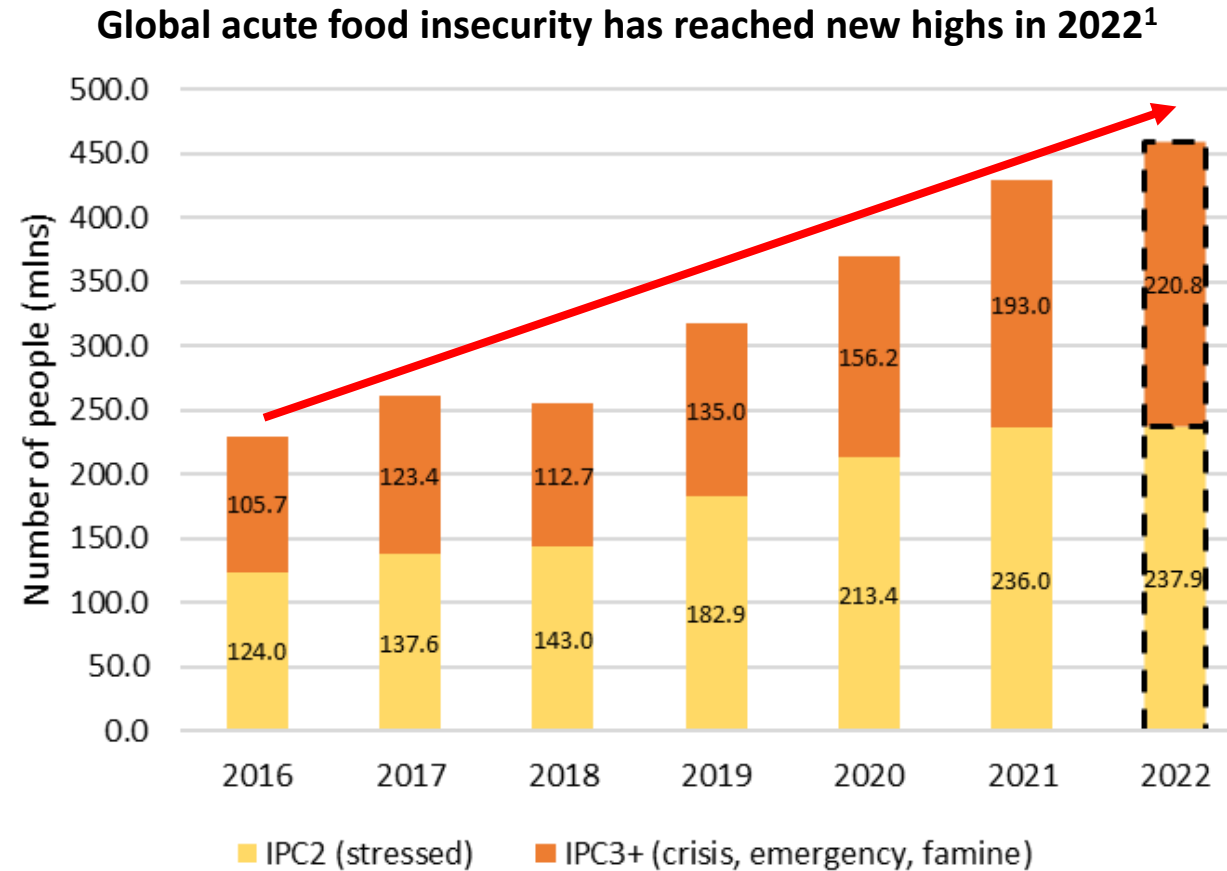





# Mainstreaming Climate Smart Agriculture: Financing transformation to support healthy people, a healthy planet and healthy economies

*Martien van Nieuwkoop,  
Global Director, Agriculture and Food*

# Food insecurity has reached new highs in 2022, and projections indicate that it will continue worsening through 2023



 This figure draws on updated acute food insecurity figures available for 45 countries in the 2022 mid-year update of the Global Report on Food Crises. Prior year estimates have been included for 8 countries / territories for which updates were not available as of the publication of the mid-year report, namely: Bangladesh, Egypt, Lebanon, Liberia, Libya, Palestine, Rwanda, Syria.

<sup>1</sup> Adapted from the Global Network Against Food Crises. <http://www.fightfoodcrises.net/>.

<sup>2</sup> Andree, Bo Pieter Johannes. Machine Learning Guided Outlook of Global Food Insecurity Consistent with Macroeconomic Forecasts (English). Policy Research working paper; no. WPS 10202 Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/099224110112215850/IDU0e396273b08036047c8082f8086f52e55c9ac>.

# There is not one but many drivers of the crisis which are currently worsening all aspects of food and nutrition security across the globe

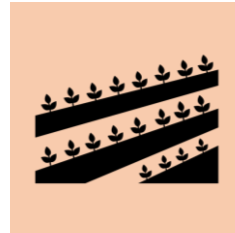
## Overview of Global Food and Nutrition Security Crisis Drivers

### Food Access



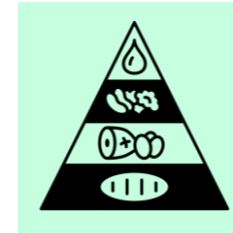
- High domestic food price inflation
- Elevated global commodity prices

### Food Availability



- High energy and fertilizer prices
- Adverse trade policies
- Uncertainties of Black Sea Grain Initiative renewal

### Food Utilization



- Households with reduced ability to eat healthy/nutritious food
- More children being wasted and stunted

### Food Stability

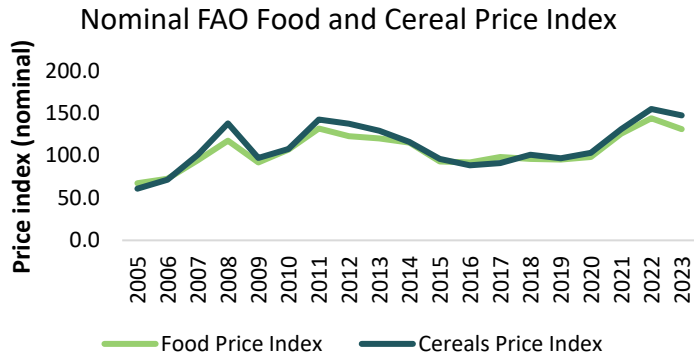


- Uncertainties of the Russia-Ukraine war
- Tightening interest rates / global recession
- Currency depreciations
- Growing debt burdens
- Adverse impacts of climate change

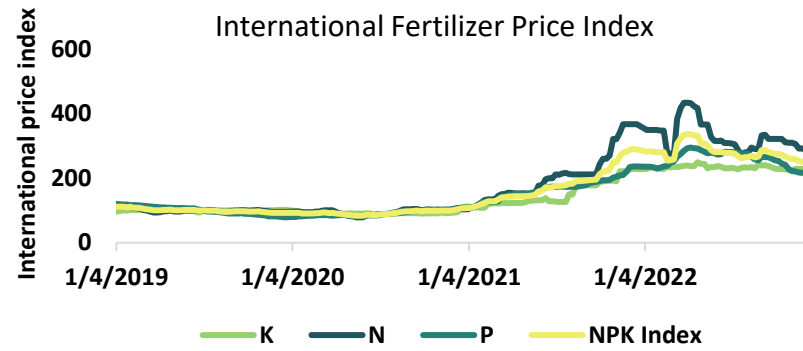


# Five key risks continue to impact food access, availability and stability

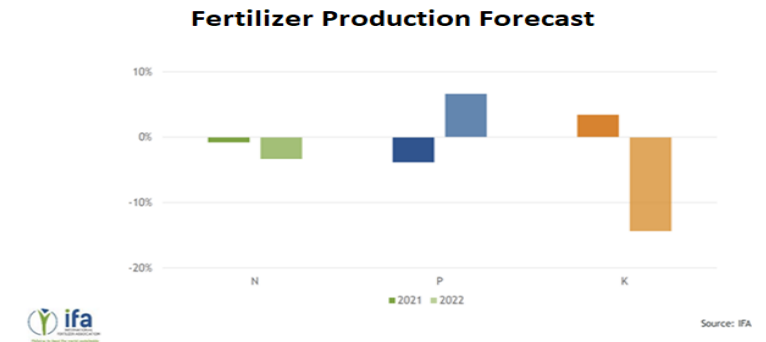
## Food prices are declining but remain high by historical standards



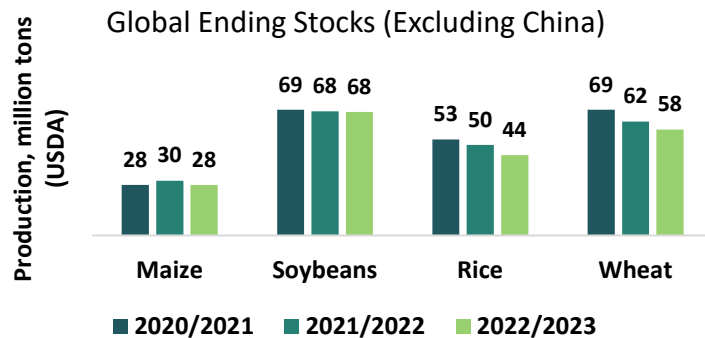
## Global fertilizer prices are declining but remain high by historical standards



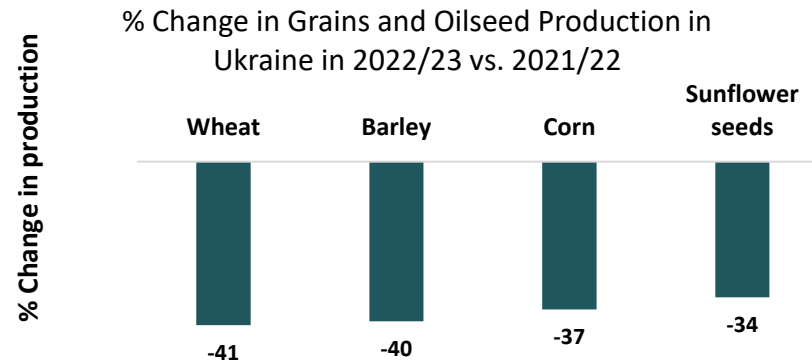
## Fertilizer supply constraints remain



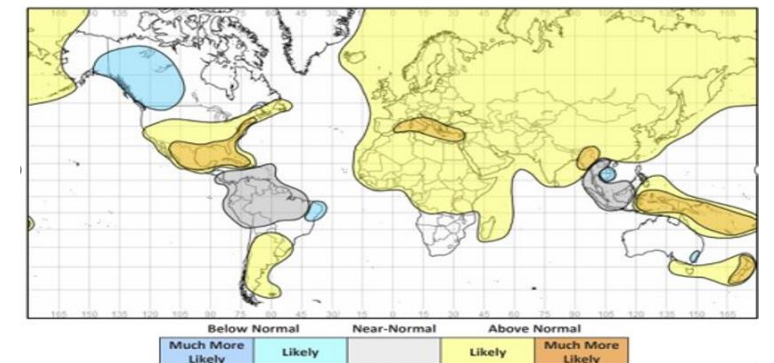
## Global food inventories and supply conditions have tightened



*The war in Ukraine now threatens Ukraine's 2023 grain supply. Thus, even if the Black Sea Grain initiative remains in effect, Ukraine will not be able to supply the same volumes of grain to the world as before.*



La Niña temperature and precipitation may continue through the next several months, creating the sixth consecutive drought season in East Africa



# World Bank Food and Nutrition Security Response

## FNS Response Themes

1



Support Production  
and Producers

2



Facilitate increased trade  
in food and Ag inputs

3



Support  
Vulnerable  
Households

4



Invest in sustainable  
food and nutrition  
security

The WB is **mobilizing up to \$30 billion between April 2022 and June 2023** in existing and new projects in areas such as agriculture, nutrition, social protection, water and irrigation.

# The Bigger Picture Is That The Global Food System Is Not Fit For Purpose

A food system that helps deliver by 2030	Vision/ interrelated targets	Currently off track
<p>Healthy <b>economy</b> (inclusive incomes, jobs &amp; livelihoods)</p>	<ul style="list-style-type: none"> <li>• Increase incomes of poor people that work in the food system</li> <li>• Support structural transformation</li> </ul>	<ul style="list-style-type: none"> <li>• 2030 end poverty target unlikely to be met, significant lag in fragile, conflict affected countries</li> </ul>
<p>Healthy <b>people</b> (secure and safe food and nutrition)</p>	<ul style="list-style-type: none"> <li>• End hunger and acute food insecurity</li> <li>• Improve health outcomes [lower micronutrient deficiency and obesity, improved food safety, less zoonotic disease, and reduced AMR]</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in hunger since 2015</li> <li>• 220 million acutely food insecure</li> <li>• 2 billion people micro-nutrient deficient</li> <li>• 2 billion people overweight or obese</li> <li>• Increase in zoonotic diseases</li> <li>• Anti-microbial resistance</li> </ul>
<p>Healthy <b>planet</b> (environmentally sustainable practices)</p>	<ul style="list-style-type: none"> <li>• Operate within safe planetary boundaries for sustainable resource use; lower emissions; boost climate resilience</li> </ul>	<ul style="list-style-type: none"> <li>• Land degradation</li> <li>• Water scarcity</li> <li>• Pollution</li> <li>• 25% of global GHG emissions</li> <li>• Biodiversity loss</li> <li>• High loss and waste</li> </ul>

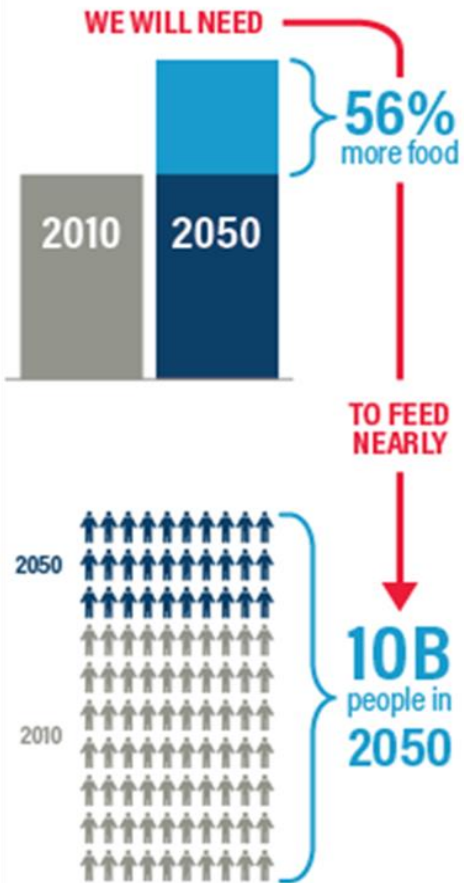
# Social Costs Outweigh The Market Value of The Global Food System

Trillions USD, 2018 prices

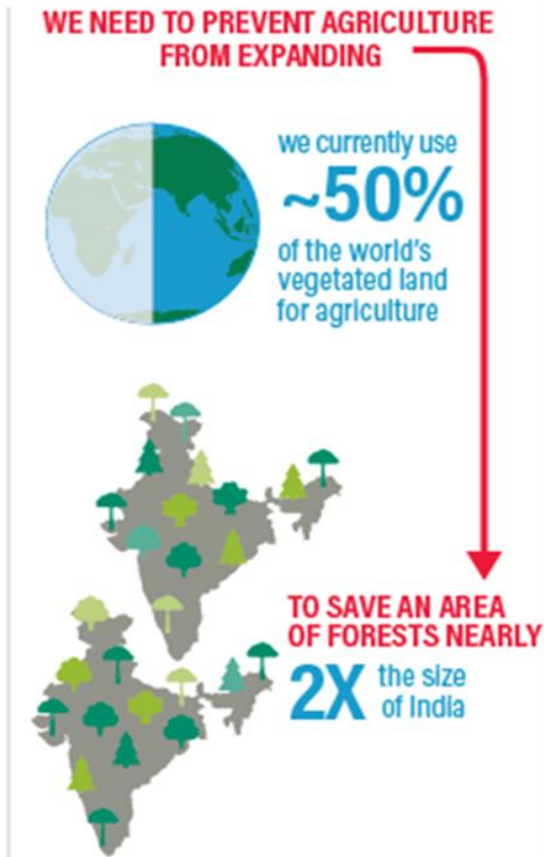


# Current And Emerging Challenges Are Massive

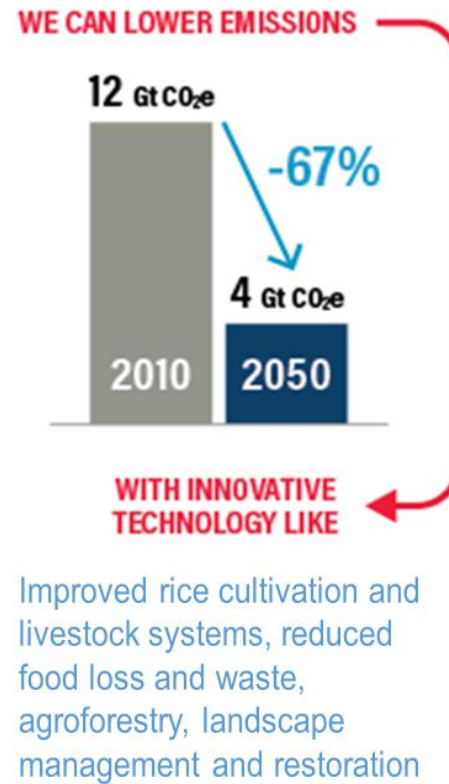
How do we feed 10 billion people...



...without using more land...



... while lowering emissions



... while improving climate resilience and without contributing to further water insecurity



... while improving nutrition and building human capital



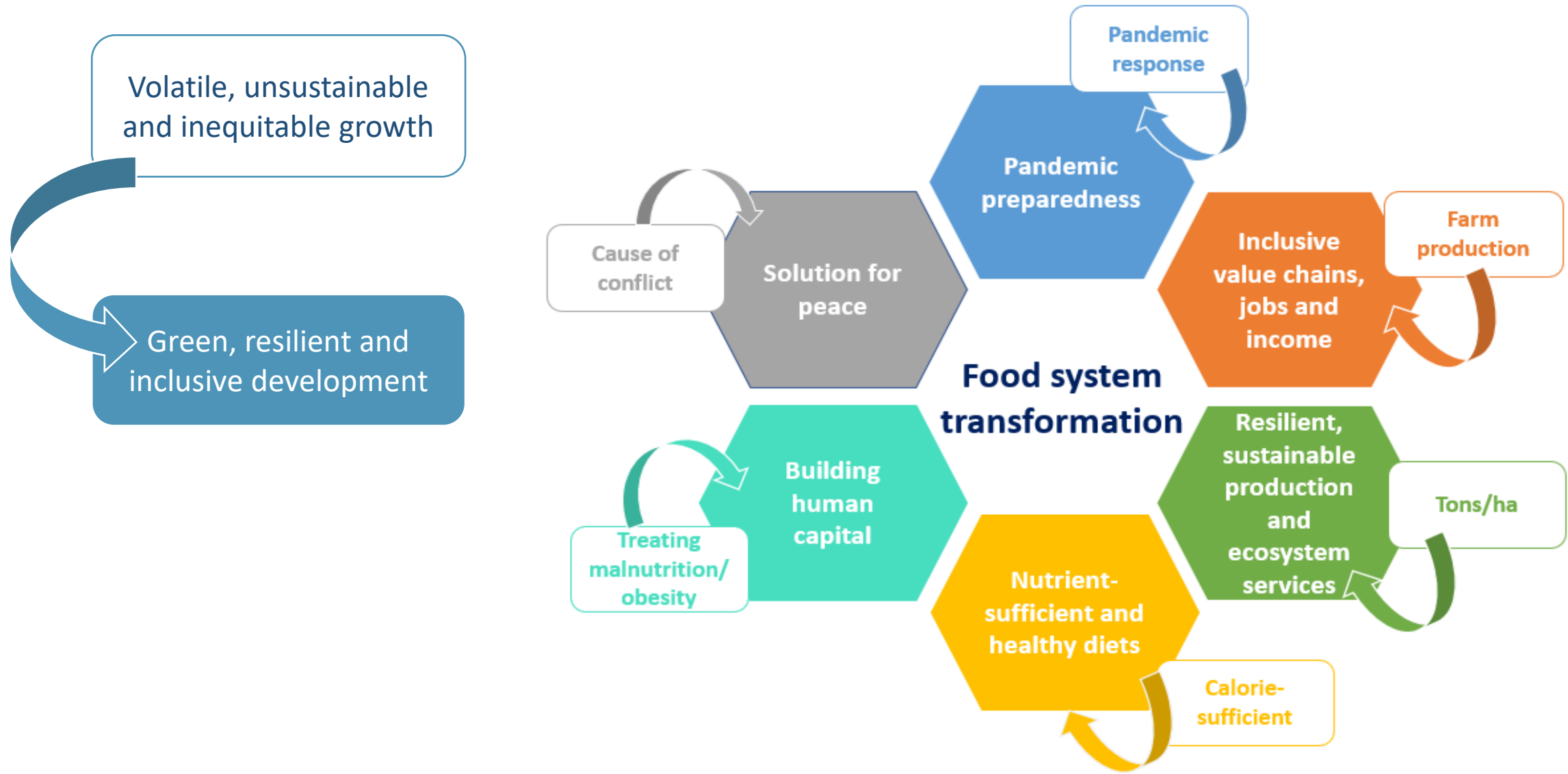
...and lifting the poor who work in the food system out of poverty?



Source: WRI (2019) *Creating a Sustainable Food Future*



# The Vision: A Global Food System in Support of Healthy People, Planet, Economy



# What does this Vision mean for Farmers?

Farmers need to be resilient and climate smart through 3 revenue streams:

## 1 FIRST REVENUE STREAM



- **More healthy Food from More Productivity**

- Climate smart agriculture
- Diet oriented production – vegetables and proteins versus carbos and fats
- Less food loss and waste
- Better market access from remote areas
- Buffering global supply disruptions

## 2 SECOND REVENUE STREAM



- **Payment for Environmental Services**

- Carbon sinks – forests, soils
- Biodiversity set-asides
- Pollutant recycling
- Biosecurity

## 3 THIRD REVENUE STREAM



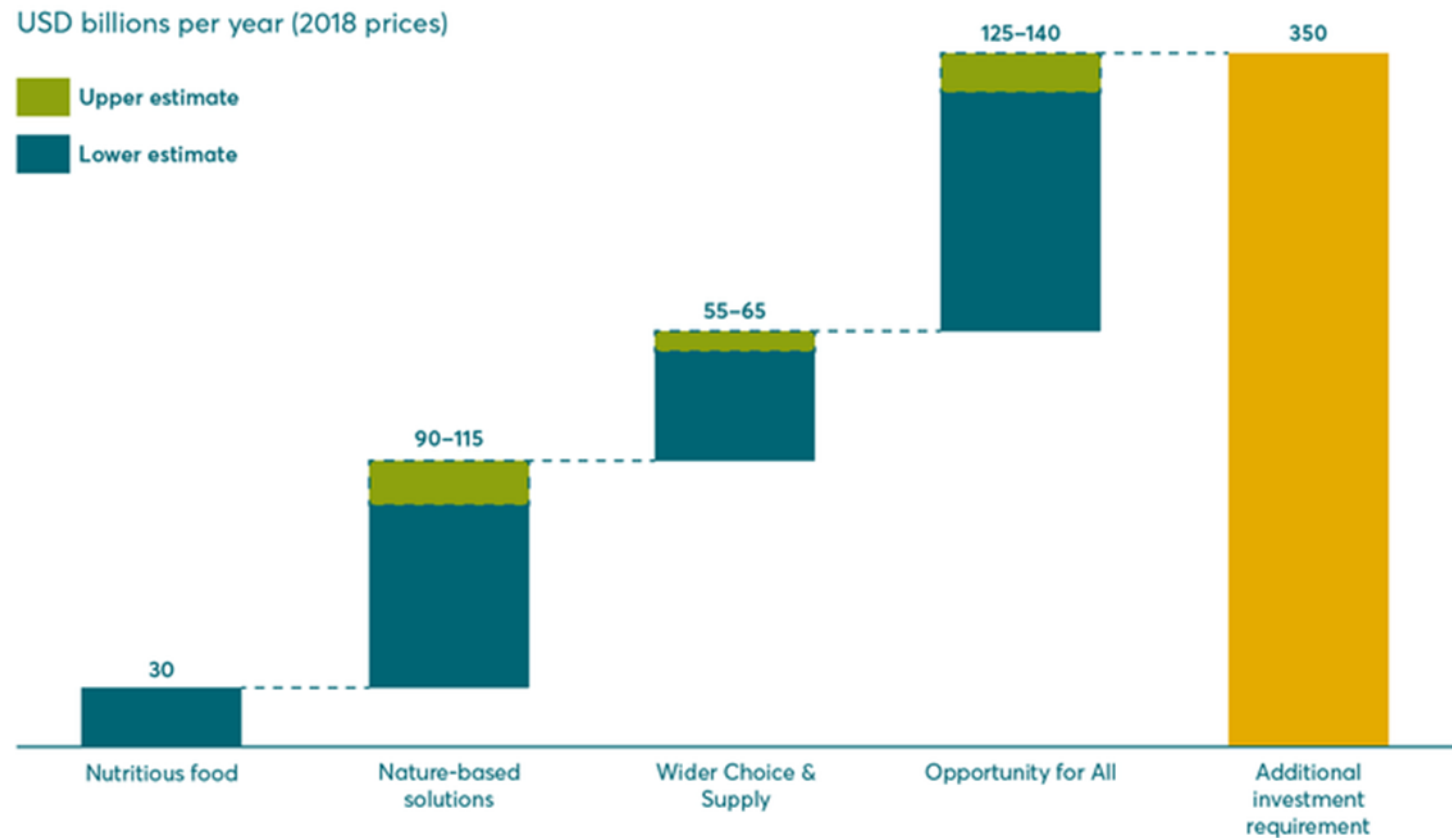
- **Renewables and sustainability**

- Renewable energy for own use and grid – solar, wind, micro-hydro
- Nutrient recycling – composting, organic matter recovery, efficient chemicals
- Irrigation – water productivity, lower withdrawals

# Food Systems Transformation: How Much Would Need To Be Invested?

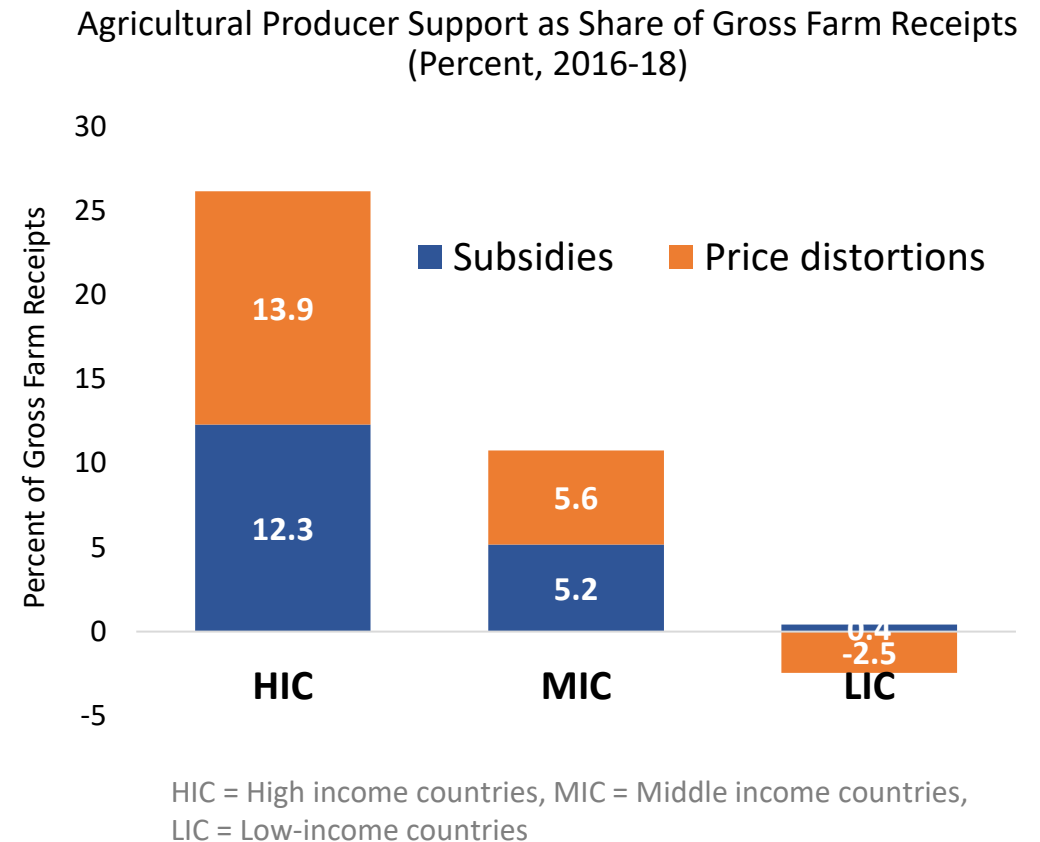
The additional annual investment requirements associated with the ten critical transitions are between **\$300 and \$350 billion** (2018 – 2030).

This is less than **0.5% of GDP**, a **return ration of more than 15:1** based on the economic prize.



# There Is A Major Opportunity to Realign INCENTIVES

- \$568 billion per year supports agricultural producers in 79 countries
- 65% of support distorts producer incentives (market price support, input and output subsidies)
- Large protection by high-income countries, continued net taxation by low-income countries
- Agriculture and food sector is lagging adoption of ESG standards

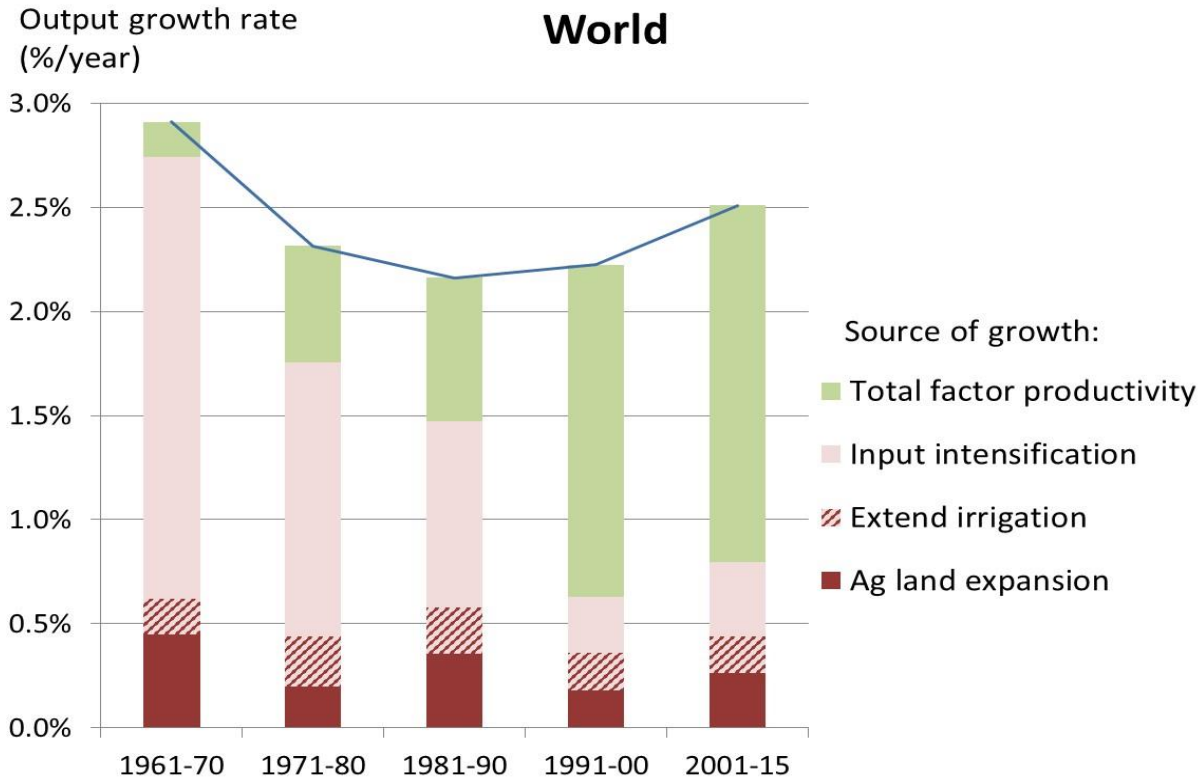




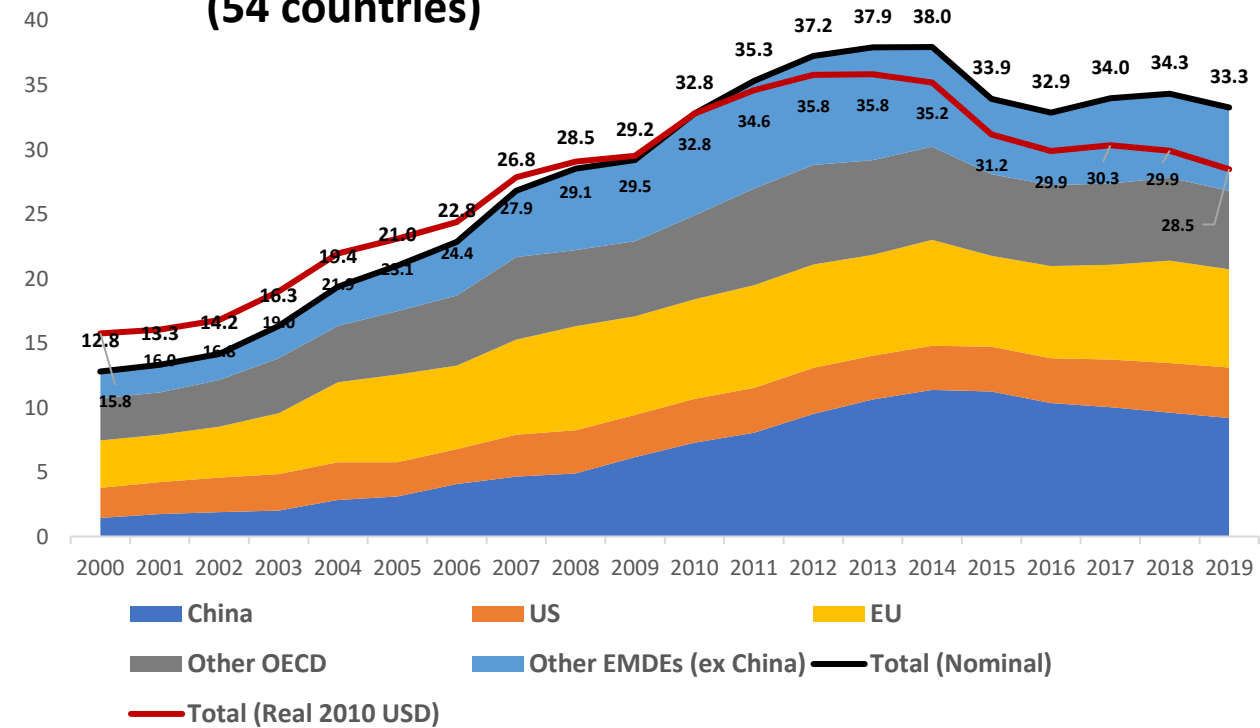
# It Is Important To Accelerate Agricultural INNOVATION:

## Urgent Need To Address The Innovation Paradox: Research Investment Gap

### Ag. growth is increasingly productivity-dependent



### Trends in Public R&D Funding (54 countries)



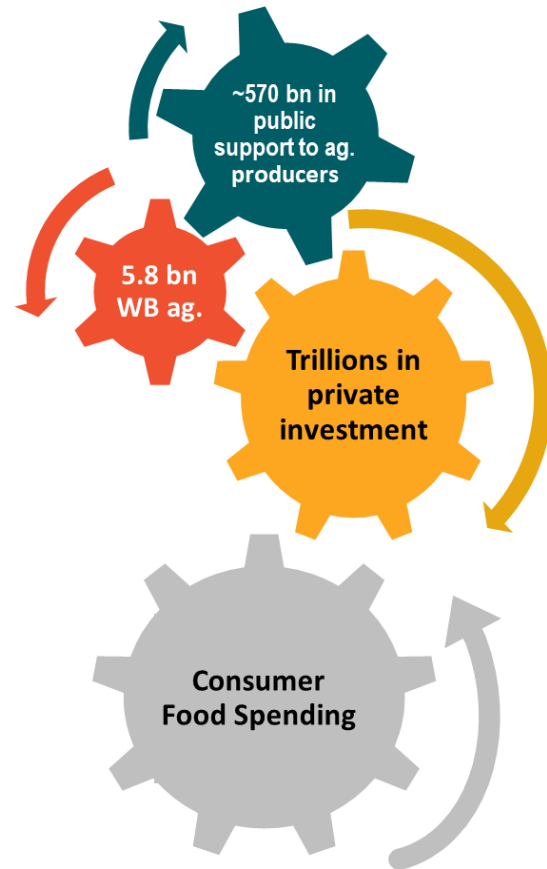
**High rates of return to investments in R&D  
Yet, R&D/GDP low and falling in Africa and SE Asia**

# There Is An Urgent Need to Scale Needed INVESTMENTS

**~\$300-350bn**

more per year to 2030 in public and private financing needed for transformation of food and land use systems for healthier people, planet and economy.

*Source: Food and Land Use Coalition (FOLU) Global Report 2019*



Increasingly use support to:

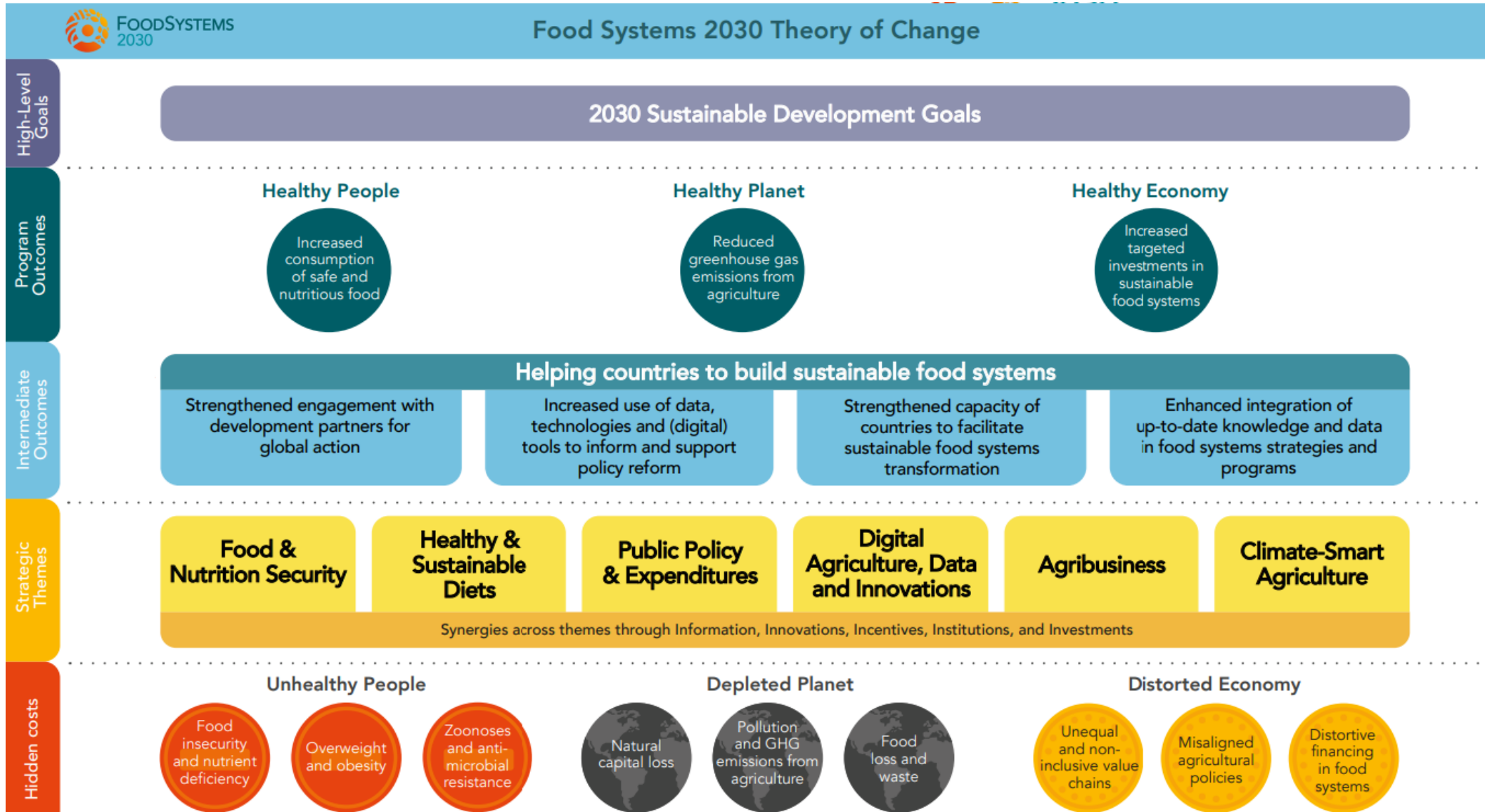
- ✓ Repurpose policies and public support
- ✓ Crowd-in private investment
- ✓ Leverage the technology ecosystem
- ✓ Leverage external partners
- ✓ Apply an integrated ONEWBG approach: working hand in hand with all Internal partners: SD, EFI, HD, INF, IFC, MIGA, and DEC, TRE.

# It Is Critical To Strengthen INSTITUTIONS

- Allow For Systematic Food Systems Focus
- Ensure Effective Inter-Ministerial Coordination
- Apply a Food Systems Lens on the Public Budget
- Integrate Farmers' Voice



# FOOD SYSTEMS 2030 MDTF SEEKS TO CATALYZE NEEDED CHANGES





The image features a dynamic and colorful background of paint splatters. The colors transition from purple and blue on the left, through green and yellow in the center, to red and orange on the right. The splatters are of various sizes and densities, creating a textured, energetic feel. Centered over this background is the text "Thank You!" in a large, white, bold, sans-serif font. The letters have a slight 3D effect with soft shadows, making them stand out prominently against the busy, colorful backdrop.

**Thank You!**