UNITED NATIONS FOOD SYSTEMS SUMMIT 2021

Italy 2023 UN FOOD SYSTEMS SUMMIT + 2 STOCKTAKING MOMENT

# Exploring Global Food Systems Transformation

**Fan, Shenggen**

Dean, Academy of Global Food Economics and Policy

Chair Professor, China Agricultural University

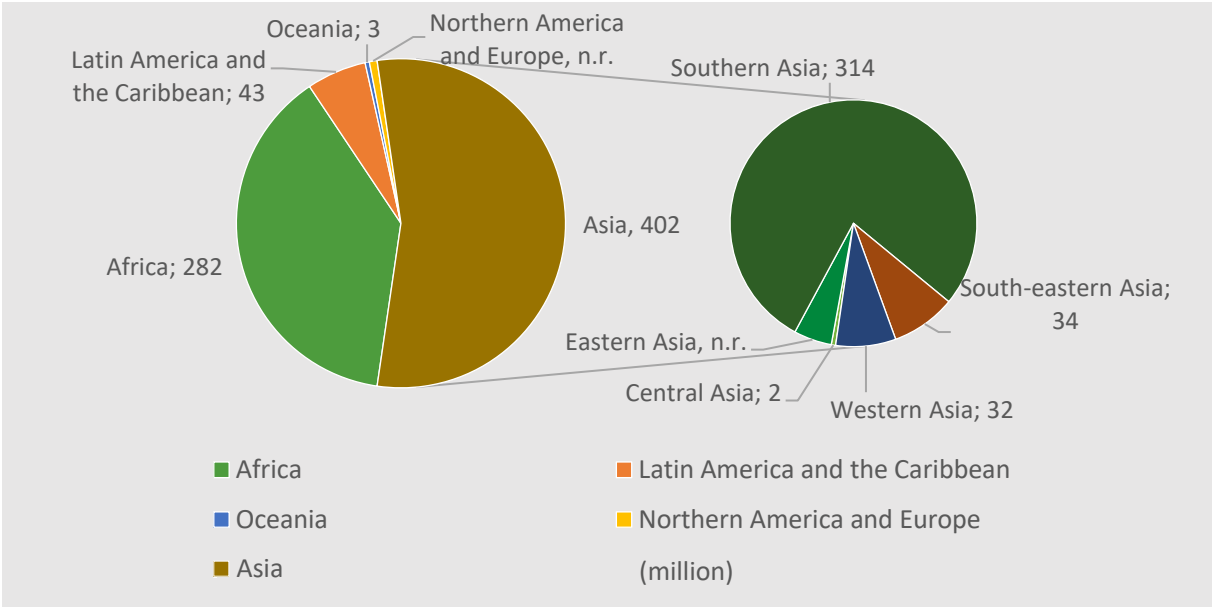
# Outline

- Global Food Systems Facing Multiple Challenges
- 2021 UN Food Systems Summit and 2023 Stocktaking
- Chinese Food Systems Transformation

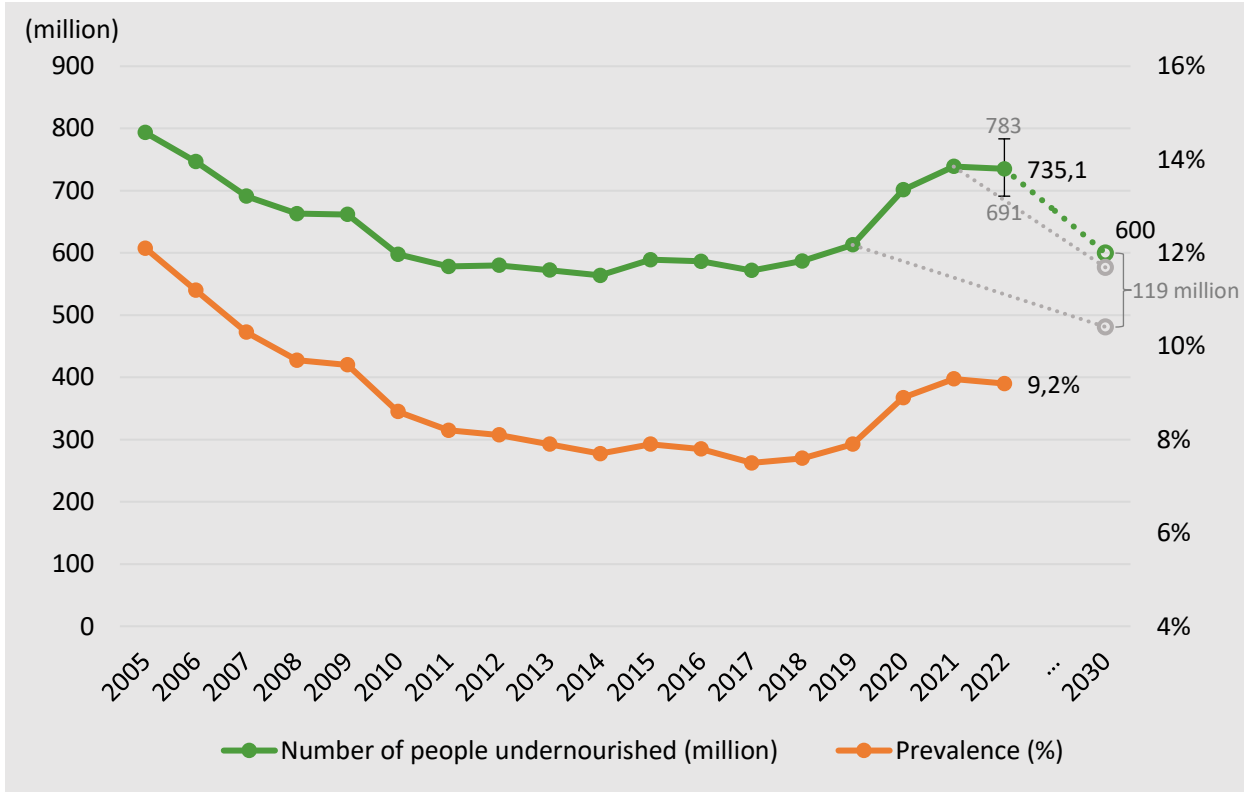
# Persisting Global Hunger

- **258 million** people in the world are in **food crisis** or worse (IPC/CH Phase 3 or above or equivalent), keep increasing since 2018
- **735 million** people are suffering from **hunger**
- **2.4 billion** people, 29.6% of the global population, are facing moderate or severe **food insecurity**

## Number of People Undernourished (2022)




## Prevalence of Undernourishment (PoU), Global




* Projected values in the figure are illustrated by dotted lines and empty circles

Sources:
The State of Food Security and Nutrition in the World 2023, FAO
2023 Global Report on Food Crises, WFP

# Emerging Overweight and Obesity

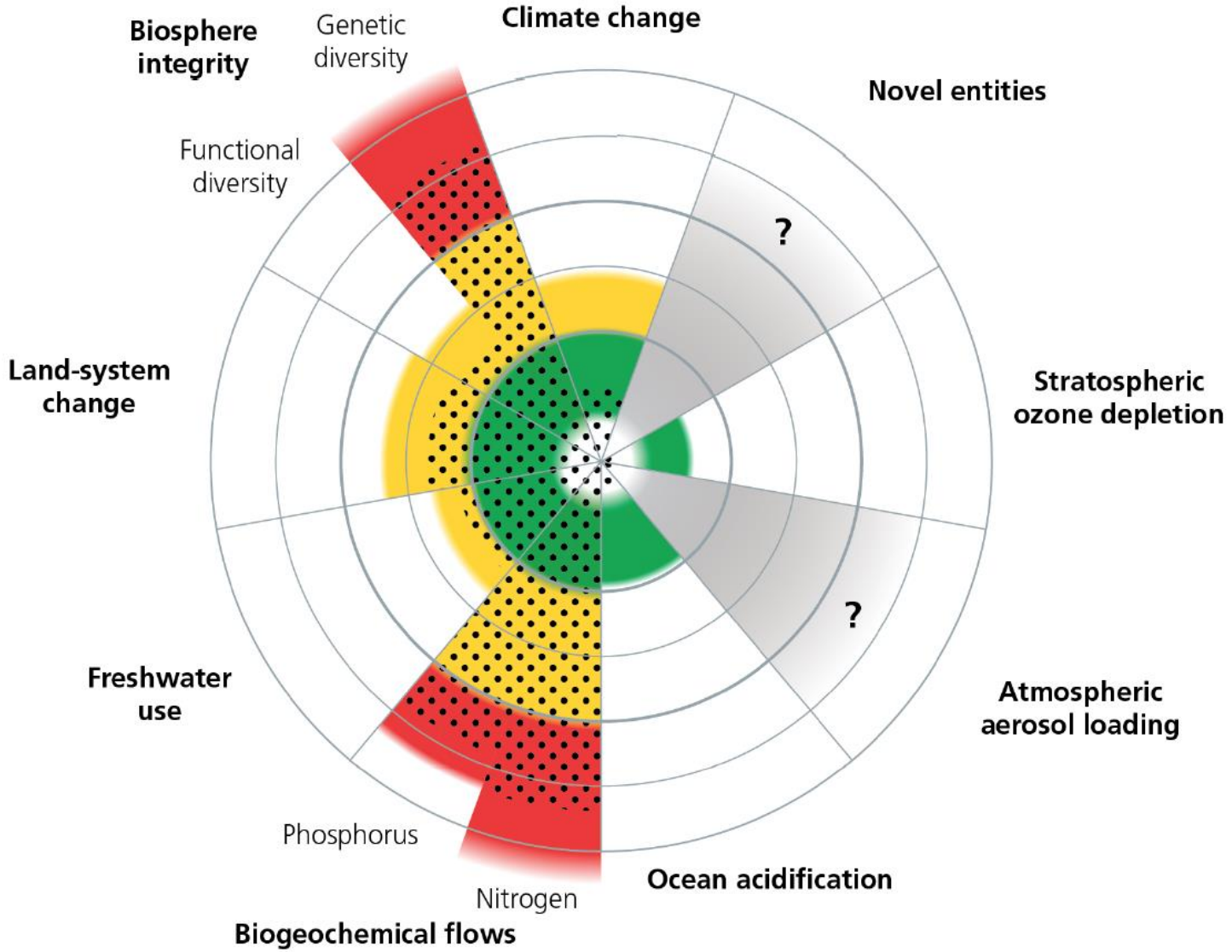
- 37 million (5.6%) of children under 5 y/o was overweight (2022)
  - Prevalence: 16.8% (0.6 million) in Oceania, 8.6% (4.2 million) in Latin America and the Caribbean
- 675.7 million (13.1%) of adult was obese (2016)
  - Prevalence: 28.1% (8.1 million) in Oceania, 26.9% in Northern America and Europe
- At least **2.8 million** people dying each year as a result of being overweight or obese (WHO, 2021)

## China's increasing obesity


Source: China CDC, 2022

# Planetary Boundaries are Breached

- Multiple planetary boundary is threatened
  - Soil Degradation
  - Water Scarcity
  - Loss of Biodiversity
  - Climate Change
- The increasing climate-related risks are calling for urgent actions



# Natural Resources Degradation

## Soil Degradation

- Approximately 20% of the world's land (30 million square kilometers) has undergone degradation
- Boron deficiency is present in 50% of arable soils worldwide
- Soil salinization is estimated to take 0.3-1.5 million hectare of farmland out of production each year

(UNCCD, Global Land Outlook 2nd, 2022; FAO, SOLAW, 2021)

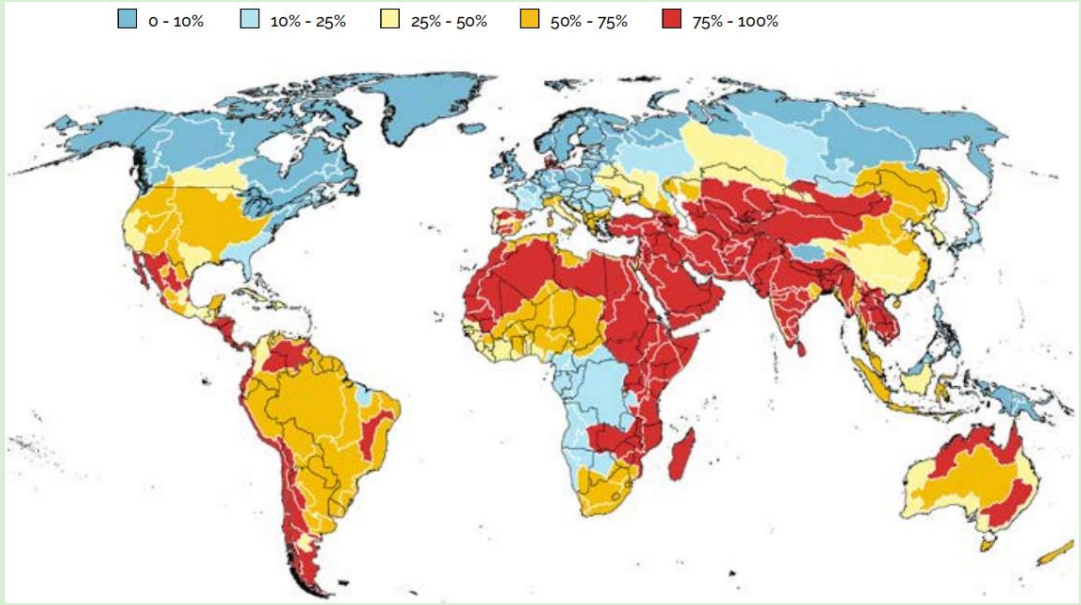
## Loss of Biodiversity

- 7745 local breeds of livestock are still in existence
  - **Only 7%** are not at risk
- **33%** of freshwater fish species assessed are considered threatened
- In the past 50 years, agriculture posed a threat to **24000** of the 28000 species at risk of extinction

## Water Scarcity

- About **70%** of global freshwater withdrawals are used for irrigation (Rockström et al., 2017)
- In 2050, **2.7 to 3.2 billion** people would live in potential severely water-scarce areas

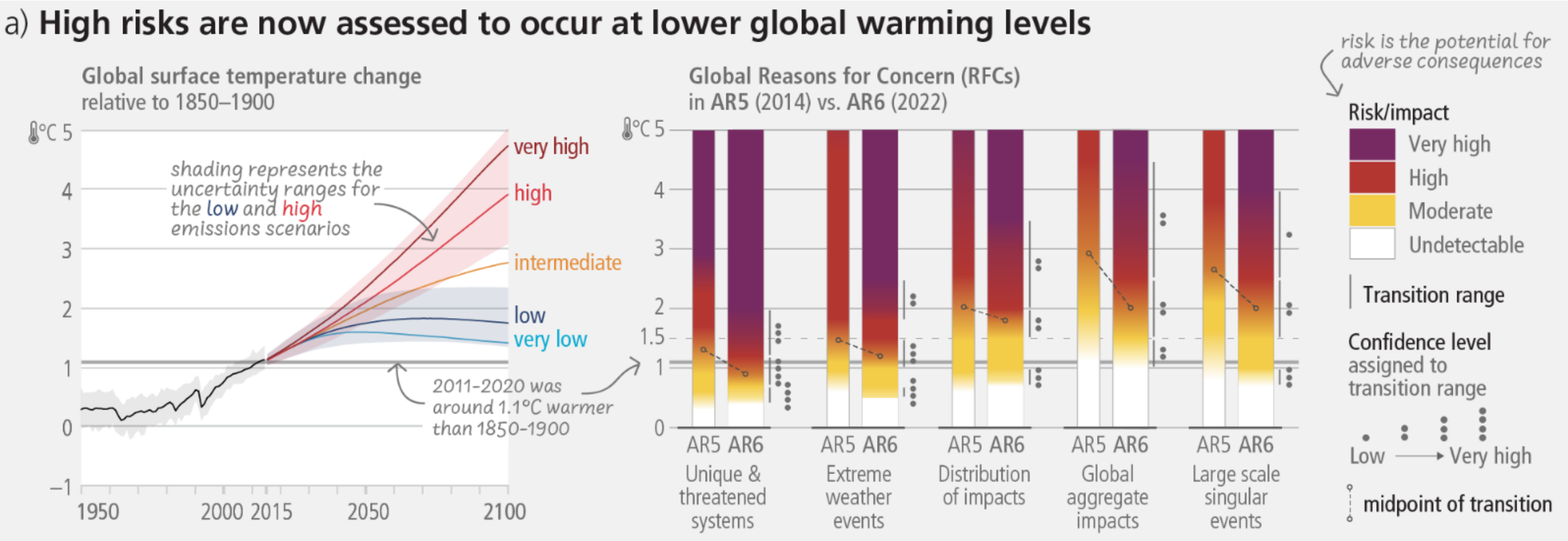
**Water Stress Due to Agriculture (By basin, 2018)**




Source: WMO, UNEP, GCP, UK Met Office, IPCC, UNDRR, 2022; IFPRI, 2010

# Intensifying Global Warming

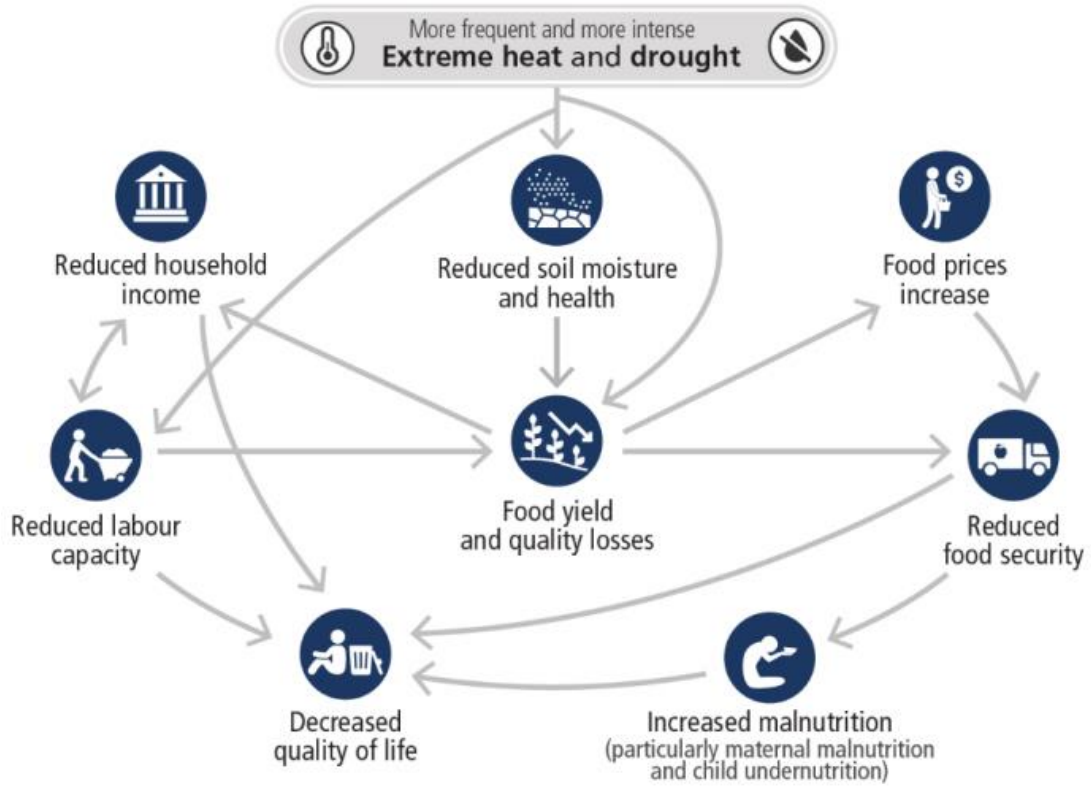
- Under current policies, global warming is projected to be **2.8°C** over the 21st century
- Achieving **net-zero** results in keeping projected global warming to **1.8 [1.8-2.1] ℃** with a 66% chance




Source: UNEP, 2022; IPCC AR6 SYR 2023

# Increasing Climate-Related Risks

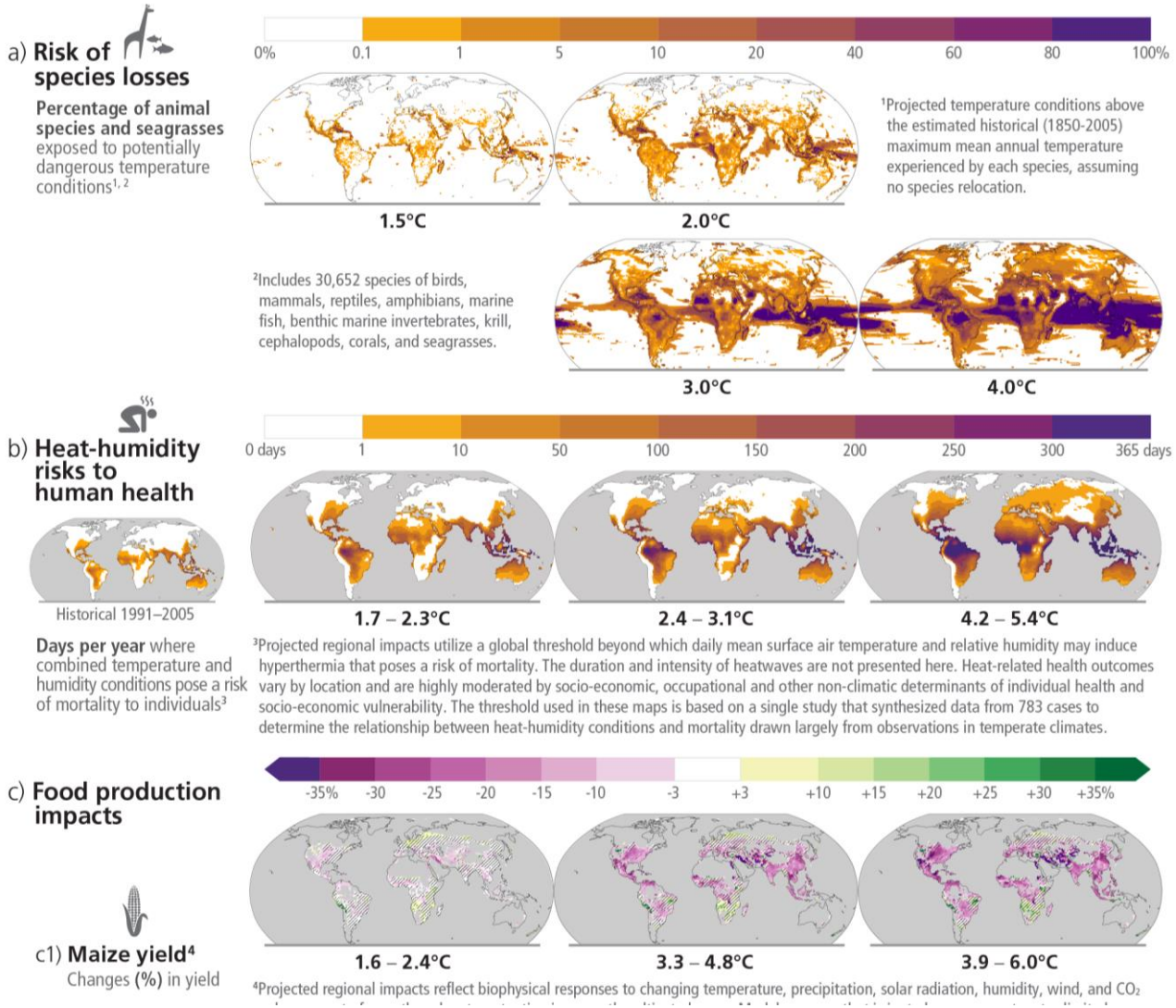
## The Complexity of Risks Related to Climate Change




1 ℃ global warming would lead to production **loss**:

- Wheat: 6.0%
- Maize: 7.4%
- Rice: 3.2%
- Soybeans: 3.1%

## Risks Related to Climate Change and Its Regional Differences




Source: IPCC AR6 Synthesis Report 2023
Lesk et al., 2016; Zhang et al., 2022; Harvey et al., 2014


# Outcomes of the UN Food Systems Summit (2021)

Food Systems Summit 2021

Overall “portfolio of action”

People | Planet | Prosperity

National Food Systems Transformation Pathways

Member State Statements on National Food Systems Transformation Pathways / Strategies

(spanning the 2030 Agenda and Goals; Drawing on all possible actions and solutions prioritized)

Regional Food Systems Transformation

Regional Group Statements on Regional Food Systems Transformation Pathways / Strategies

(spanning the 2030 Agenda and Goals; Drawing on all possible actions and solutions prioritized)

Action Areas

- Nourish All People
- Boost Nature-Based Solutions of Production
- Advance Equitable Livelihoods, Decent Work, & Empowered Communities
- Build Resilience to Vulnerabilities, Shocks, and Stresses

Support Means of Implementation

(Finance; Governance; Science and Knowledge; Innovation, Technology, & Data; Capacity; Human Rights)

Initiatives and commitments

Multi-stakeholder initiatives and hundreds of complementary stakeholder commitments from actors at local, national, and global level posted on a digital platform space

Knowledge Base

Compendium

Follow Up and Review

Approach to Follow Up and Review

# Action Tracks

| | |
|---|---|
| Ensure access to safe and nutritious food for all | • End hunger and all forms of malnutrition<br>• Reduce the incidence of non-communicable disease<br>• Enable all people to be nourished and healthy |
| Shift to sustainable consumption patterns | • Strengthen local value chains<br>• Improve nutrition<br>• Promote the reuse and recycling of food resources |
| Boost nature-positive production at sufficient scale | • Optimize environmental resource use<br>• Reduce biodiversity loss, pollution, water use, soil degradation and greenhouse gas emissions |
| Advance equitable livelihoods and value distribution | • Promote full and productive employment<br>• Reduce risks for the world's poorest<br>• Enable entrepreneurship<br>• Address the inequitable |
| Build resilience to vulnerabilities, shocks, and stresses | • Ensure that all people within a food system are empowered to prepare for, withstand, and recover from instability |

# Outcomes

- **11 Global dialogues**
- **1600 Member states & Independent dialogues**
- Engaged **millions of people** from diverse backgrounds and sectors
- Co-created solutions and pathways for food systems transformation
- Fostered trust, mutual learning, and innovation

**Dialogue programmes**

**Commitments from civil society, indigenous peoples, youth**

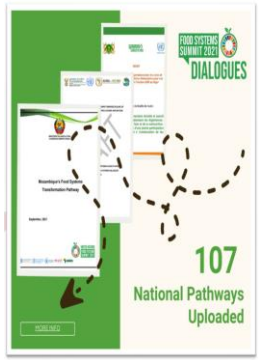
- **200+ commitments** from civil society, indigenous peoples, youth
- Presented their own **visions**, **demands**, and **commitments** for food systems transformation
- Highlighted the challenges, opportunities, and priorities of their groups

- More than **90 coalitions** were formed by diverse partners
- Aim to leverage their **collective** resources, expertise, and influence to deliver concrete actions and impacts
- Cover a wide range of topics such as nutrition, climate, biodiversity, resilience, innovation, etc.
- Open to new members and collaborations

**Coalitions launched**

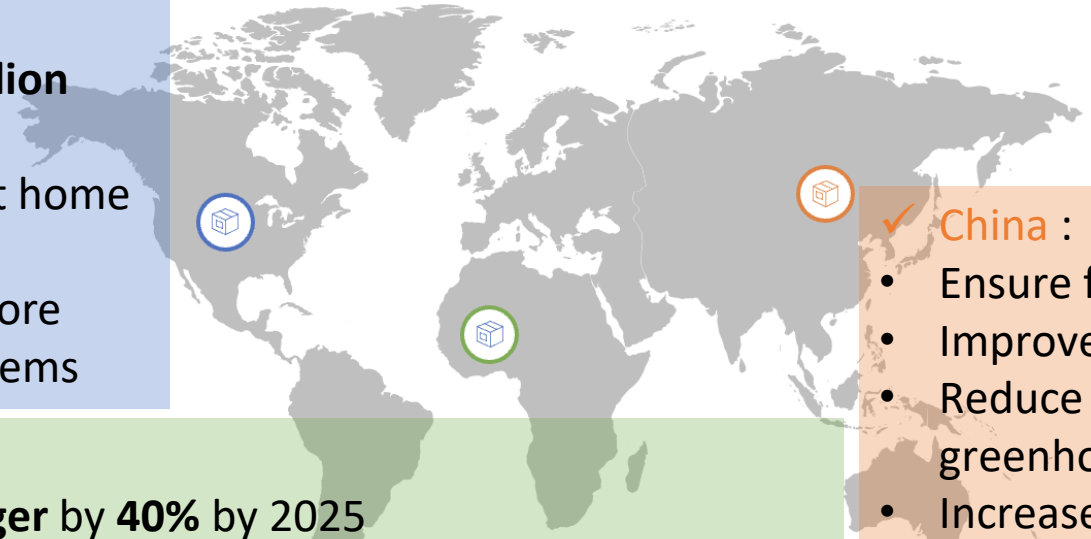
# Outcomes: National Pathways and Commitments

- **107** Member States have posted National Pathways on the Food Systems Summit Gateway
  - Living documents that provide emerging national strategies for the transformation of their food systems




- **More than 130 countries** announced **national commitments** at UN Food Systems Summit

✓ The United States:
- Committed to investing **$10 billion** over five years
- End hunger and malnutrition at home and abroad
- Support the development of more resilient and inclusive food systems



✓ China :
- Ensure food security and self-sufficiency
- Improve food quality and safety
- Reduce environmental impacts and greenhouse gas emissions
- Increase investment in agricultural science and technology
- Promote South-South cooperation on food security

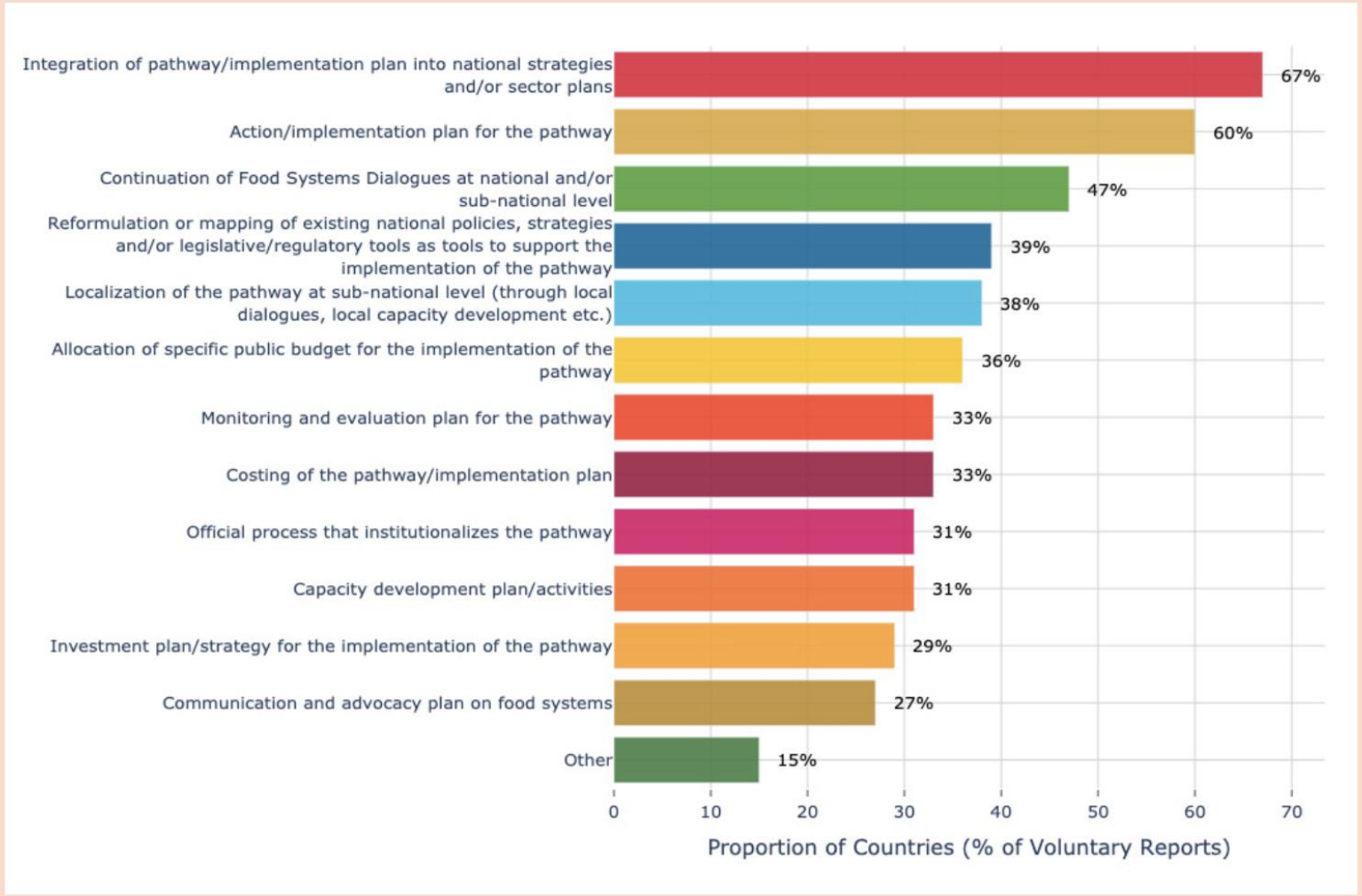
✓ Africa:
- Reduce **chronic hunger** by **40%** by 2025
- **Eliminate** all forms of **malnutrition** by 2030
- Create **10 million** decent **jobs** in the agri-food sector by 2025
- Increase intra-African **trade** of agricultural commodities and services by **50%** by 2030


# UN Food Systems Summit +2: Stocktaking Moment (2023)

# Country Outputs on Food Systems

Proportion of responses to Question - "**Since the 2021 Food Systems Summit, have you developed or are you working on any of the following outputs as steps towards the implementation of your country's Food Systems Transformation Pathway**?".

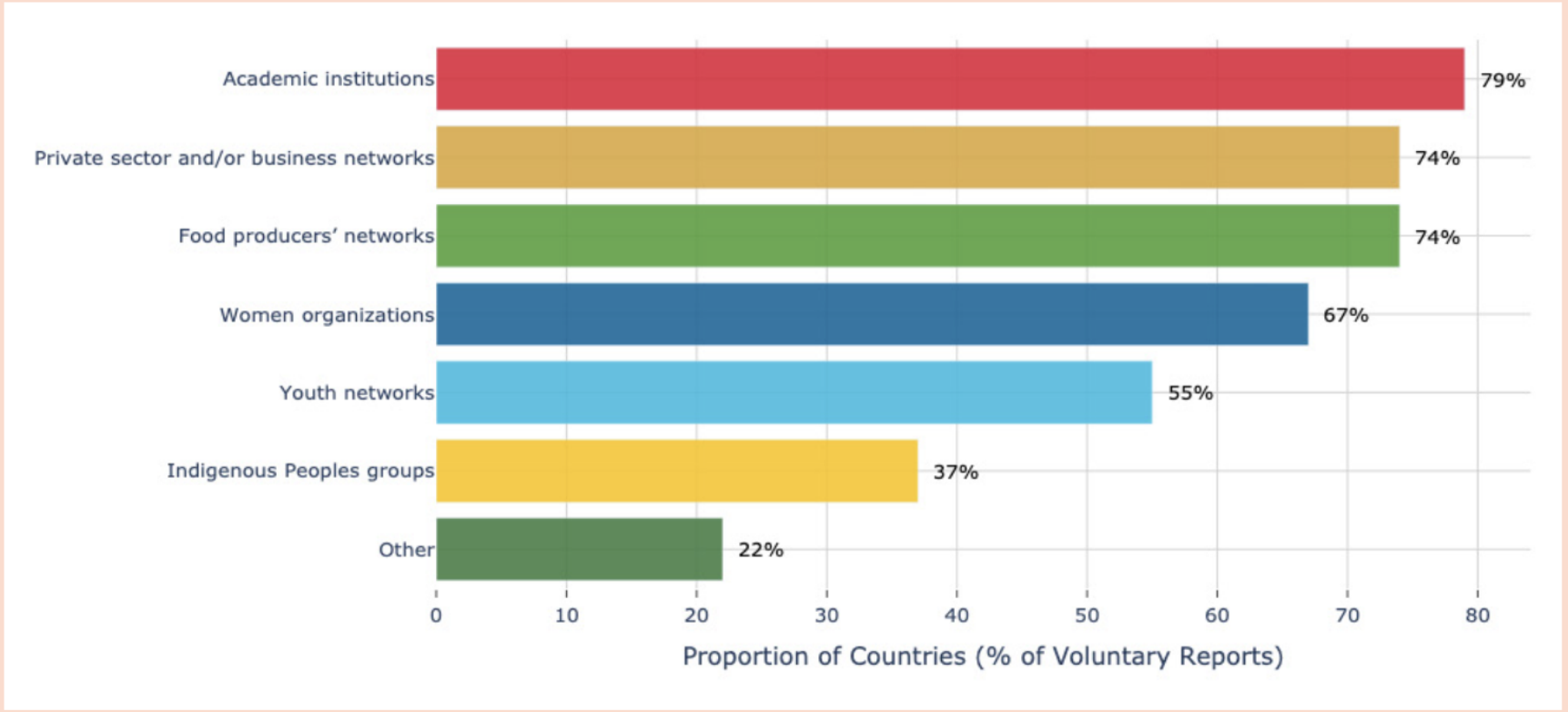
- **67**% of the countries reported successfully **integrated the priorities outlined in their national pathways into their overarching national development plans and strategies**



# Country Engagement with National Actors

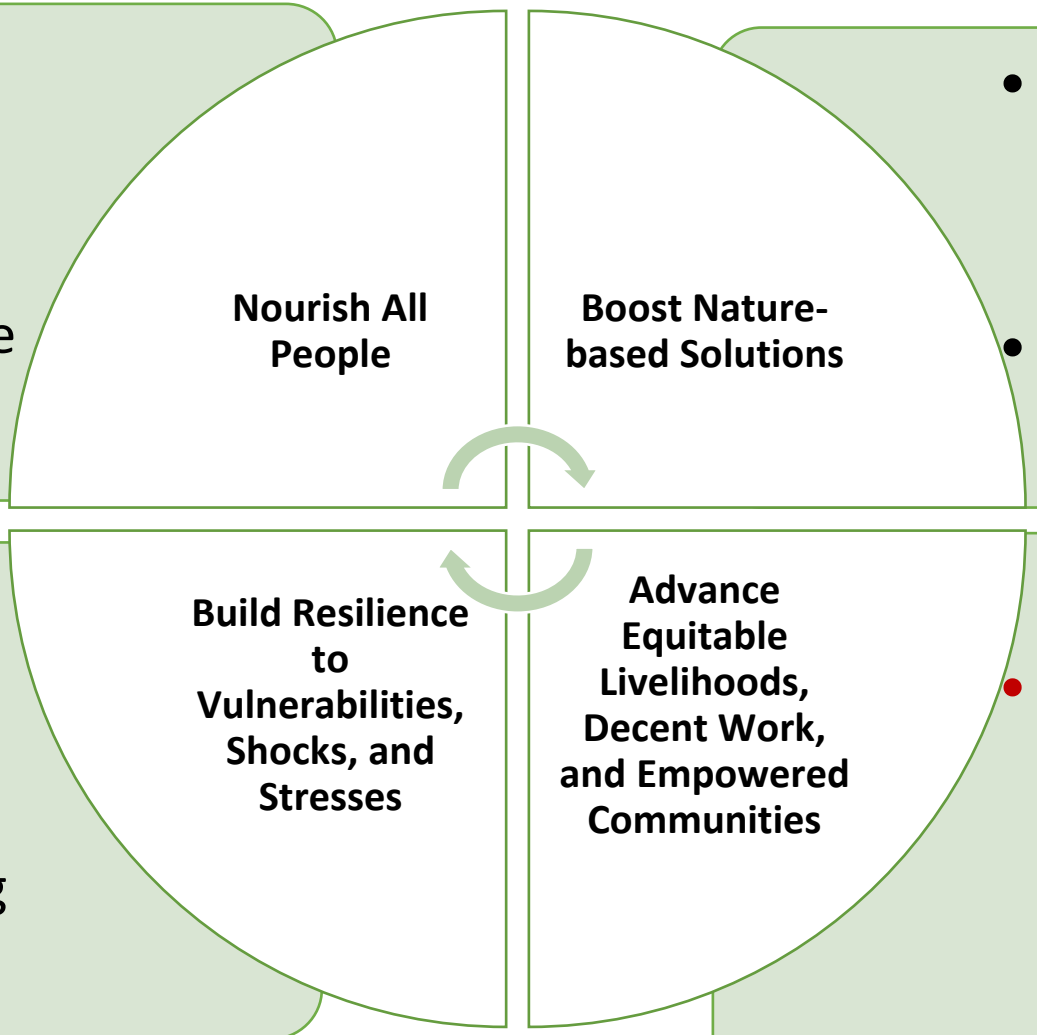
**Proportion of responses to the Question**
**"Have you engaged with any of the following actors at the national level in designing and implementing food systems transformation?"**

- Engagement with youth and Indigenous Peoples groups is still **limited**



# Country Progress in Four Thematic Action Areas

- **Varied** based on their income levels
- High-income countries: promote healthy diets
- Low-income countries: reduce hunger and malnutrition




- The majority of countries prioritized crop production and diversification to boost nature
- Some countries also prioritized sustainable livestock and fisheries

- **Only half** of the countries recognize the urgency of adapting food systems to climate change and promoting environmental resilience

- **Only 1/3** of countries reported initiatives to create jobs, improve farmers' income, enhance women's opportunities, and increase youth participation in food production

# Enduring Challenges Faced by Countries

**The complex crisis and fluid**

- **15**% of countries have undergone changes in political leadership and administration in the past two years

**Operationalization**

- In some countries, the endorsement of new policies, laws, or implementation plans by the government is still **pending**.

**Finance**

- The financial ecosystem for agriculture is highly **fragmented** with many small aid activities, especially by bilateral donors

**low-income countries**

- Low-income countries encounter difficulties in accessing **technical assistance** and adequate **infrastructure** for storage, transport, and processing
- hinder the efficient movement of food

# Chinese Food Systems Transformation

# Strategies and Policies


- "Big Food Concept" to diversify food sources while continue to ensure grain security
- "Store Grains (food) in Land" & "Store Grains(food) in Technology"
- Accelerate the construction of an agricultural powerhouse and modernize agriculture and rural areas
- "Food Security Law" to ensure grain production of 650 million tons (roughly equal to the 2018 level) by 2025
- Carbon peak by 2030 and neutrality by 2060, to transform towards safe, green and sustainable systems
- Developing overall plan to increase the resilience of food systems, to reduce shocks such as natural disasters, climate change, plant animal and zoonotic diseases (i.e. COVID-19)
- New technologies (e.g., biotechnology and ICTs), to increase agricultural productivity, developing digital agriculture and extending the value chain of agricultural and food products

# Commitment from China

- Improve food productivity, prioritize food production and agriculture, increase rural and agricultural input, promote technology development and infrastructure, expand food supply in a sustainable way
- Establish multilateral guaranteed stable supply chains, promote trade liberalization and investment facilitation, lift unreasonable trade restrictions, reduce food loss and waste, and build an efficient, open and fair food supply system
- Work together to improve global food and agriculture governance, leverage the role of UN agencies, deepen North-South, South-South and tripartite cooperation, increase financial and technical support to developing countries, and promote the establishment of a more efficient and rational global food governance system

*Renjian Tang*

*Minister of Agriculture and Rural Affairs*

# Pathway and Plan

**Strengthening institutions, policies and investment using food systems approach**

- Establish a leadership group to coordinate national and local food system policies and investments
- Increasing the productivity through more innovative technologies
- Investing in restoring natural resources, sustainable agricultural infrastructure, and reducing costs related to transportation, marketing, and food consumption
- Reforming institutions for land improvement, help small farms upgrade or quit, expand machinery customization services, and develop more effective farmers' cooperatives
- *"From farm to table"*, establish a modern system for the distribution of agricultural products to improve inclusiveness, efficiency, nutrition and food safety
- Evaluate the goal of agricultural growth and sustainable development
- Improve the social protection system
- Strengthen international cooperation to improve food security in China and the world

# 全球食物经济与政策研究院

# Academy of Global Food Economics and Policy