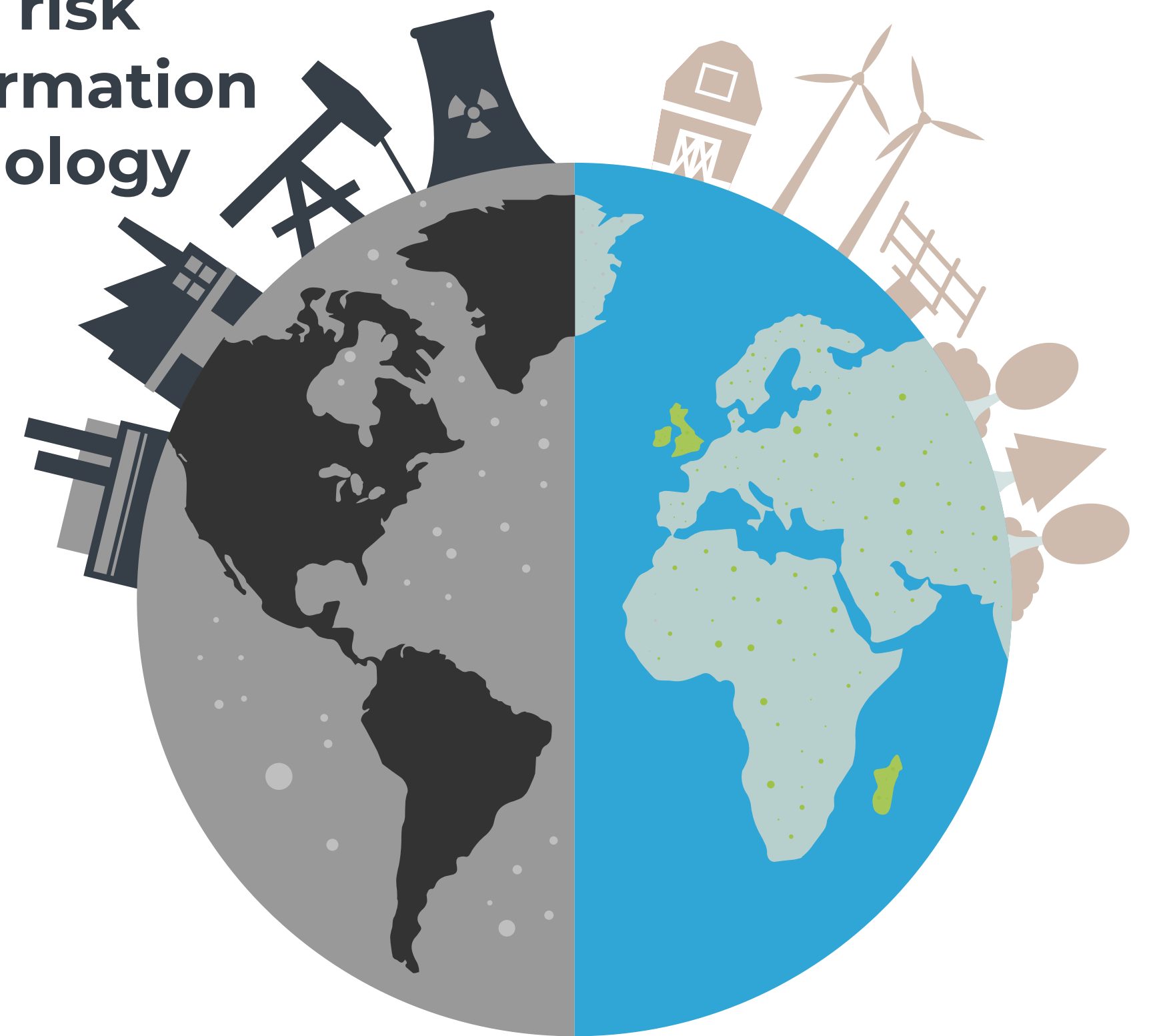
- The global food system is responsible for **one-third** of human-caused greenhouse gas emissions¹
- Around **80%** of soy is used to feed animals which is the leading cause of global deforestation²
- Agriculture accounts for **70%** of freshwater withdrawals worldwide, though as much as 50% is lost to evaporation³
- 60%** of global biodiversity loss could be attributed to the food we eat⁴
- Producing a kilogram of beef takes an average of **15,415** litres of water versus **4,300** litres for chicken meat⁵
- Agriculture is threatening **86%** of at-risk species⁶

1. WWF; 4. CBD; 5. WFP; 6. New Chatham House report, supported by the UN Environment Programme (UNEP)

Global Risk Assessment Forum

The GLORIA will be a platform for organizations which provide risk assessment/science advice on food and nutrition to share information and work on the development of innovative scientific methodology and best practices for assessing risk or benefit to humans and the environment.

WHO is willing to hold the GLORIA Forum, which will bring together scientists and experts from a variety of fields to discuss current and future problems and concerns in risk assessment, as well as to develop consensus proposals for improving the process.





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THANKS

M o e z S A N A A
P R E S E N T A T I O N