

Rethinking of Food Systems for the Post COVID World



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Outline

- Food systems are already under numerous threats
- COVID-19 has made the food systems more vulnerable
- The pandemic is a wake-up call for rethinking future food systems
- Future food systems must place resilience as one of the top priorities



Food Systems Facing Numerous Challenges

Food Systems Are Already Under Threat

**Conflict/
wars**

**Degradation
of natural
resources**

-More than 690 million people suffer from hunger (after adjusting the Chinese number)

-More than 2 billion people lack essential micronutrients

-More than 2 billion people are overweight or obese

-More than 144 million children are stunted, 47 million children were wasted

**Climate
change**

**Hunger and
Malnutrition**

**Rising
inequality**

**Anti-
globalization**



Poverty Will Increase For First Time in Many Years

IMF

Instead of 3.3% growth, the global economy is projected to shrink by 4.9%.

IFPRI

140 million additional people could fall into extreme poverty in 2020, including 80 million in Africa and 42 million in South Asia
(Laborde, et al., 2020)

UNU-
WIDER

With a 5% contraction in per capita income, the world could witness an increase in the number of poor people, relative to the 2018 figures, of more than 80 million for the US\$1.9/day poverty line, 130 million for the US\$3.2/day standard

World
Bank

There will be 70-100 million more extreme poor in 2020

Acute Hunger Will Double

Global Report on Food Crises (GRFC)

- At 135 million, the number of people in crisis or worse (IPC/CH Phase 3 or above, or acute food insecurity) in 2019 was the highest in the four years of the GRFC's existence.

United Nations World Food Programme (WFP)

- COVID-19 will add another 130 million acute food insecurity population, almost double of the number in 2019. Majority of these added food insecure population will be in Africa.

IFPRI

- The nutritional status of vulnerable groups will be damaged due to the drastic declines in income primarily through declining demand for vegetables, fruits, and animal-sourced foods, which are the main sources of essential micronutrients in diets.

UNICEF

- An additional 6.7 million children under 5 could suffer from wasting this year due to COVID-19.



Vulnerable population has been hit very
hard



Major Disruptions in Food Supply Chains

COVID's impact unprecedented

- Global, longer period and widespread - Very different from the global financial crisis in 2008, food price spikes in 2007-2008, and SARS in 2003
- Heterogeneity in impacts—the poor suffer more disproportionately

Supply chains are disrupted

- Impacts are more intrusive in labor-intensive (vs capital-intensive) systems
- Smallholders, rural migrants, youth and women—less capacity to cope and recover
- Trade has been affected by lack of demand and logistics challenges

Smallholders Are Hit Hard by COVID-19

Supply chain disruptions hinder smallholders' access to inputs, services, labor, markets, finance, etc.

A survey of around 370 farmers across nine Indian states found that among those who had harvested some produce this season, 29% were still holding on to it; 13% had sold the harvests at throwaway prices and about 7% reported that they had to let the produce go to waste ([Narayanan, 2020](#))

Vegetables and livestock sector were severely disrupted in China, Ethiopia, Nigeria, and many other parts of the world (IFPRI, 2020)

Substantial fall in producer prices and rising urban consumer prices in India and some African countries ([Narayanan, 2020](#), and [Minten, 2020](#))

Source: Andy Johnstone

Rural Migrants Most Adversely Affected

China

- 290.8 million rural migrants (Fan, 2020)

India

- 40-50 million seasonal migrants (Dev, 2020)

Africa

- 36 million international migrants (Adhikari, 2020)

- In China, migrants' employment decreased by 30%, wage rate declined by 6-8%, and 80% of migrants work in the sectors most exposed to the pandemic shock (for example, construction, services and manufacturing)
- Majority of migrants work in micro and small enterprises without formal employment contracts and unemployment benefits

Poor People are Switching to Lower Quality Diets

China

(Rozelle, et al, 2020)

63% reported that the prices of foodstuffs were higher than in 2019

55% of villagers in the survey villages reduced their spending on food

Nearly half said the quality of their diets fell

People are buying more grains in bulk at low cost in lieu of more expensive goods like meat and produce

Nigeria

(Lashitew and Kanos, 2020)

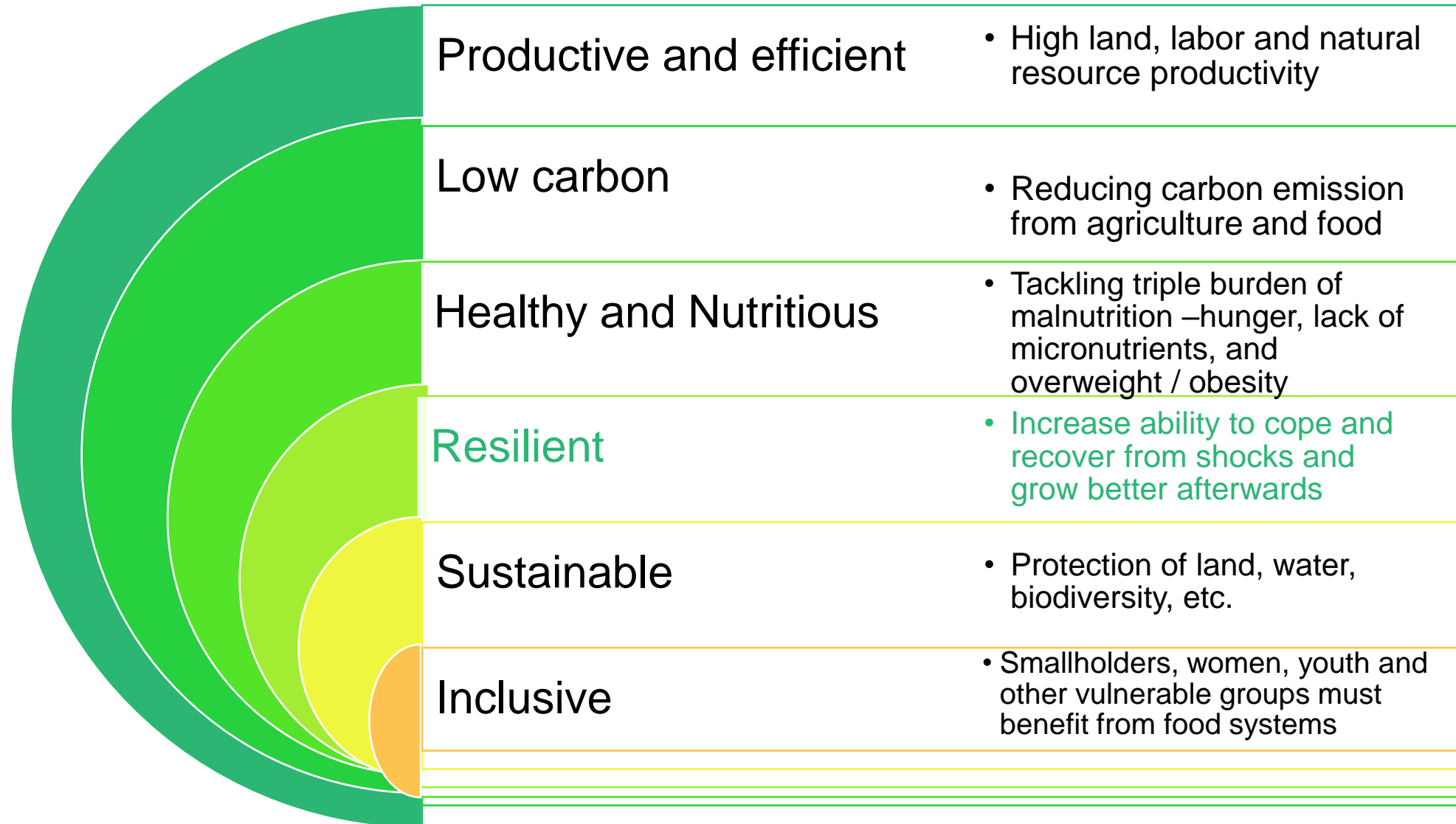
70 percent of both urban and rural respondents have experienced a reduction in income since the onset of the pandemic

70 percent of respondents in both rural and urban areas of Nigeria are facing food insecurity



COVID is a wake-up call for rethinking of future food systems

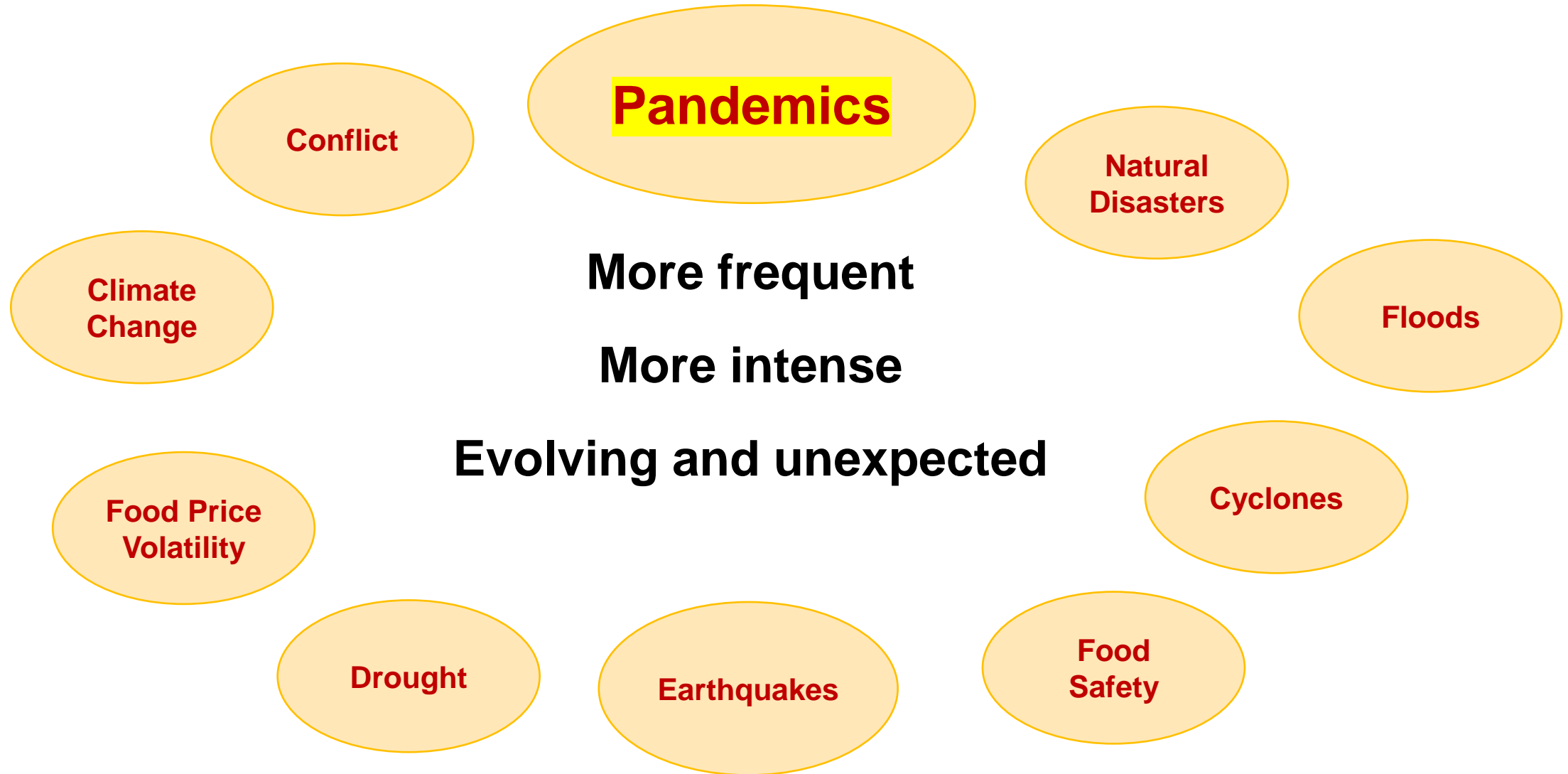
What Future Food Systems Do We Want?





**Resilience critical to cope with and
recover from shocks like COVID-19
and grow even better**

The world is facing a barrage of shocks



Resilience is more than just a buzzword



Picture source: CCAFS

“Helping people, communities, countries, and global institutions prevent, anticipate, prepare for, cope with, and recover from shocks and not only bounce back to where they were before the shocks occurred, but become even better-off.”

IFPRI 2020 Consultation definition

Resilience is also

Bridging the gap between **short-term relief** and **long-term development goals**

Systems way of thinking—healthy, sustainable global food system that can provide **nutritious foods for all at all times** without damaging the planet

Integration of **multi-disciplinary studies** to reach high equilibrium AND **benefit vulnerable communities**

Transforming Smallholders for Resilience

Strengthen land tenure security, reduce land fragmentation, improve access to finance, inputs, and ICT

Promote inclusive agribusiness models and help smallholders adapt to changing food demand and higher quality standards of modern supply chains

Facilitate better risk management for smallholders
(social protection, insurance, income diversification)

Reprioritize R&D to Improve Stability and Deliver Multiple Wins

Expand agric. R&D to promote a food system that is

- Nutritious and healthy
- **Climate-smart and resource efficient**
- Inclusive, esp. of women
- **Sustainable and resilient**

Advance frontiers for sustainable intensification and better nutrition

- E.g. Breeding high yielding, climate-ready, high-nutrient crop varieties (biofortification)



Stem rust resistant
wheat



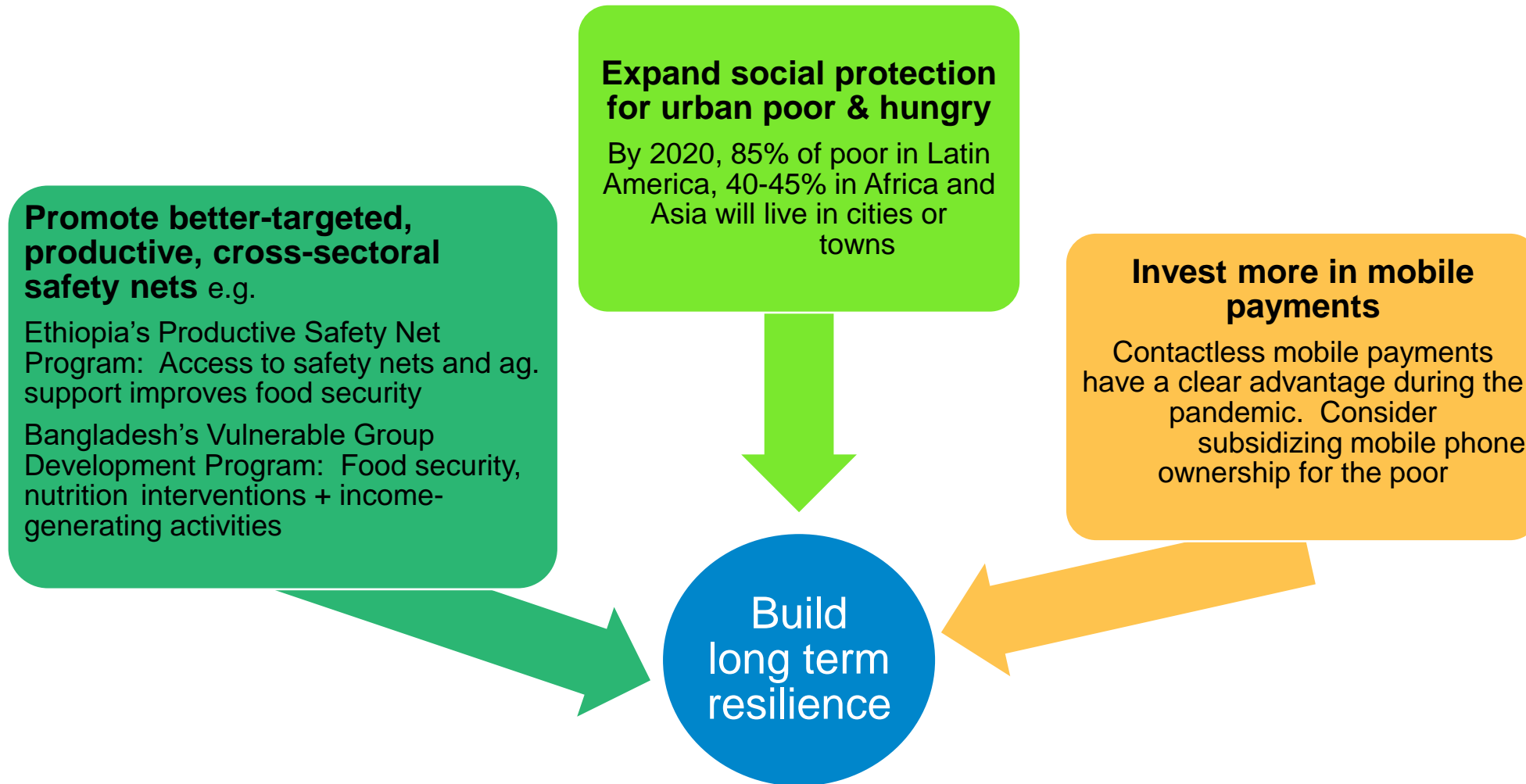
Solar-powered
drip irrigation



C4 rice

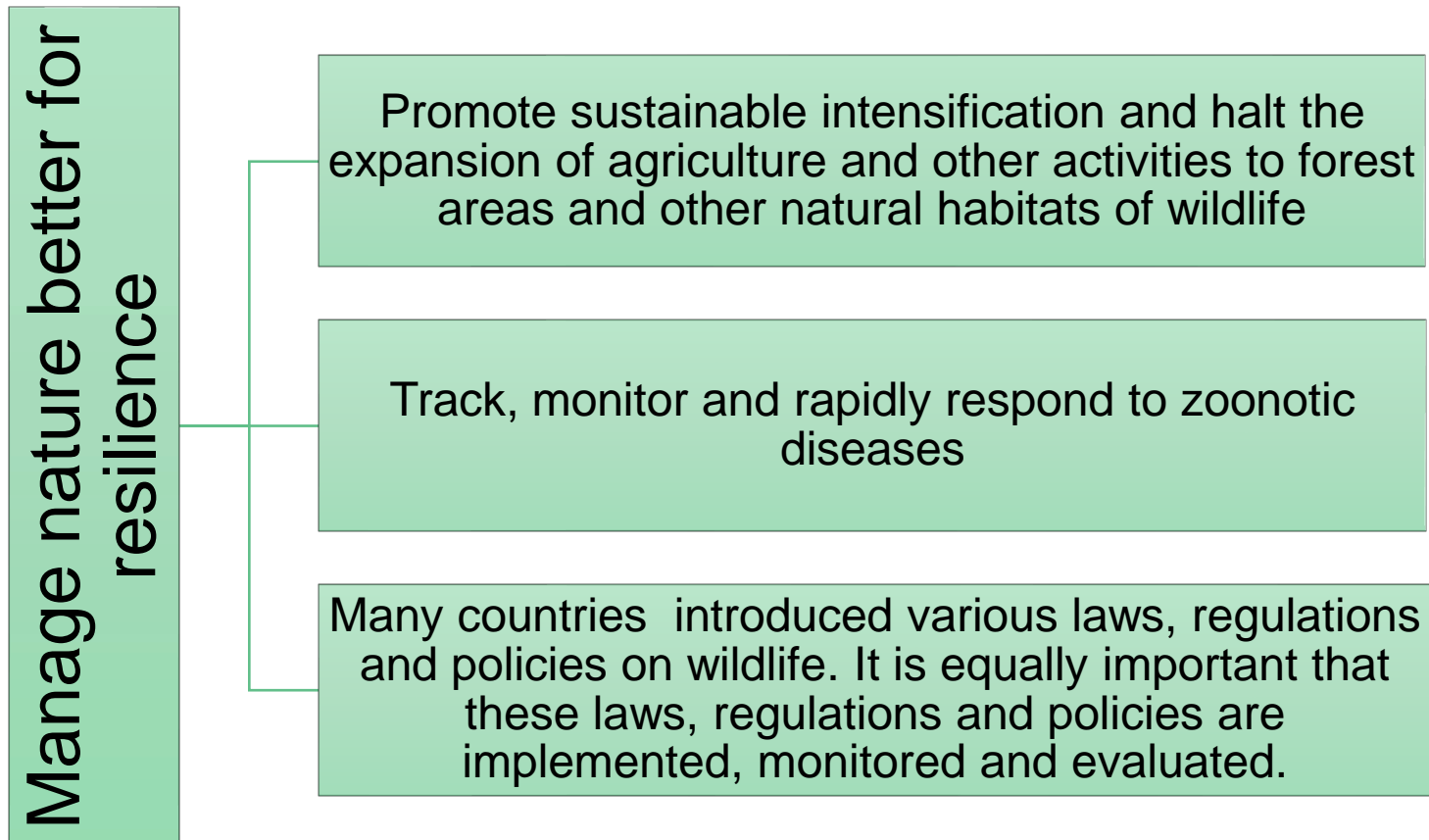
Establish and Expand Social Protection

- 190 countries and 900 measures; an expansion of beneficiaries by roughly 15% in South Asia and East Asia and the Pacific, but by only 2% in the Africa region (Gilligan, 2020).

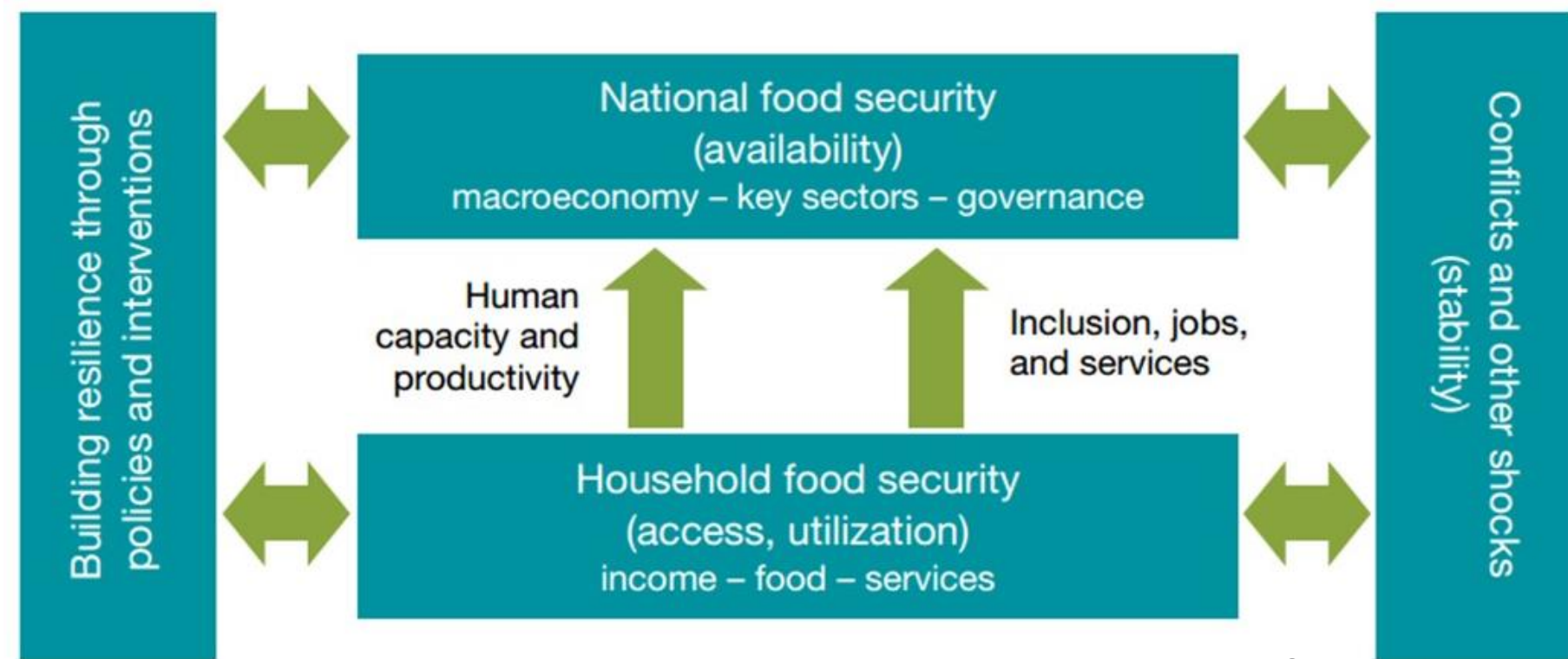


Managing Nature for Resilience

- Expansion of agricultural, food and urban use of land has destroyed habitats of wildlife
- Interactions of humans and wildlife have intensified dramatically for the past several decades



Resilience Address Conflict



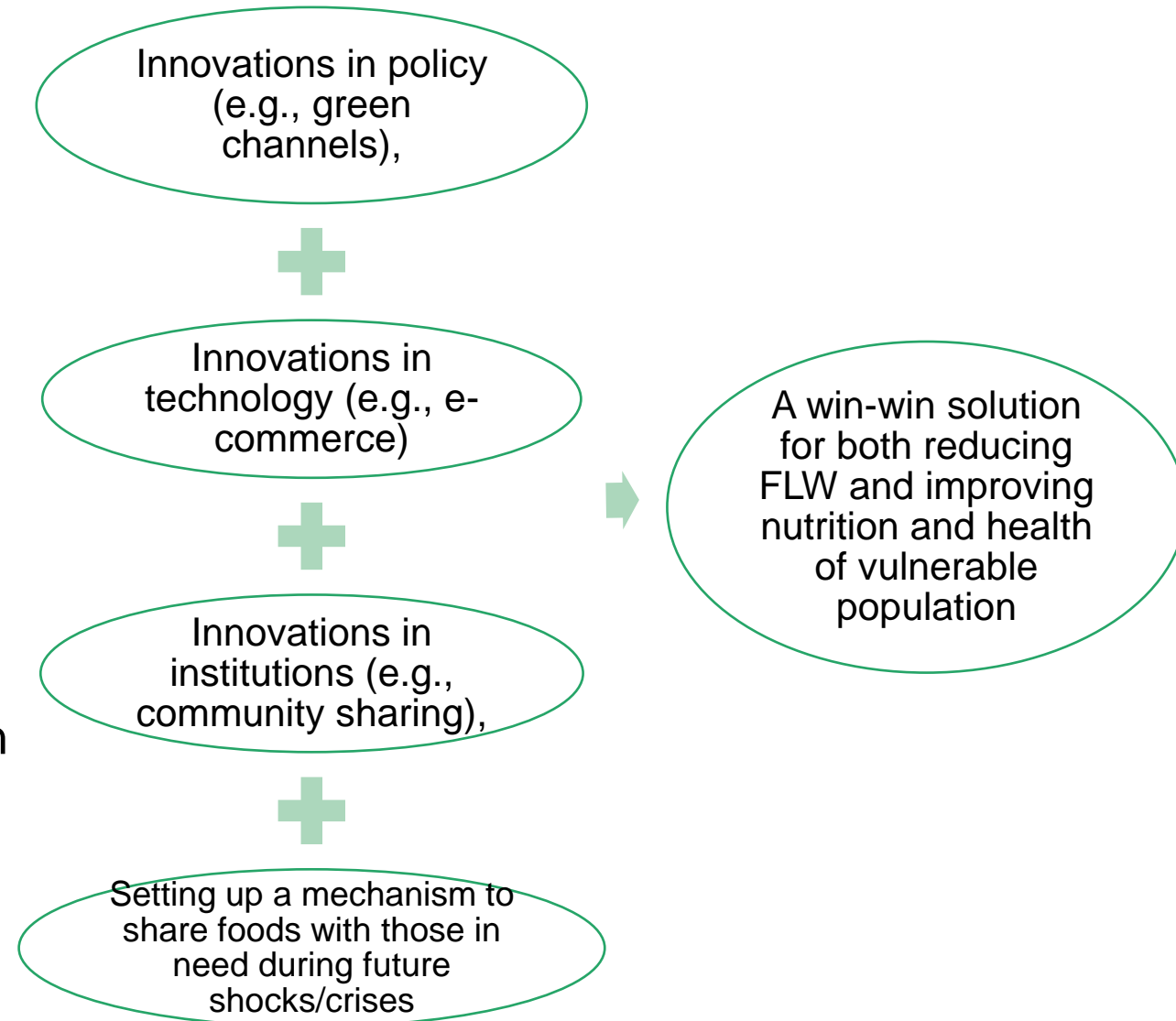
Source: Breisinger et al. 2014

- **Short run:** Humanitarian aid BUT must pave way for development efforts
- **Long run:** Investments that transition toward development, e.g. improve infrastructure; foster trade with refugees' countries of origin

Reducing Food Loss and Waste

Food loss and waste increases substantially due to shocks like COVID-19, floods, droughts and food safety concerns. In China, the supply of live chicken and ducklings decreased by about 50 per cent in February (CAU, 2020). Many of chicken and ducklings were buried.

In Spain, during the lockdown the amount of FLW in households has increased by 12%, the economic cost and CO2 emissions by up to 10% and 11%, respectively. The nutritional content was reduced by 8% due to relaxation in healthy eating habits (Aldaco et al, 2020).



Trade Remains Important

Trade restrictions lead to tighter markets and exacerbate crisis—
Open, transparent, and fair trade can build resilience

Eliminate distortionary trade policies

Harmful trade policies e.g. import tariffs and export bans, hurt the poor and hinder efficiency of agricultural markets

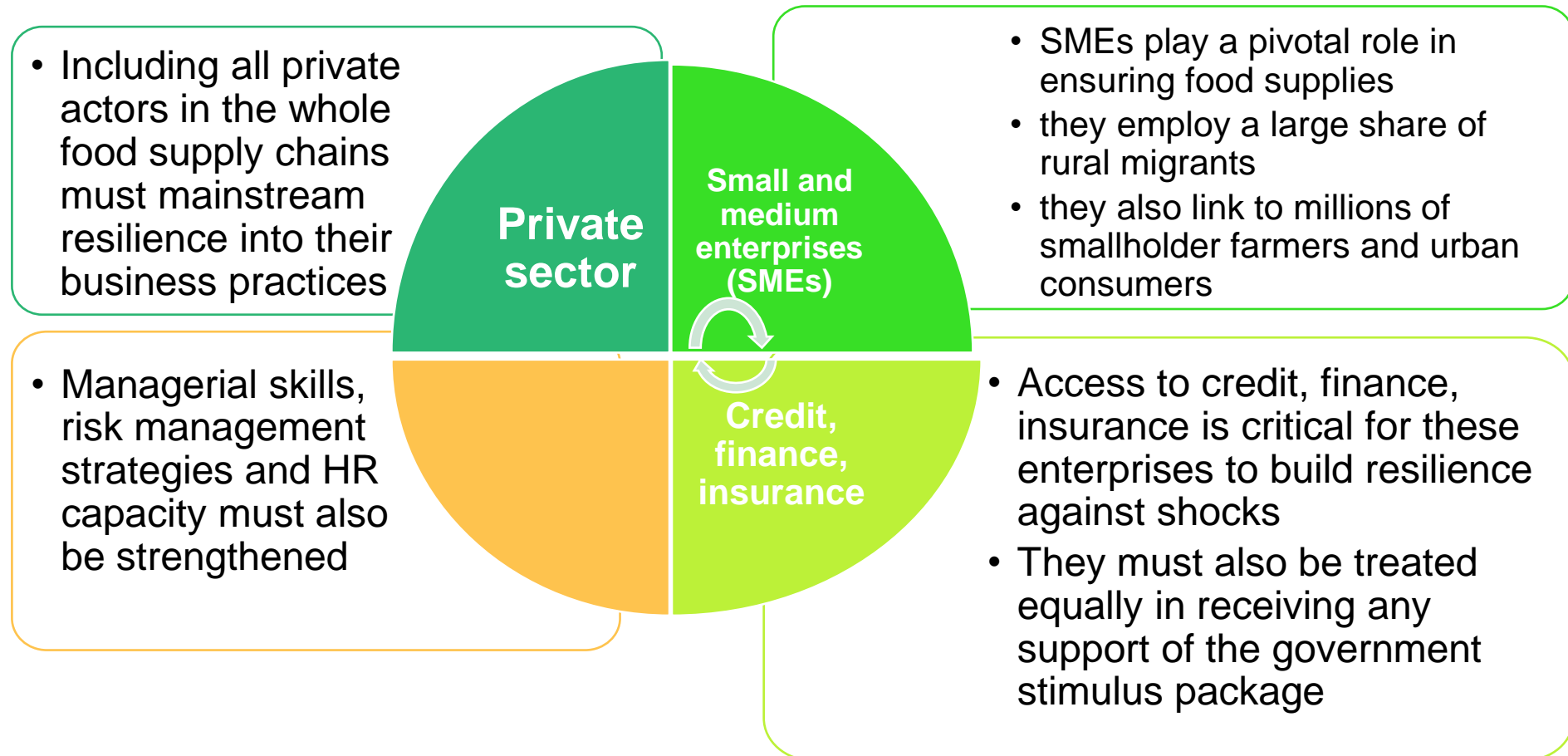
Improve targeting of subsidies

Resources can fund public goods and support nutritious food production

Create global and regional grain reserves

Located in poor, food importing countries, e.g. Horn of Africa

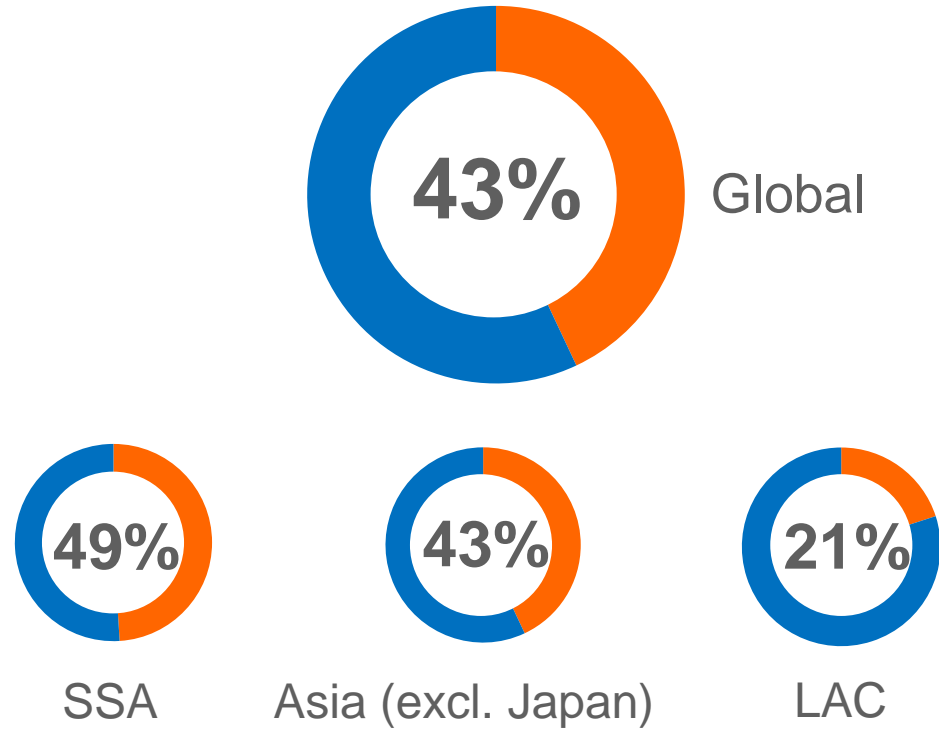
Engaging the Private Sector for Resilience



Women Matter in Building a Resilient Food System



Agriculture labor force made up by women



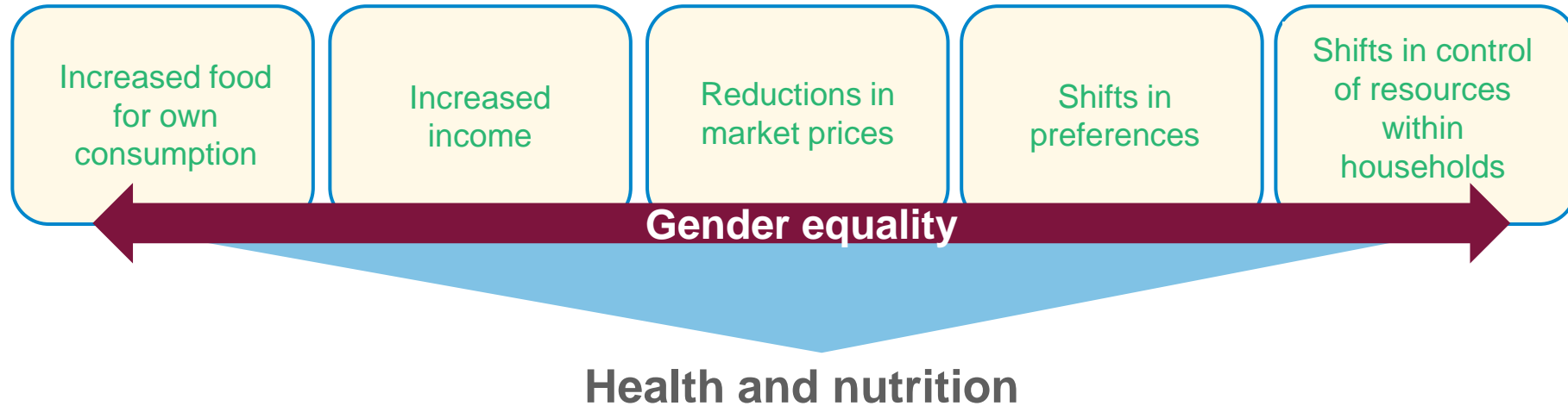
If women had

- same amount of land as men
→ 10% increase in crop yields
- same access to tools and credit
→ 150 million fewer hungry people

Source: FAO 2011

Empowering women in agriculture is critical to ensure global food security and nutrition

Women Mediate Pathways from Agriculture to Nutrition



Source: Arimond et al. 2010

Examples of interventions

- **Ghana:** Women's empowerment in credit decisions improved dietary diversity for women and girls (Malapit and Quisumbing 2015)
- **Bangladesh:** Cash AND nutrition education program for women reduced child stunting (Hoddinott et al. 2015)



Food Banks: Part of the Resilience Solution

○ Demand for food banks services skyrocketed during the crisis

○ They play a critical role to get foods to people in need very quickly

○ 1,000 food banks that have been established in Addis Ababa to curb the likely deterioration in food security (Hirvonen, et al., 2020)

○ They must be supported by business communities and government;
Financial and regulatory support

○ Knowledge sharing among food banks critical for improvement