



# Resilience for food security and nutrition

## **Lessons learned from IFPRI's experience**

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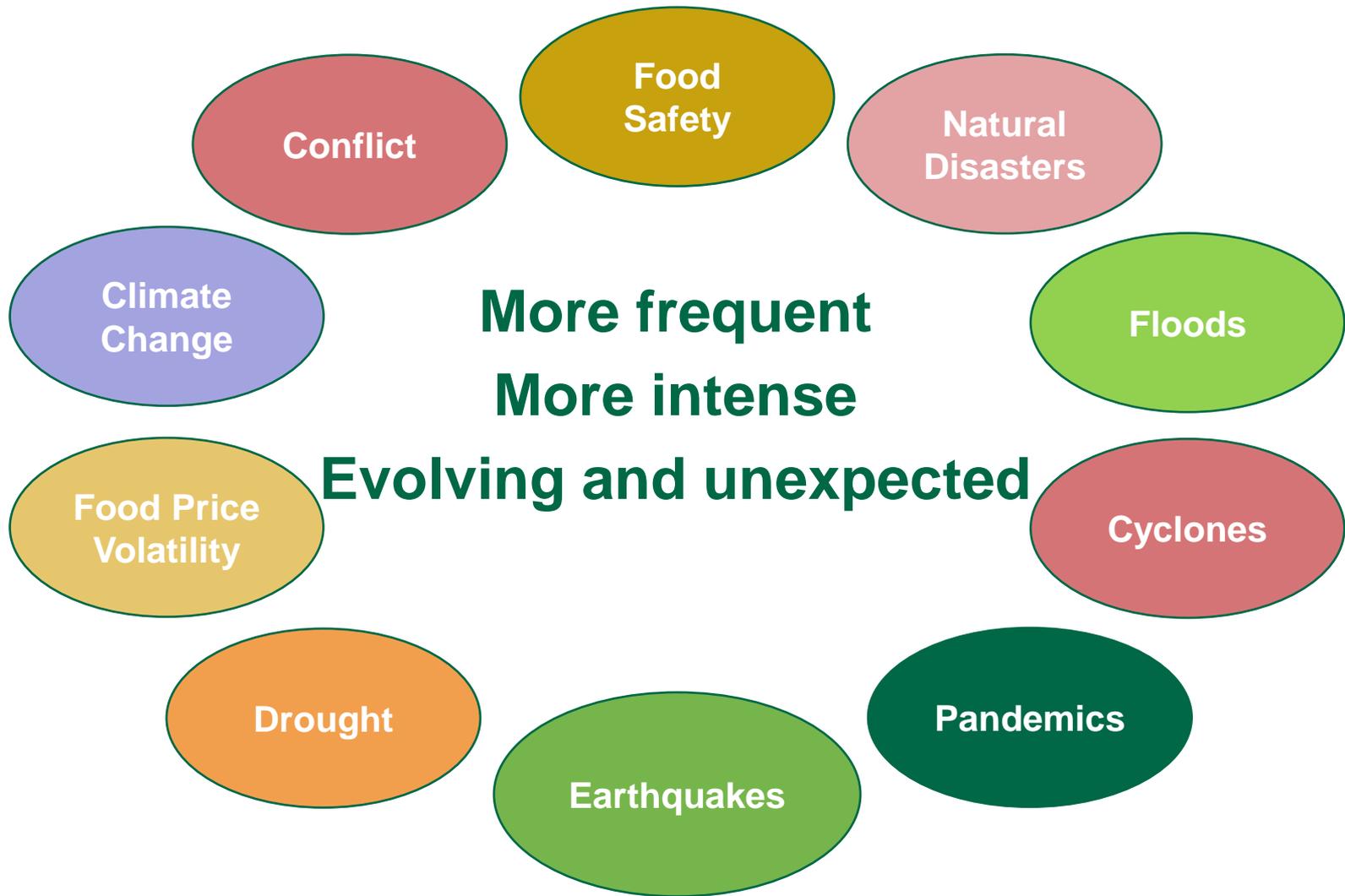
Third Annual PSSP Conference  
April 14, 2015 | Islamabad

# Key messages



- The world is facing a barrage of shocks that affect food security and nutrition
- Resilience is critical to end hunger and undernutrition
- Resilience is more than just a buzzword
- Systems approach should be adopted—efficient investment must target weakest nodes and individuals
- Measurement of resilience is possible, but in its infancy

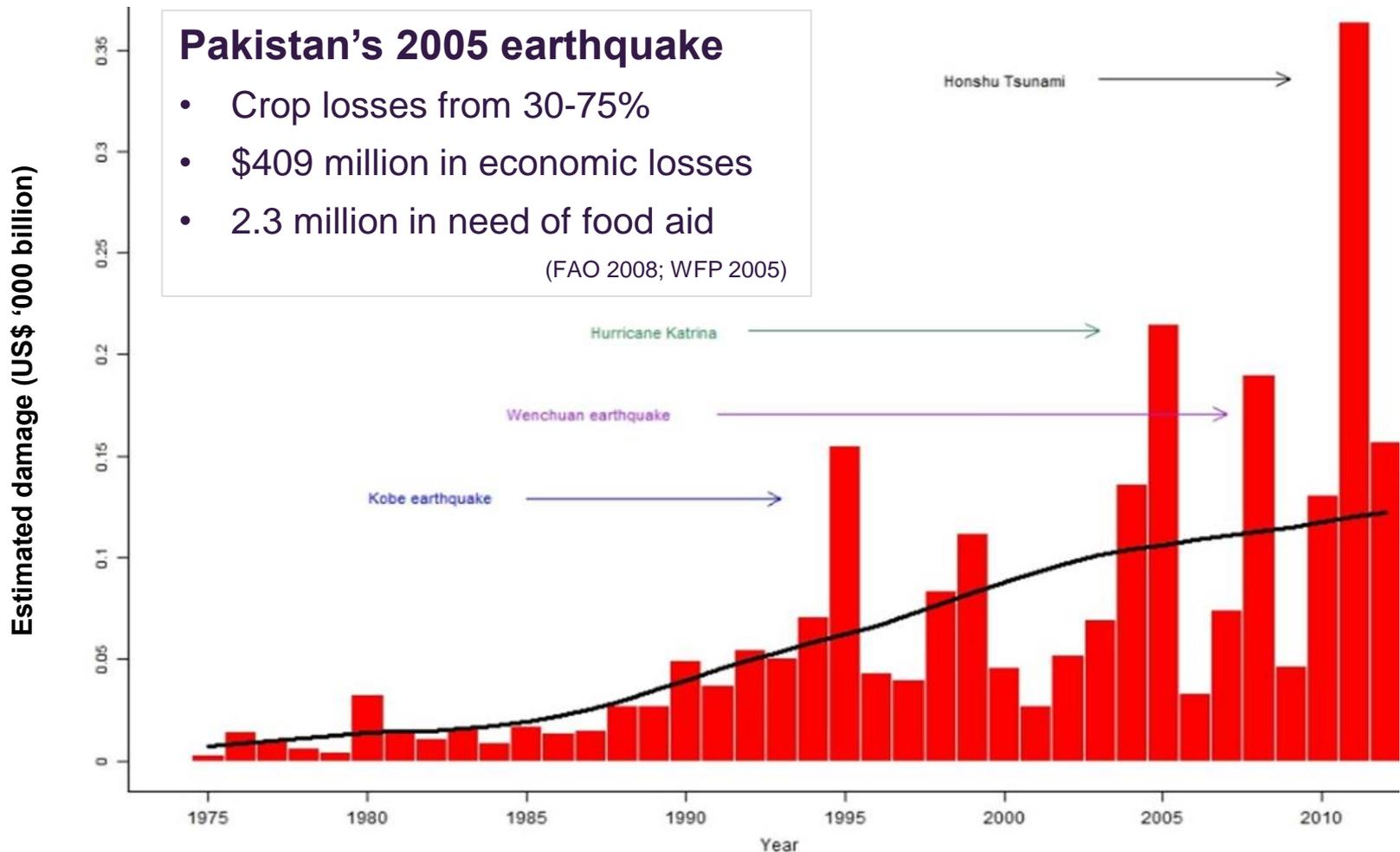
# The world is facing a barrage of shocks



# Higher frequency and intensity of natural disasters



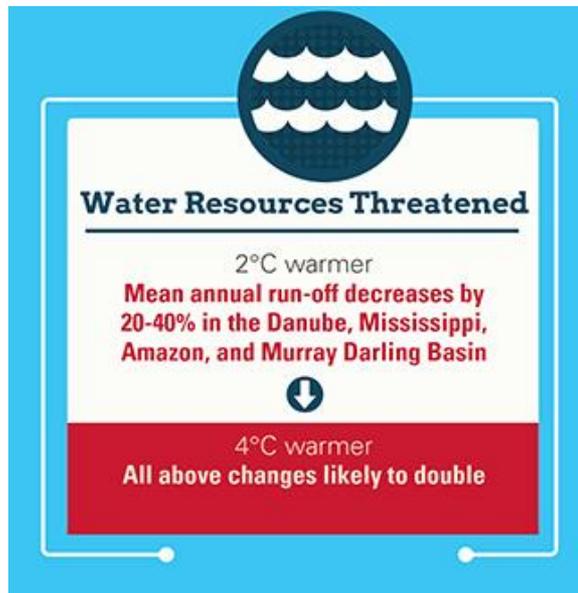
Estimated damage (US bil.) caused by reported natural disasters, 1990-2012



# Growing climate change threats



Business as usual = 4° Warmer by 2100



There would be **LARGER** adverse impacts on agriculture and nutrition



**SEA LEVEL RISE** is likely to be 15-20% higher in the tropics than global mean

**DROUGHT AND ARIDITY** would likely increase in tropics

**HUMAN AND ANIMAL HEALTH** will be affected

# Shocks interrupt progress

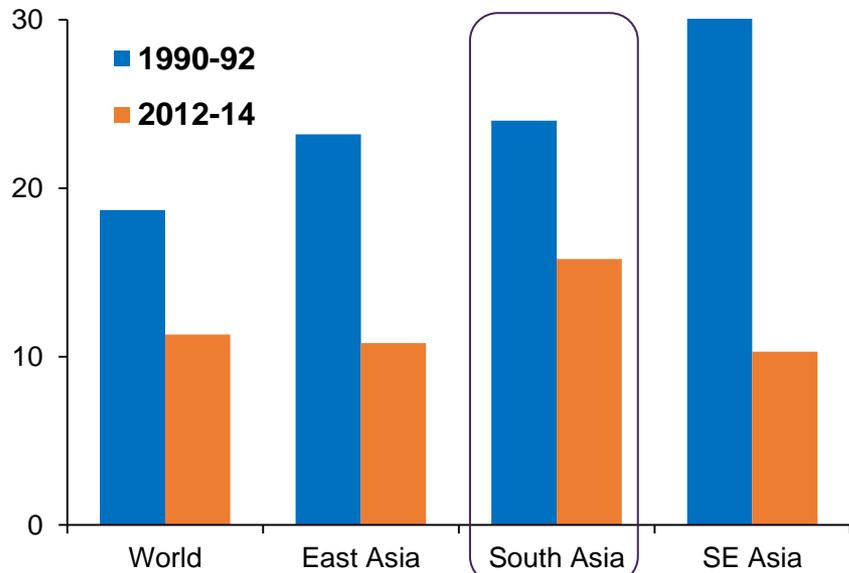


1. **Shocks affect food security**—2008 food crisis may have caused 63 million more people to become undernourished
2. **Shocks affect nutrition**—2011-12 drought in Horn of Africa affected nearly 3 million children through risk of severe and moderate undernutrition
3. **Shocks affect livelihoods**—2010 drought in Russia destroyed more than 30% of agricultural area in affected regions
4. **Shocks affect national economic growth**—2010 floods in Pakistan cost about US\$10 billion (World Bank; ADB 2010)

# Hunger and undernutrition persist in the midst of increasing shocks



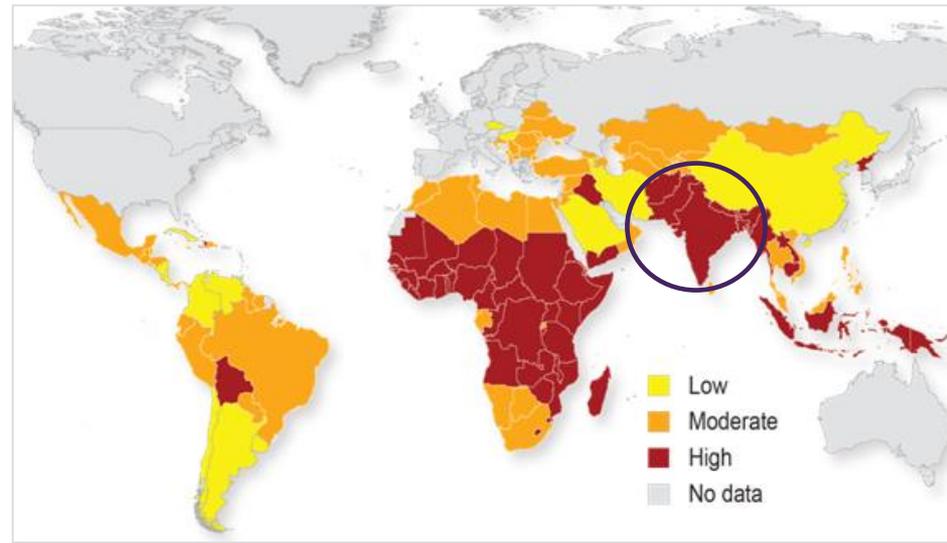
## Prevalence of undernourishment (%)



Source: Data from FAO 2014

**805 million people**  
undernourished

## Prevalence of micronutrient deficiencies



Source: HarvestPlus 2011

**Over 2 billion people**  
micronutrient deficient

**Lack of resilience and greater shocks have slowed down progress in reducing hunger and undernutrition**

# Hunger and undernutrition are costly Investments in reduction have high returns



## Hunger and undernutrition lead to

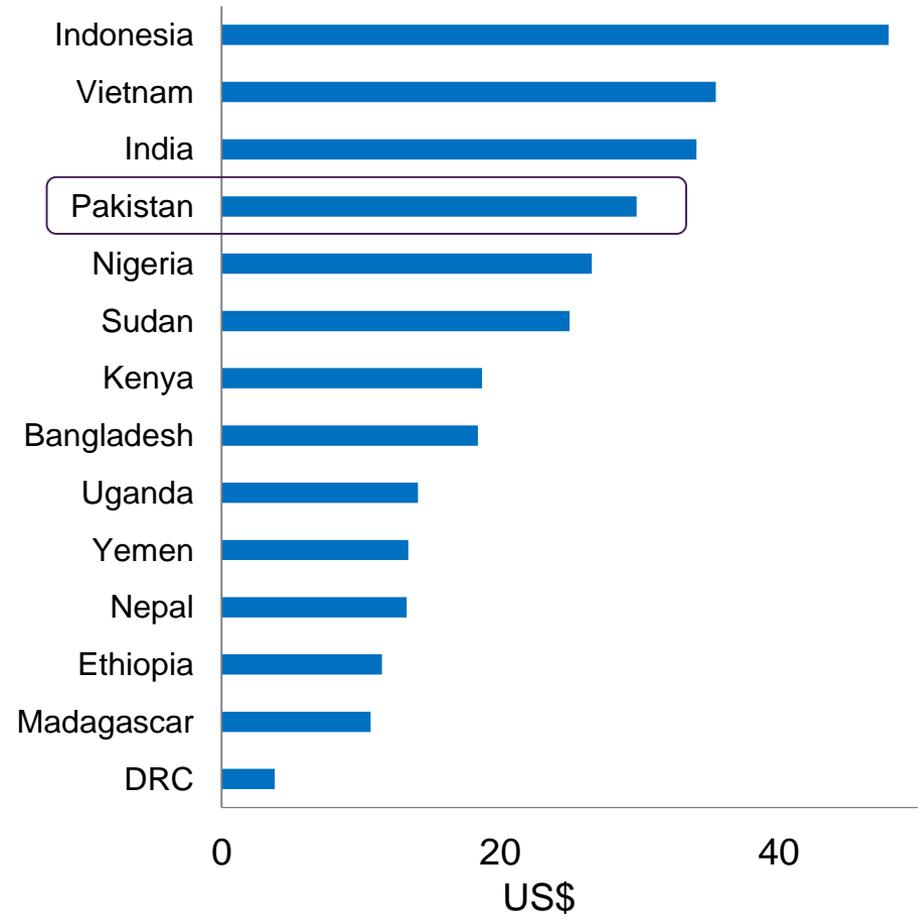
- Impaired physical and cognitive development
- Productivity losses
- Problems of social inclusion

## Economic losses (% of GDP)

- Global: **2-3%**
- Ethiopia: **17%**
- India: **2.5%**
- Pakistan: **3%**

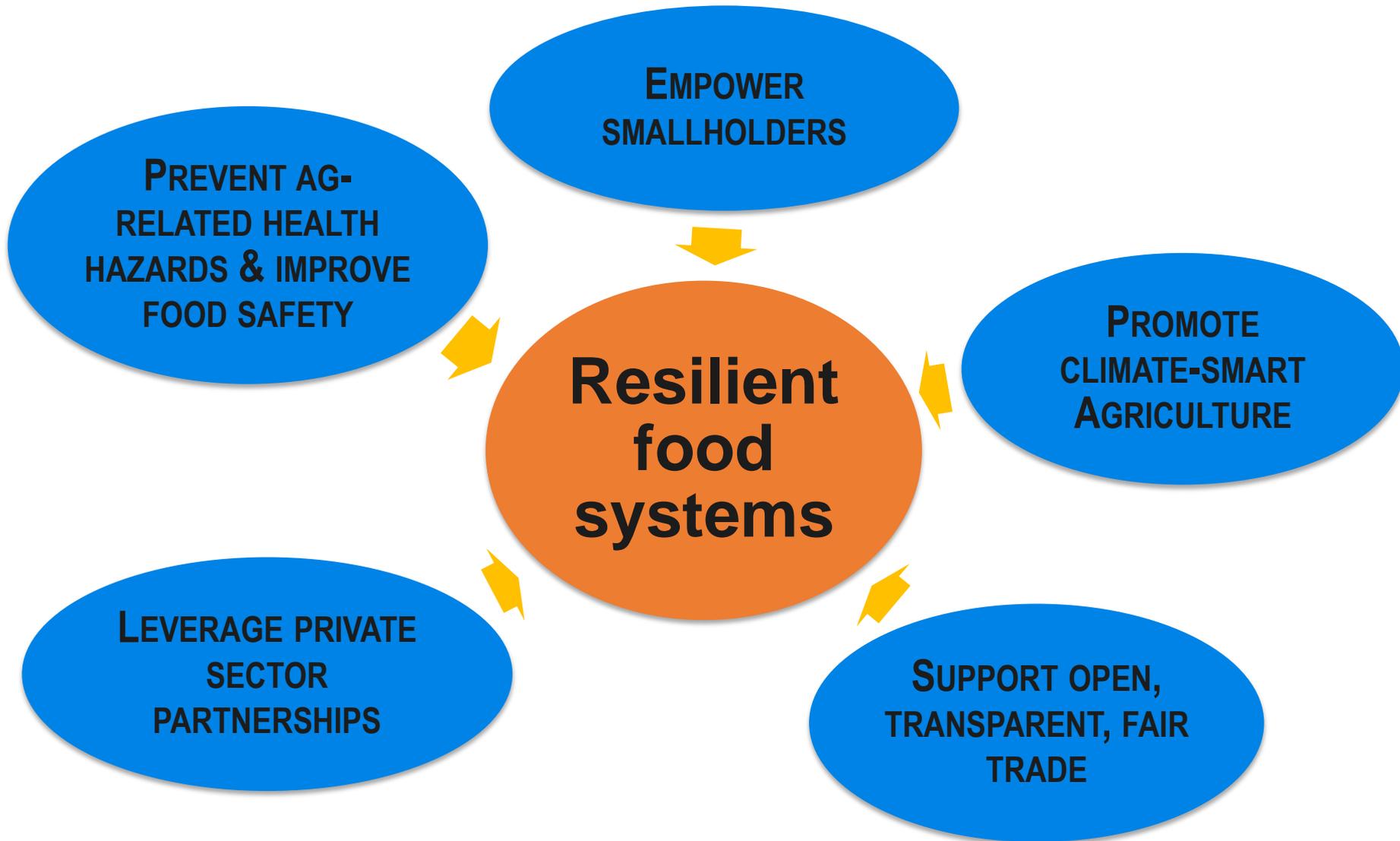
Source: Stein and Qaim 2007; AUC, NEPAD, UNECA, WFP 2013; FAO 2013; World Bank 2012

## Economic returns to US\$ 1 invested in reducing stunting



# Resilience key to end hunger and undernutrition

## Create resilient food systems





## Outcomes

- Identified key emerging shocks to food security & nutrition
- Drew lessons from past experiences in building resilience
- Recognized key approaches & tools to build resilience
- Set priorities for action
- Identified knowledge & action gaps



## Snapshot

- Over 800 attendees
- Over 140 speakers
- 24 plenary and parallel sessions
- 19 briefs; 9 papers



“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

- 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



- Research community lags behind NGOs re knowledge and application of resilience strategies that already exist
- To scale up successes, **social capital** has a key role to play

Exclusion increases vulnerability and reduces resilience



Source: von Braun and Thorat 2014

- Optimize resources and efforts
- Efforts to enhance resilience should not crowd out strategies that already work well
- Strengthened social protection is critical for vulnerable and excluded groups

# Lessons learned

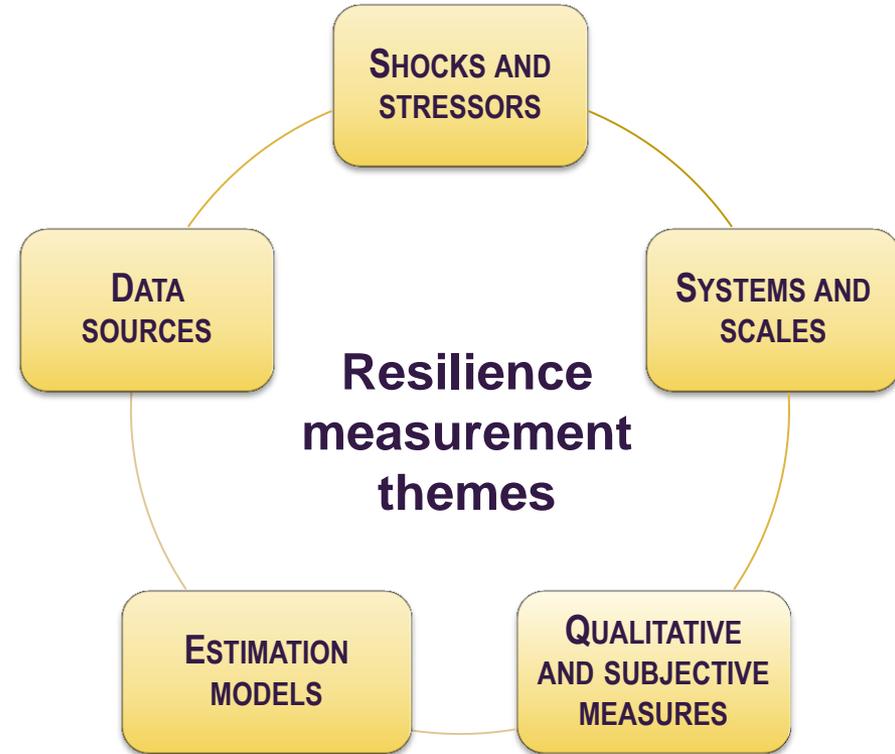
## Strengthen capacity



# Measure resilience



- Standardized but context-specific indicators
- High frequency measurement in hot spots
- Modern technologies for data collection
- Better use of existing data
- Surveys that capture the multidimensional complexity of shocks



Source: Resilience Measurement Technical Working Group 2014

**Demand for stronger measurement and coordinated research needed**



- Global decisionmakers need to mainstream resilience into all SDG goals
- Governments need to create enabling environment
- Communities and civil societies need to demand tools for greater resilience
- NGOs need to link short-term relief to long-term development
- Private sector needs to see resilience as a business
- Researchers need to improve understanding and measurement of resilience