

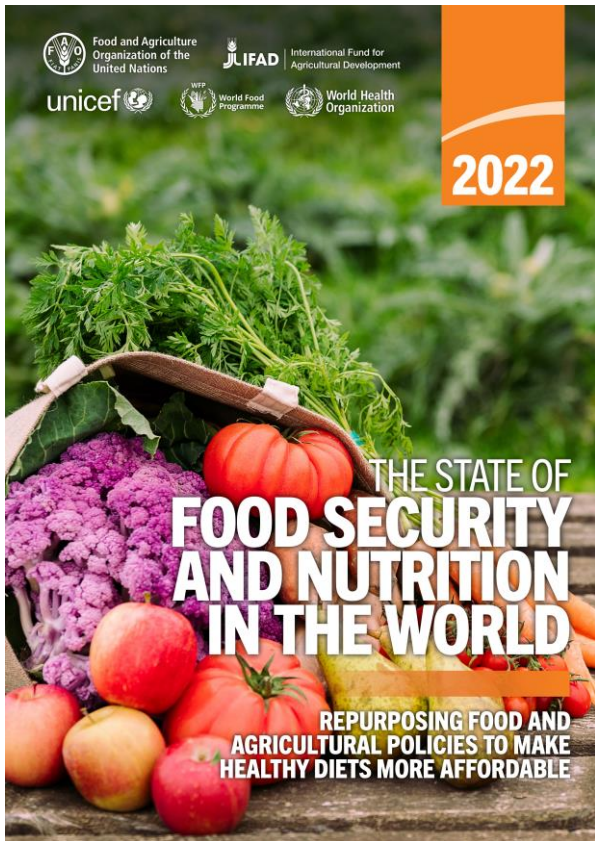


Food and Agriculture
Organization of the
United Nations

Plant health and trade in support of food security and nutrition: a food system perspective

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Food Security and Nutrition situation (SOFI 2022)



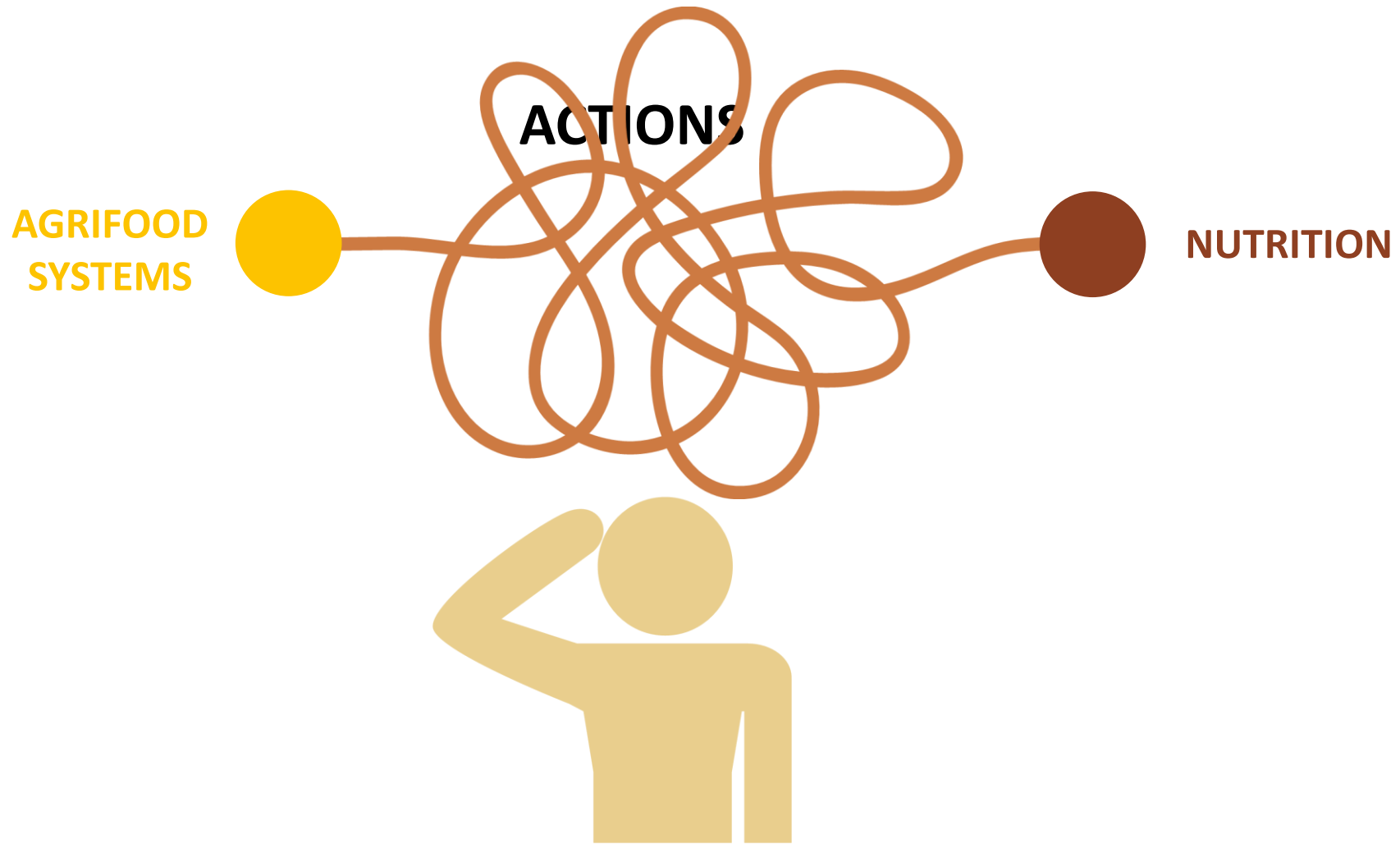
- Between 702 and 828 million people faced hunger in 2021 – 150 million more people since 2019.
- Around 2.3 billion people in the world lacked access to adequate food in 2021
- Almost 3.1 billion people could not afford a healthy diet in 2020 – 112 million more people since 2019
- The world is not on track to achieve global nutrition targets.

Plant health within food security and nutrition

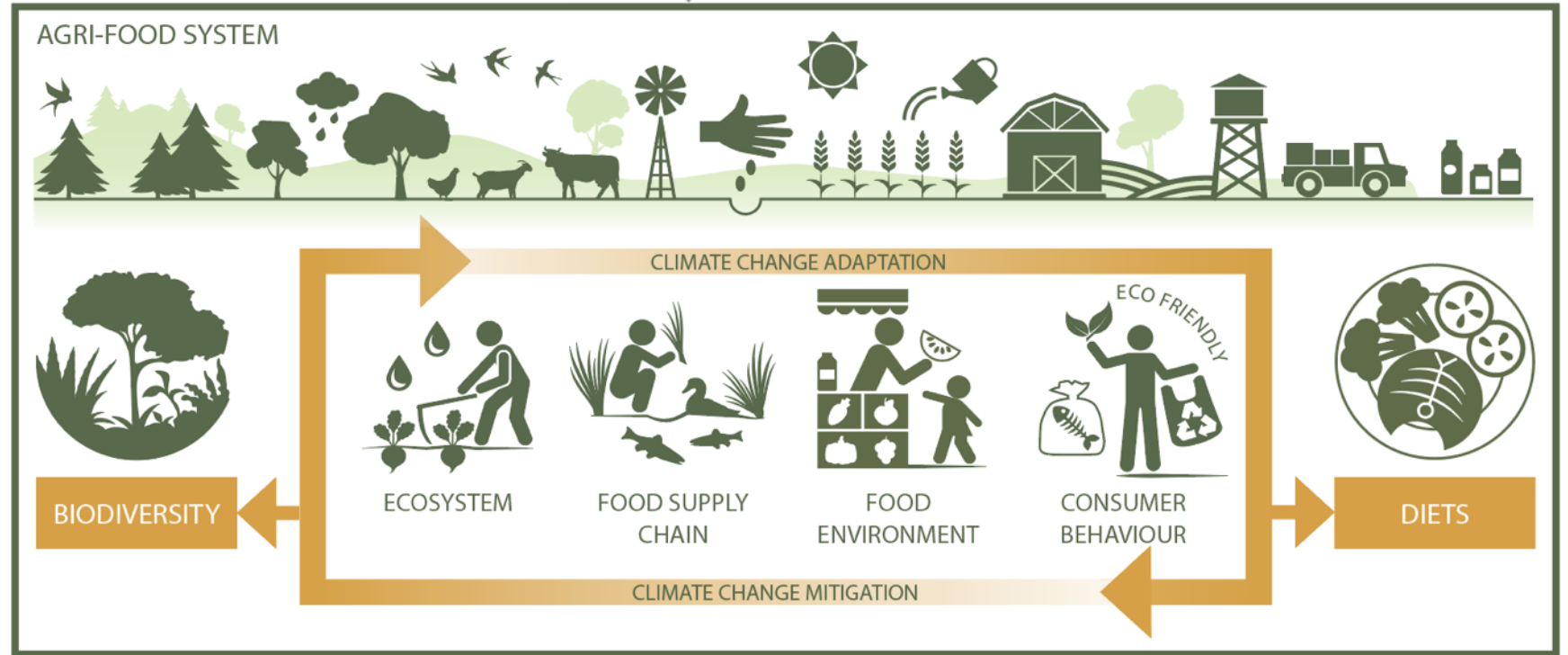
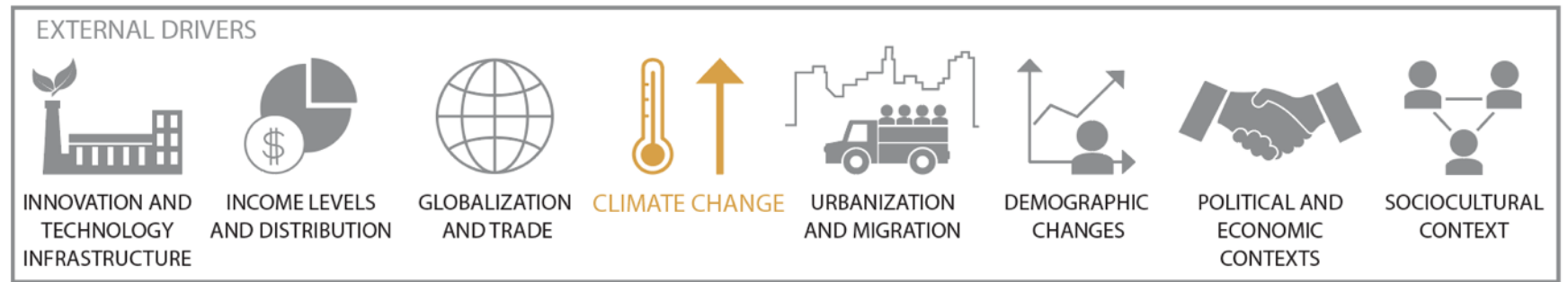


- 40% of the foodborne disease burden is among children under 5 years of age.
- High levels of aflatoxin in humans associated with maternal anaemia, low birth weight babies and child stunting, as well as potentially fatal aflatoxicosis and liver cancer
- Aflatoxin contamination contributed to the decline in West Africa's share of the groundnut market, from 77% in 1960s to 4% in 2010 (loss of ~US\$1.6 billion)
- Between 2008 and 2013, fruit and vegetables alone represented about 20% of all EU food export refusals, largely due to the violation of pesticide residue limits.
- In lower-income countries, over 40% of the losses of edible parts of foods occur in the post-harvest and processing parts of the food system

Why a food system approach?



A food system perspective



From plant health to healthy diets

ECOSYSTEM



BIODIVERSITY



FORESTS



WATER



SOIL



BIOECONOMY

FOOD SUPPLY CHAIN



CROP IMPROVEMENT



INTEGRATED PRODUCTION SYSTEM, AGROECOLOGY REGENERATIVE



AQUATIC FOODS



LIVESTOCK DERIVED FOODS



FOOD LOSSES

FOOD ENVIRONMENT



TRADE & MARKETS



PUBLIC PROCUREMENT



FOOD WASTE



FOOD QUALITY & SAFETY

CONSUMER BEHAVIOUR



FOOD CHOICES



EDUCATION



FOOD BASED DIETARY GUIDELINES (FBDGs)

Healthy soils

Plant health hazards are linked to the **deteriorating quality of soils** due to erosion, contamination, acidification and erosion.

Phytoremediation, removal of heavy metals and other pollutants from soils and water using green plants, can help preventing or reducing soil contamination.

Novel biomass production systems, including crop rotations, double cropping, flexible crops, intercropping and agroforestry, have potential to ensure nitrogen content but also minimize weeds



Aflatoxin management

Climate extremes are **increasing the threats of mycotoxins** such as aflatoxins that are common on maize, groundnuts and sorghum.

Mould mitigation strategies combine provision of tolerant or resistant cultivars with good agricultural practices and biological control.

Dry chain development involves drying products to safe levels followed by moisture proof strategies.

Improved market incentives for food safety and quality management and **public awareness** on the importance of food handling and dietary diversity.



Minimization of food toxins

Nutrient-rich foods such as **fruits and vegetables** are highly perishable and often prone to pests and disease and losses.

Improper use of pesticide causes high level of artificial toxins - both a public health but also a trade concern.

Integrated pest management can minimize economic, health and environmental risks.

Cold and dry chain development requires investing in better infrastructure and innovations to reduce food perishability but also **market incentives** for food safety and quality management

Public awareness on the importance of food handling and dietary diversity



Plant health and trade in support of food security and nutrition

Final considerations:

- Working with a **food system perspective** requires a diversity of disciplines and stakeholders to agree on common strategies.
- **Food safety and reduction of food losses** are major concerns in LICs for both economic and nutrition/ health reasons. **Controlling and mitigating this** requires that stakeholders work together to find solutions and manage potential trade-offs.
- **Partnership for Aflatoxin Control in Africa** was established to coordinate aflatoxin mitigation across the health, agriculture and trade sectors, and to provide information management systems and laboratory testing facilities. Similar initiatives should be promoted to ensure innovations at scale.