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INDUSTRIAL DEVELOPMENT ORGANIZATION



## Challenges and opportunities for building a sustainable resilient food system

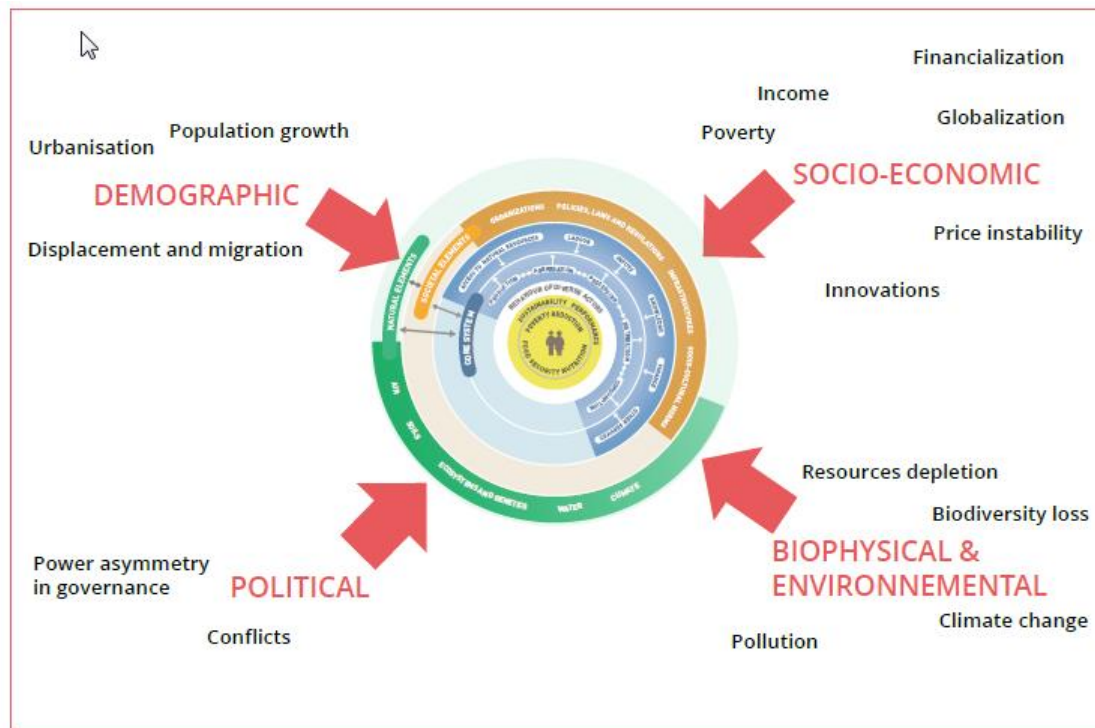


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UNIDO , October 2024

# FACTS

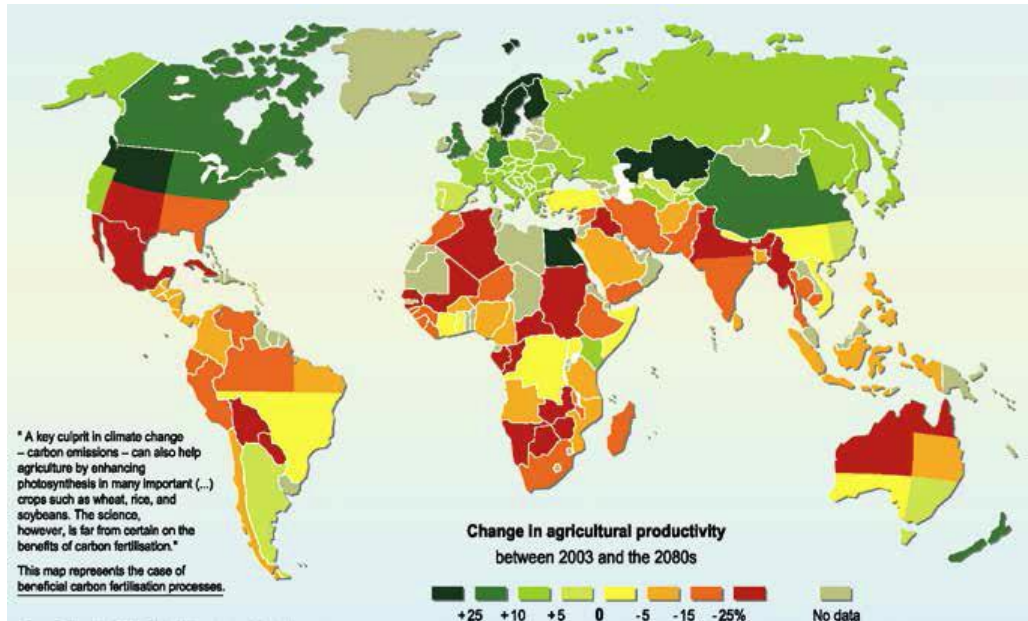
- **733 M** people estimated are chronically hungry in 2023
- **2.33 B** people food insecure (insufficient quantity and nutrient-rich food)
- **282 M** people acutely food insecure (food deprivation that threatens lives) –
- main drivers: Conflict (**135 M**), Climate Change (**72 M**), Economic Shocks (**75 M**)
- Estimated 13% of food (**931 M tons**) lost post-harvest & **1.05 B tons** wasted in households, food services, and at retail level
- About **1/3 of all GHG** emissions come from agriculture sector
- Food security comprises **4 dimensions**: access, availability, utilization, and stabilization

# Drivers of ... Food systems





# The impact of climate change ... Food systems






# Scenarios by 2050 the future of Food systems

- **By 2050 70% increase in food production to feed nearly 10 Billion people (Asia and Africa will be ca 7 Billion)**
    1. Increase **productivity and production** (Opportunities in developing countries)
    2. **Reduce consumption** .. Specially resource intensive food like meat, **reduce PHL**
    3. **Regenerative based vision**... sustainable and regenerative, circular economy and agro-ecology
    4. **The Innovation-based Vision**. A new agriculture revolution through biotechnology where farming is superseded by microbial synthesis
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# Cost of ending hunger


Called for on humanitarian grounds but lacks long-term sustainability and economic efficiency



Strategy/Goal	Annual and total cost to lift about <b>500 million</b> people out of hunger <i>(total cost in brackets)</i>	Annual and total cost to lift about <b>700 million</b> people out of hunger <i>(total cost in brackets)</i>
MACC analysis – “Short-term investments” <b>2025-2030</b>	<b>\$ 27 billion (\$ 146 billion)</b>	<b>\$ 93 billion (\$ 512 billion)</b>
MACC analysis – <b>2025-2040</b>	<b>\$ 10 billion (\$ 116 billion)</b>	<b>\$ 21 billion (\$ 223 billion)</b>

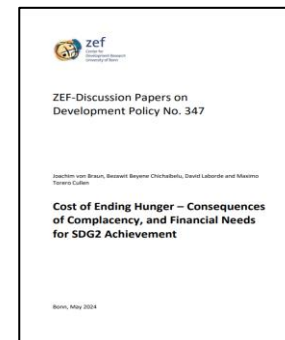
Source: ZEF & FAO (von Braun et al., (2024))

Sustainable set of investment policy scenarios BUT extending SDG 2-endline to 2040



## The cost of inaction

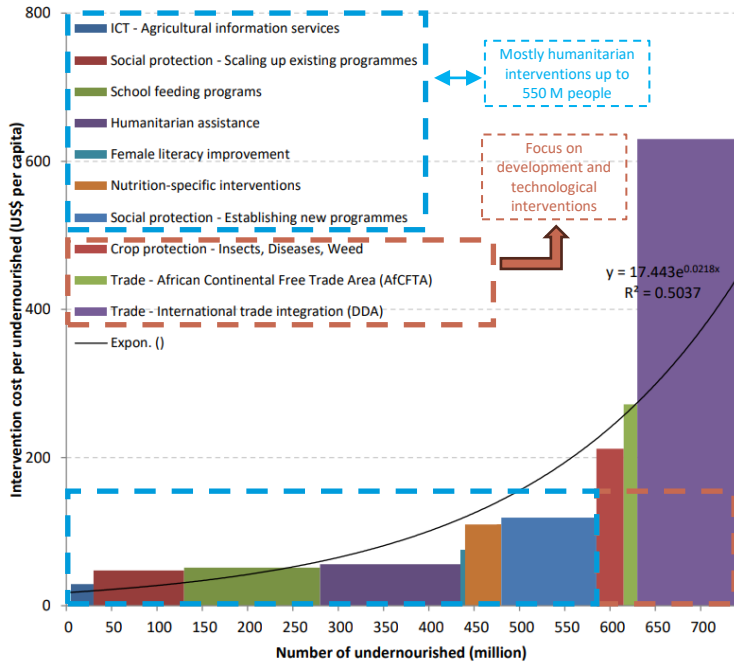
With only six years until 2030, the range of technically feasible investment options becomes limited, and the cost of achieving zero hunger increases substantially when going beyond interventions of humanitarian assistance.



[Full Paper](#)

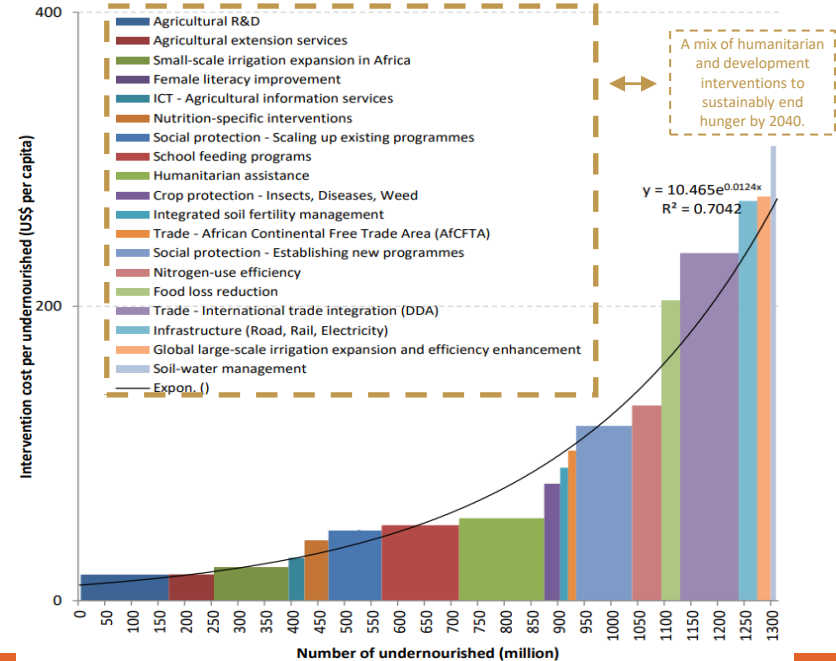
# Enablers of food security

## Short-term interventions to eradicate hunger and malnutrition from 2025 to 2030



Source: ZEF & FAO (von Braun et al., (2024))

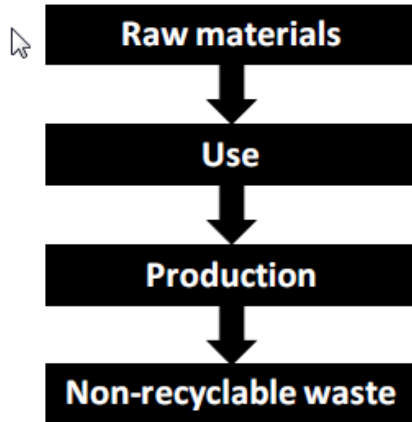
## Interventions to eradicate hunger and malnutrition from 2025 to 2040



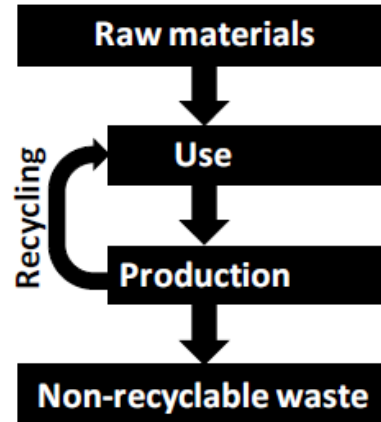


# Future of Food system: circularity and technology

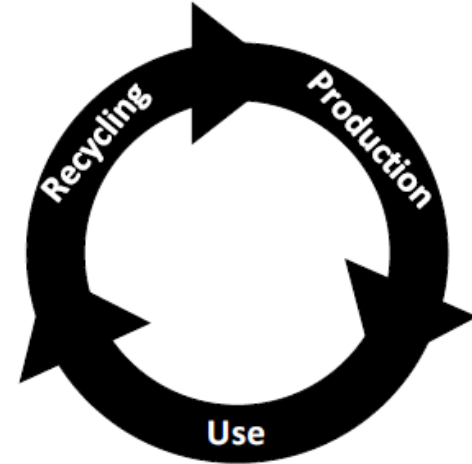
Linear economy



Reuse economy



Circular economy







# UN's work on agribusiness and food security

FAO

Leads international efforts to improve nutrition, increase agricultural productivity, raise the standard of living in rural populations and contribute to global economic growth.

WFP

Saves lives in humanitarian crises, improve the nutrition and quality of life of the most vulnerable, and help build assets and promote self-reliance of individuals.

IFAD

Investing in rural people and enabling inclusive and sustainable transformation of rural areas, notably through smallholder agriculture-led growth.

UNIDO

Promotes, dynamizes and accelerates industrial development and structural transformation by adding value to agricultural output and generating off-farm employment opportunities in rural communities, reducing post-harvest loss, dry and cold storage, processing and packaging, and promoting agro-innovation.



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THANK YOU

# Actions to be taken to minimize impact of climate change in food security

- **Sustainable Agriculture:**
  - **Improved Water Management:**
  - **Crop Diversification:**
  - **Research and Innovation:.**
  - **Education and Training.**
  - **Climate Policy:.**
  - **Community Engagement:**
  - **Reduction of Food Waste:**
  - **Support Local Food Systems:**
  - **Financial Support:**
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