

## People, Planet and Prosperity

Sridhar Dharmapuri
Senior Food Safety and Nutrition Officer
Group Leader, Agriculture and Food Systems
FAO Regional Office for Asia and Pacific
Bangkok, Thailand





## **Key considerations**

#### 2030 Agenda for sustainable development

#### People

- End poverty and hunger
- Fulfil human potential with dignity and equality
- A healthy environment

#### Planet

- Protect the planet from degradation
- Sustainable production and consumption

#### Prosperity

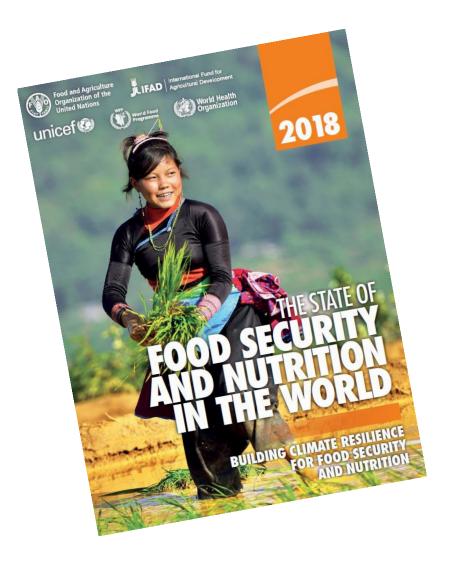
- Economic, social and technological progress
- Harmony with nature

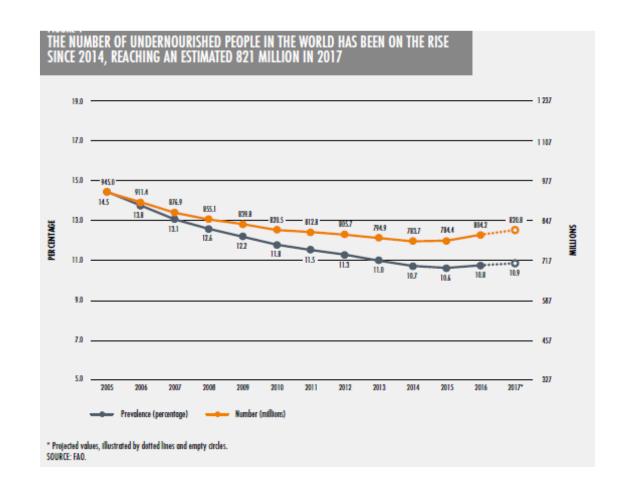






## People



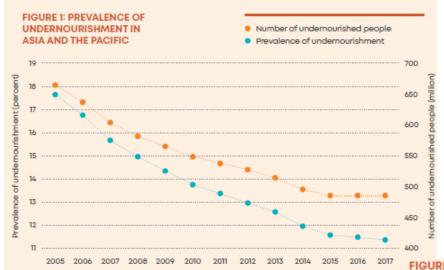


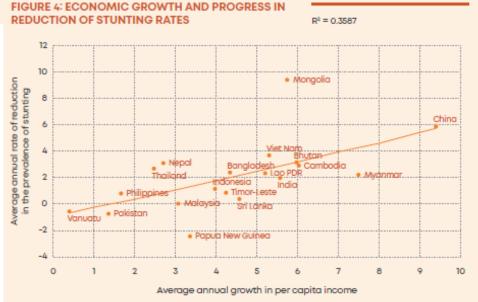




## People – Asia and the Pacific





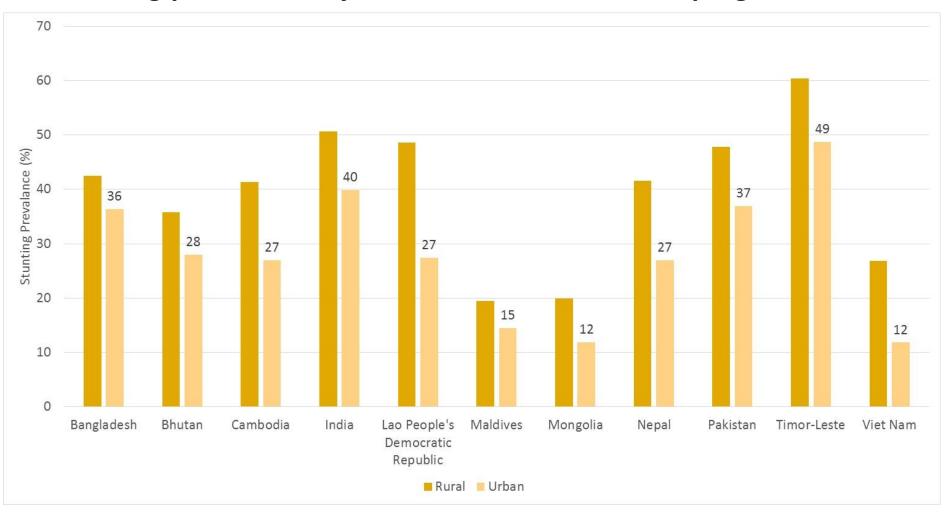






## People – Asia and the Pacific

#### Stunting prevalence by location, 11 Asian developing countries

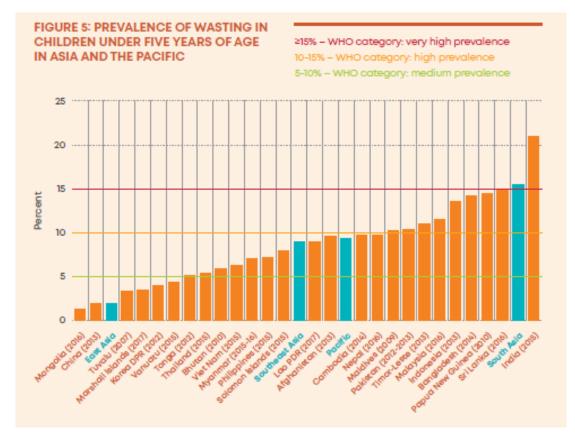




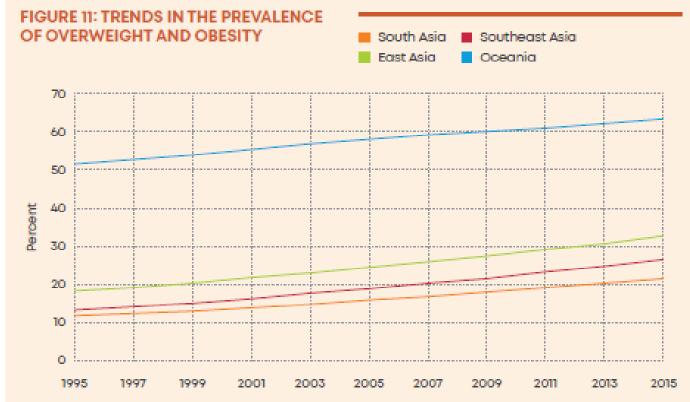


## People – Asia and the Pacific

#### **Undernutrition**



#### **Overnutrition**

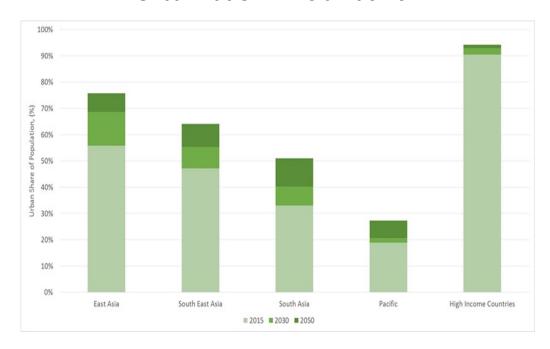




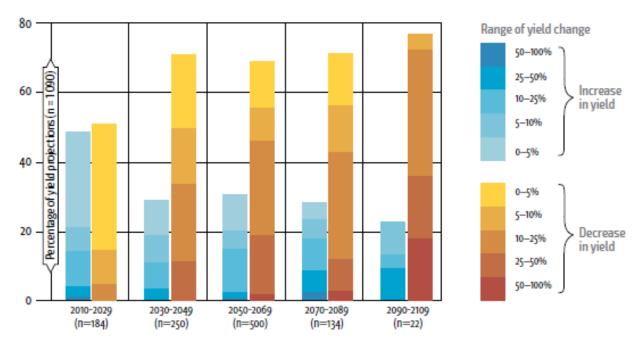


## Planet - challenges

#### **Urbanization in Asia-Pacific**



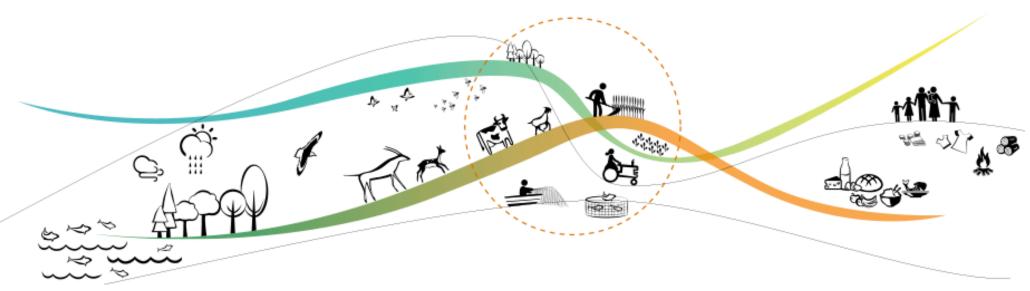
#### Projected changes in crop yields due to climate change







## Planet – sustainable agriculture



- Improving efficiency in the use of resources
- Direct action to conserve, protect and enhance natural resources
- Improve rural livelihoods and social well-being
- Enhance resilience of people, communities and ecosystems
- Responsible and effective governance mechanisms







## Agri-food systems approach

#### Balancing intensive farming, sustainability and health outcomes

#### Value chain **Production systems\* Supply chain** Retail Crops Post harvest Processing Consumption Trade **Standards** Waste disposal Livestock Storage **Fisheries** Transport Packaging Labelling Retail Participant training Consumers Farmer training Skills development Street food **Eco-friendly inputs MSMEs** Urban agriculture Biodiversity Decent work Sustainable practices

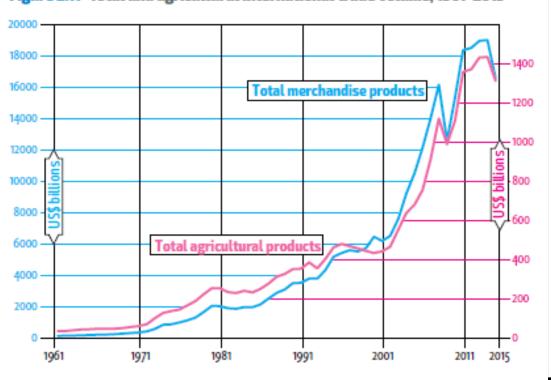
- Food safety and control systems
- Pollution control
- Nutrition
- Reduction in food loss and waste

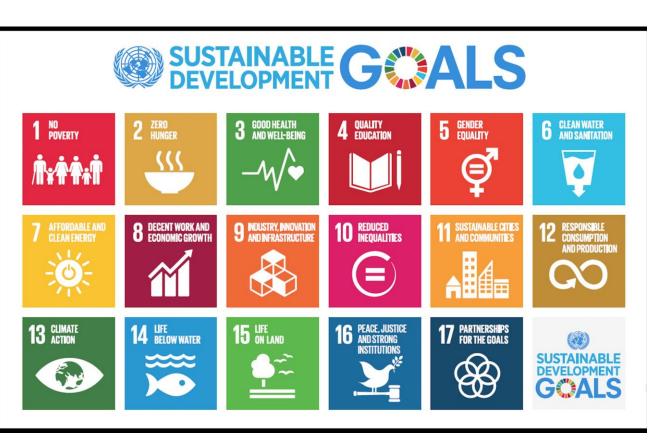




## **Prosperity**

Figure 2.11 Total and agricultural international trade volume, 1961-2015









## GOALS Codex Alimentarius Commission

#### Intergovernmental body on food standards

Founded in 1962 - jointly hosted by FAO & WHO



188 countries + EU representing 99% of world population

Observers: 220 international organizations

- Mandate
  - protect the health of consumers
  - ensure fair practices in international food trade
  - coordinate food standardization at the international level

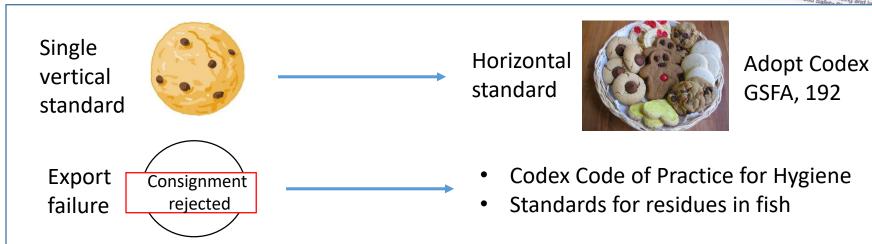




## **Codex standards and trade**

# Countries FAO assistance National Standards Body and multiple regulators Codex Alimentarius Training on Codex and infrastructure Few voluntary standards Enabling environment

#### **Support innovation and market access**



Status of National Codex Activities in ASEAN Countries





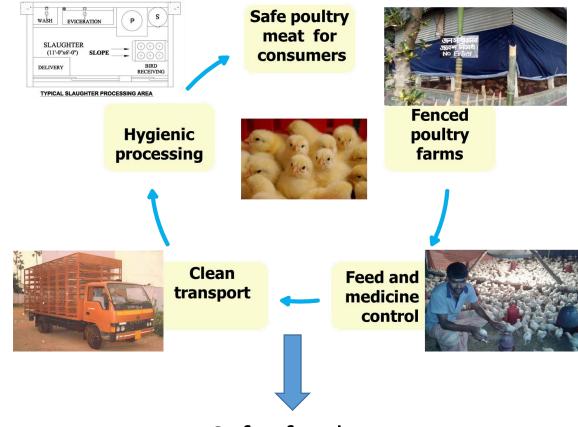
#### **Codes of Practices**

#### Key issues

- Farm-to-fork controls
- Awareness of producers and actors

#### Solutions

- **Enabling environment** for good practices
- Link safe supply chains to markets
- Demonstrate business and safety benefits
- Promote awareness and education



- Safer food
- Higher incomes
- Traceability
- Certification





## **Preventive approaches**



Report of the regional consultation workshop on Implementation of GMP/HACCP in Asia

- > Codes of Practice for Good Agricultural Practices
  - Crops
  - Livestock
  - Fisheries
- ➤ Delivery of large-scale training
  - > Training of Trainers
  - > Farmer's field schools

- > Regional standards and certification schemes
  - > ASEAN GAP , SAARC GAP

➤ GHP/GMP/HAACP implementation (SMEs)







## Linking farmers to standards



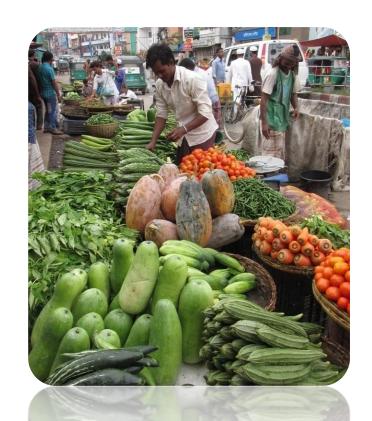
External controls
Third party certification

#### **Internal controls**

Private sector
Co-operatives
Producer groups

#### **Self controls**

Producers
Processors
Farmers
Value chain actors





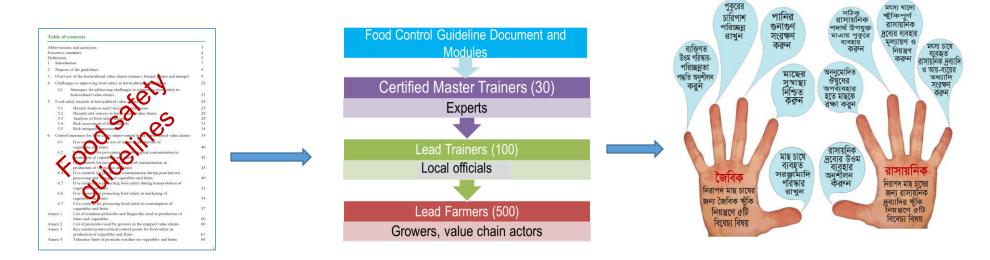


#### **Connecting farmers with markets**



**Aim**: To improve product quality and safety in the **Horticulture, Poultry** and **Fisheries** value chains

**Outcomes**: Better price for farmers and safer product for customers



Drafted by Experts

Develop change team Build trust

Simple distilled messages





## Food safety guidelines

#### **Table of contents**

Abbreviations and acronyms 3 Executive summary 4				
Executive summary				
Definitions 5				
1.	Introduction			
2.	2. Purpose of the guidelines			
3.	. Overview of the horticultural value chains (tomato, brinjal, potato and mango)			
4.	Challen	ges to improving food safety in horticultural value chains	22	
	4.1	Strategies for addressing challenges to improving food safety in horticultural value chains	23	
5.	Food sa	fety hazards in horticultural value chains	24	
	5.1 5.2	Hazard Analysis and Critical Control Points Hazards and sources in horticultural value chains	25 28	
	5.3	Analysis of food safety hazards	28	
	5.4	Risk assessment of food hazards	33	
	5.5	Risk mitigation measures	34	
6.	Control	measures for food safety improvement in the horticultural value chains	39	
	6.1	Five controls for safe use of inputs in production of vegetables and fruits	40	
	6.2	Five controls for preventing microbiological contamination in	40	
	6.3	production of vegetables and fruits  Five controls for preventing chemical contamination in	42	
		production of vegetables and fruits	45	
	6.4	Five controls for preventing contamination during post-harvest processing and storage of vegetables and fruits	49	
	6.5	Five controls for protecting food safety during transportation of vegetables and fruits	52	
	6.6	Five controls for protecting food safety in marketing of vegetables and fruits	54	

**HAZARDS** 

**CONTROLS** 





#### **Codes of Practice**

- Produce quality
- Produce safety
- Decent work
- Occupational health
- Environmental health









## **Certified training**

Training Day	Content
Day 1	Introduction to the FAO Food Safety programme and objectives Introduction to the Food Control System and the demand for safe food Barriers to Change – benefits and productivity gains HACCP principles – 7 Principles, Analysing hazards in the FCS
Day 2	Development of the HACCP schedule – HACCP Analysis  HACCP Monitoring and control – target tolerance  Defending the HACCP plan – court case and business case role plays  Exam/assessment based on UK past papers
Day 3	Value chain cost and benefits Value chain – pro-poor and getting the design right – Who GAINS? Auditing the Value Chain – GAP audit:
Day 4	Building codes of practice - Food Safety 'Why do it?' – example benefits and gains 'Why do it?' – benefits of the GAP COPs
Day 5	Teaching styles and communication, Session Plans Training the master trainer Teaching assessments and resources Development of an outline training programme for the GAP COP





## Training cascade



Certified Master Trainers (30)

**Experts** 



Extension officials, NGOs

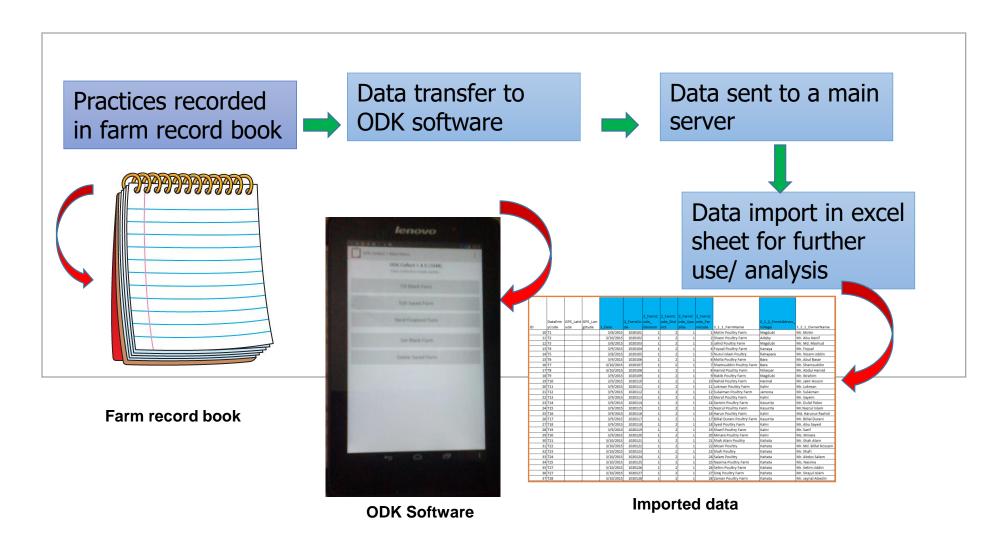
Farmers (25,000)

Growers, value chain actors





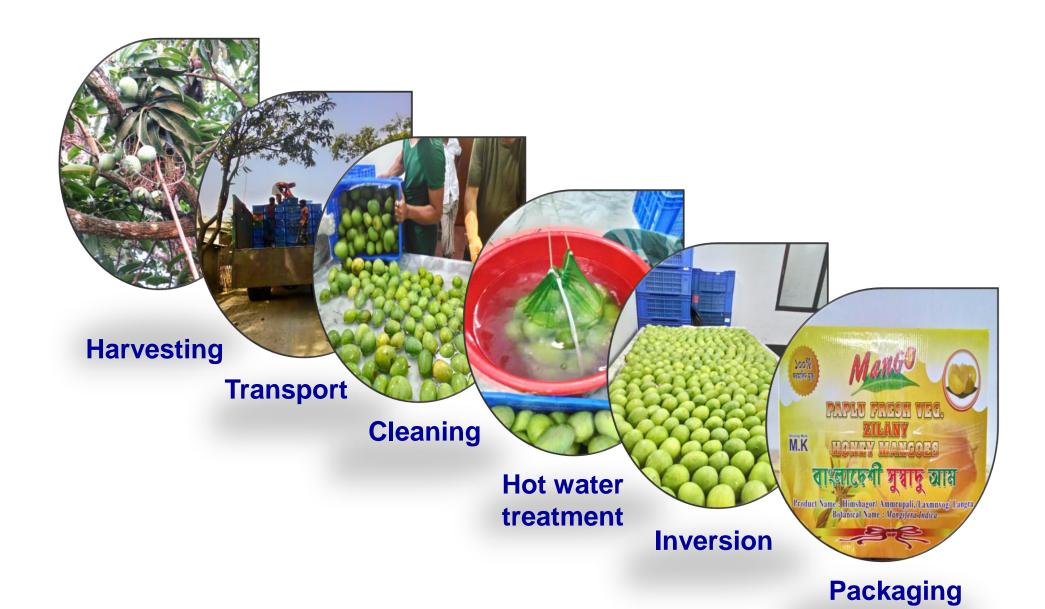
## Monitoring using technology







#### Improved supply chain



ขอบคุณครับ

Merci ¡Gracias

## Thank You

谢谢

Спасибо

شكرا