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Food Security and Rice Market: Global Trends and Regional Perspectives

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Outline

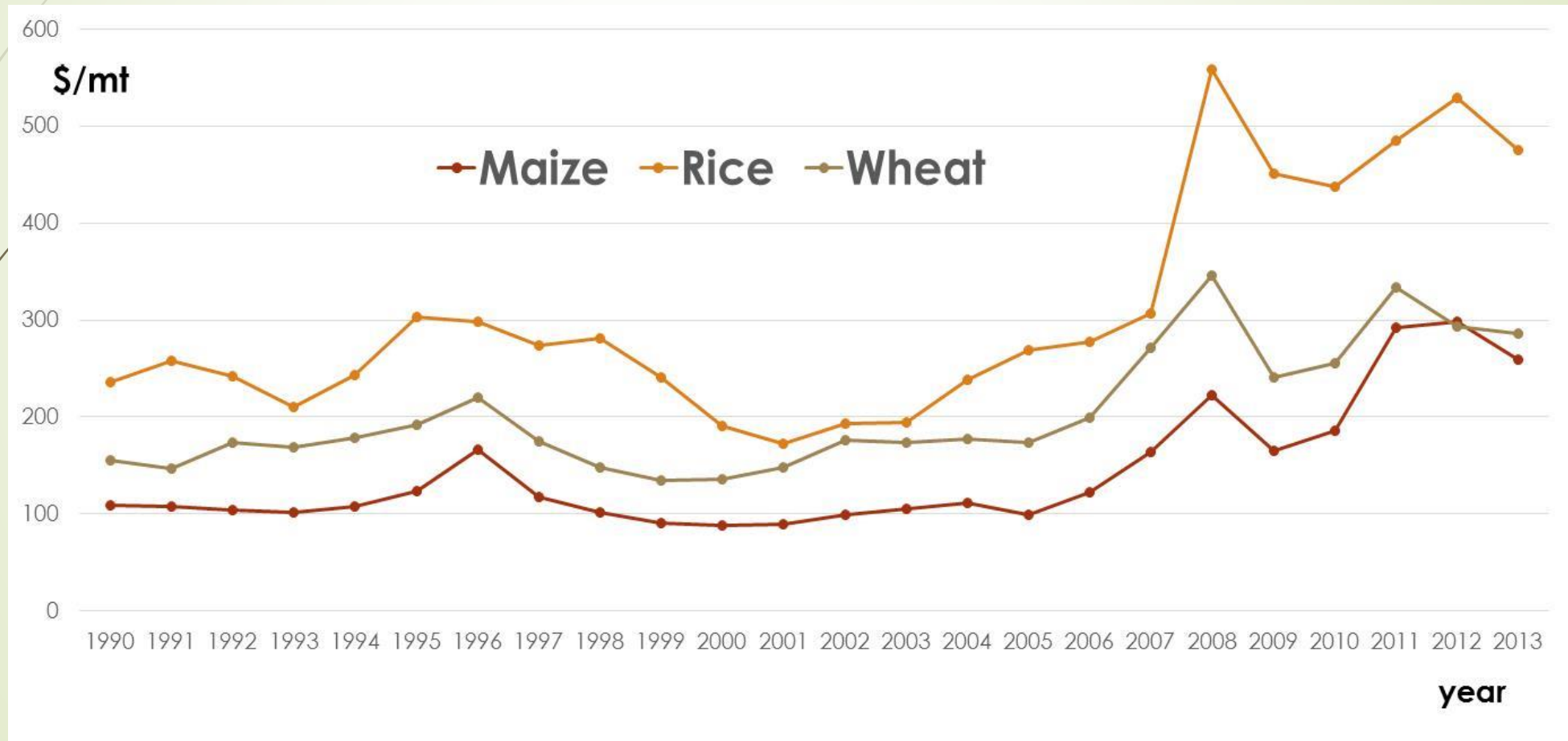


- I. Introduction**
- II. Global Trends**
- III. Food Security in East Asia**
- IV. Policy Response of East Asia**
- V. Conclusions and Implications**

I. Introduction

- The sharp increase in global food prices during 2007-2008 has triggered the awareness of food insecurity problem.

Grain prices from 1990 to 2013



(Source: Global Economic Monitor (GEM), World Bank, <http://databank.worldbank.org/ddp/home.do?Step=1&id=4.>)³

Main Driving Forces

➤ Demand Side

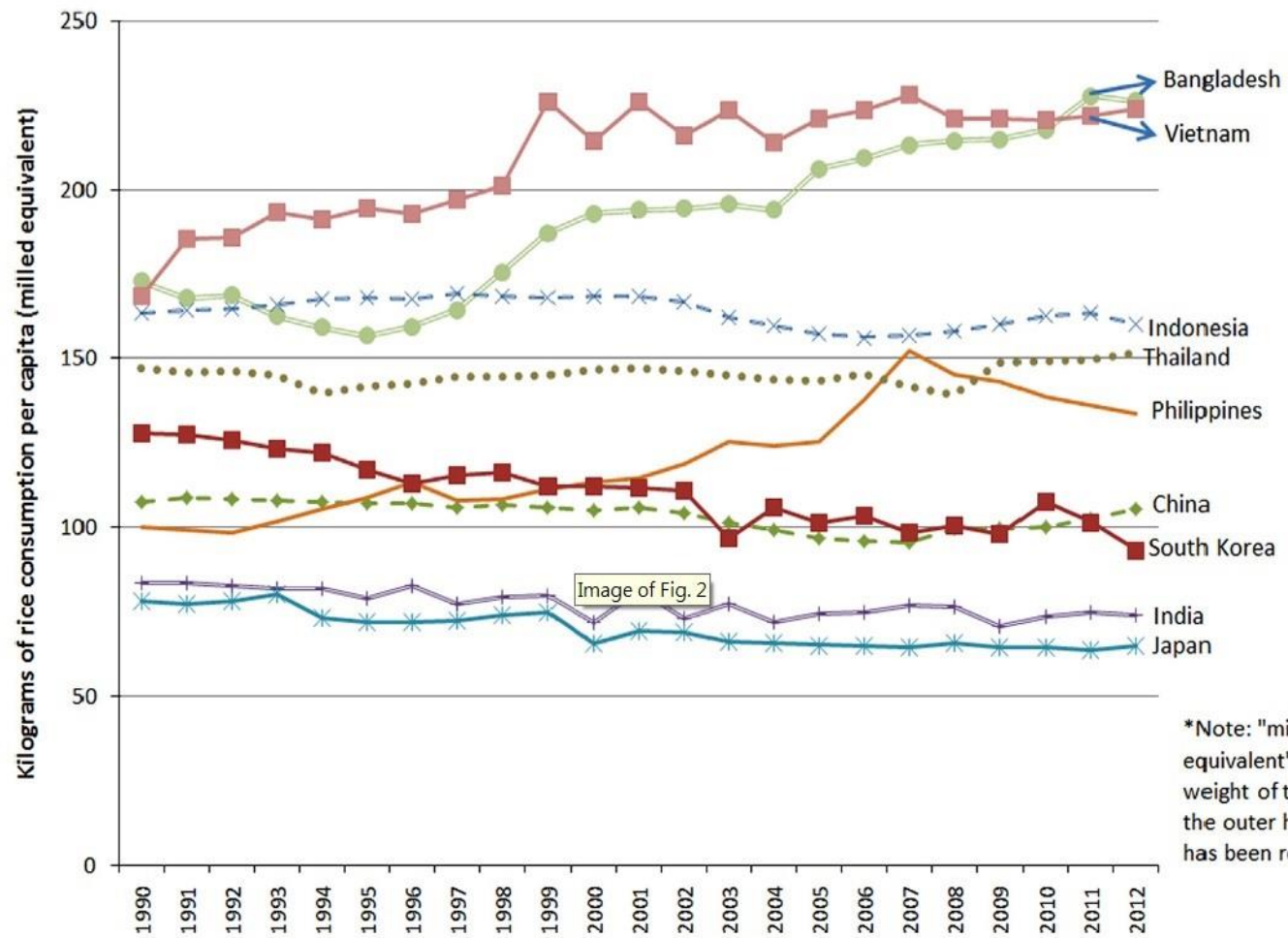
- Economic Growth-
 - Global 4%, Developing 6%
- Population Change-Urbanization
- Biofuel Policies

➤ Supply Side

- High Energy Cost
- Climate Change
- Stagnated Productivity Growth
- Globalization and Trade

Rice per Capita Consumption in Major Asian Countries, 1990-2012

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Rice consumption per capita in major Asian countries, 1990–2012, using USDA data (production, supply, and distribution (PSD) database of USDA).

Source: Reardon and Timmer, "Five inter-linked transformations in the Asian agrifood economy: Food security implications ", Forthcoming in Global Food Security (2014).

Instability is a Real Problem for Food Security

- **Asian Foundation (2012), Food Security in Asia and The Changing Role of Rice**
 - Technological revolution in rice and economic growth (Timmer2005b)
 - Asia is now richer, more urban, better connected and fed (Timmer2009a)
 - New food marketing system, such as modern supply chain and supermarket change the nature of farm-market-consumer interactions (Reardon2010)
 - Climate change really does seem upon us, with greatly increased uncertainty about weather patterns and

Farm Size-Another problem for Asia?

➤ Globally

- there are about 525 million farms , out of which smallholdings of **less than 2 hectares** (ha) **constitute 85%** (Oksana 2005).
- Out of this, **87% of smallholding farms are located in Asia**, followed by Africa (8%).

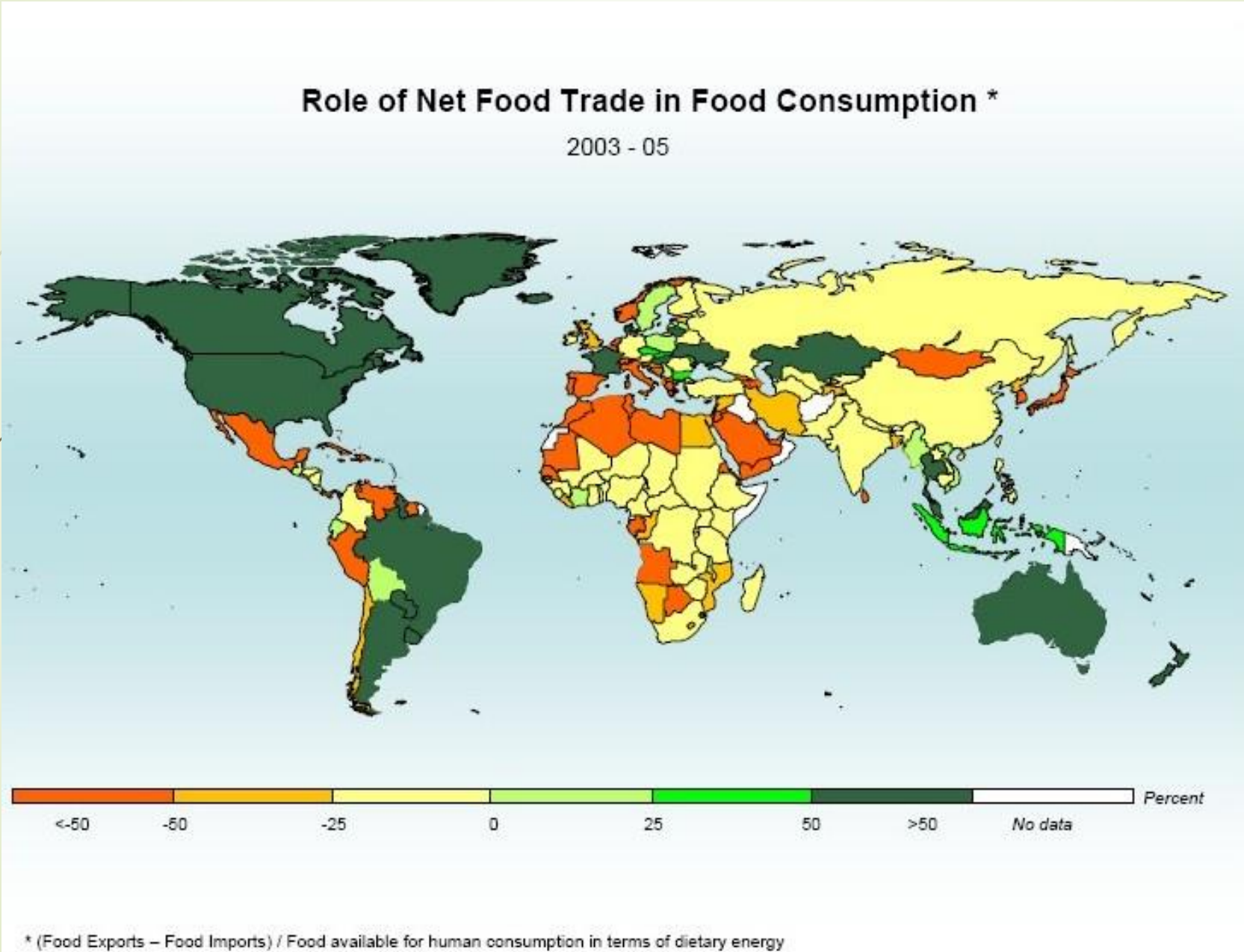
➤ In Asia

- **China** stands first in concentration of smallholdings followed by India, Indonesia, Bangladesh and Vietnam.
- The number of small farms in China in 1997 was 189.4 million accounting for 47% of smallholders in the world.

11. The Global Trends

- ▶ Oil prices were cut by nearly 70% and food prices by 33% from Jul to Dec 2008
- ▶ However, as of Feb 2010, prices of food and fuel still remain much higher than they were for much of this decade.
- ▶ Both price crisis and policy reactions have adverse consequences for the poor and for long-term stability & efficiency of food system.
- ▶ FAO; UNDP; OECD; IFPRI:
 - ▶ The prediction of high food grain prices is expected to continue as policies aiming at achieving energy security and carbon dioxide emission reductions present a strong trade-offs with food security goals.
 - ▶ The increase in food prices would be a negative development for low income, food-deficit countries, many of which are becoming more dependent on imported foods and food ingredients.

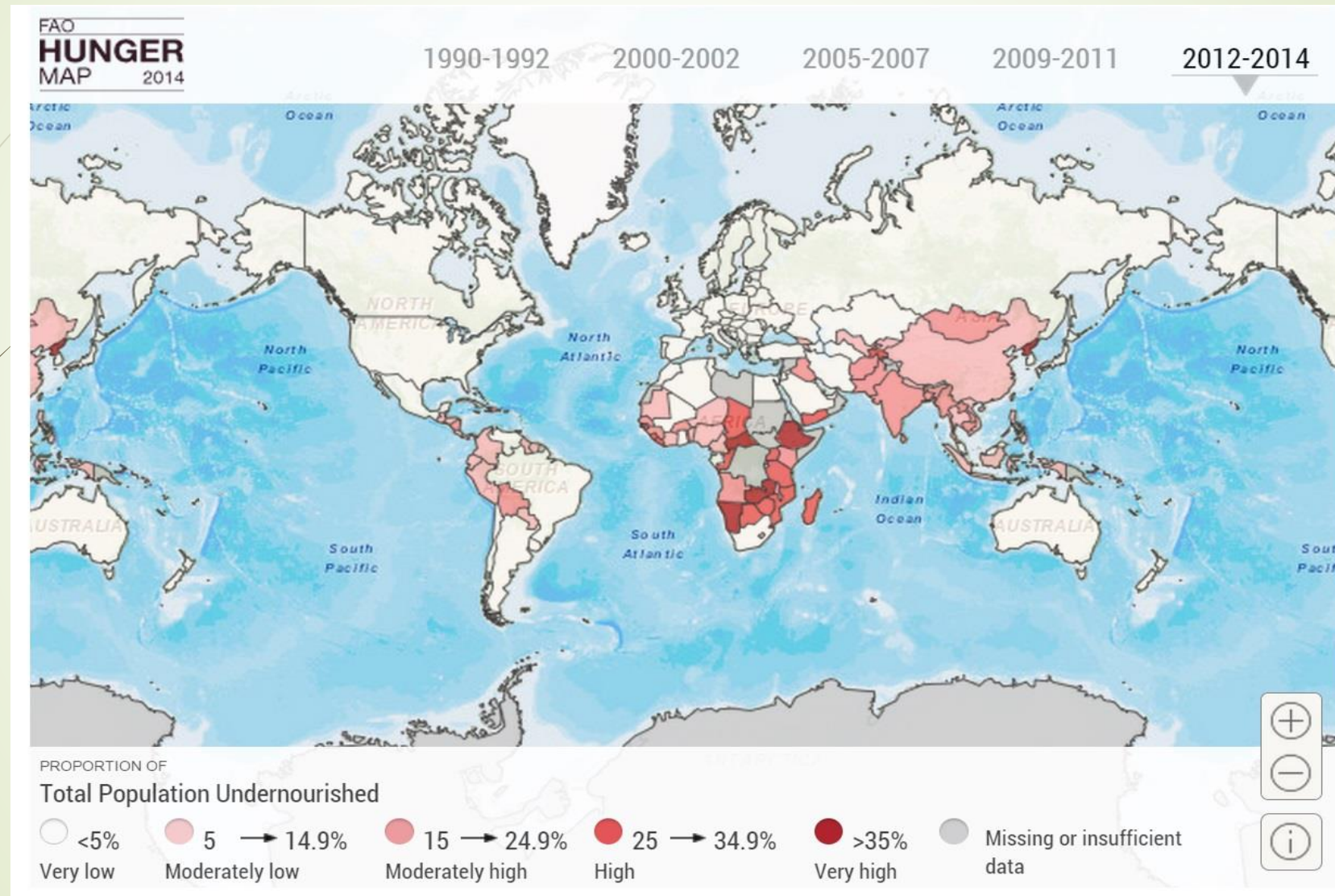
Global Net trade Position in food



Source:
FAOSTAT

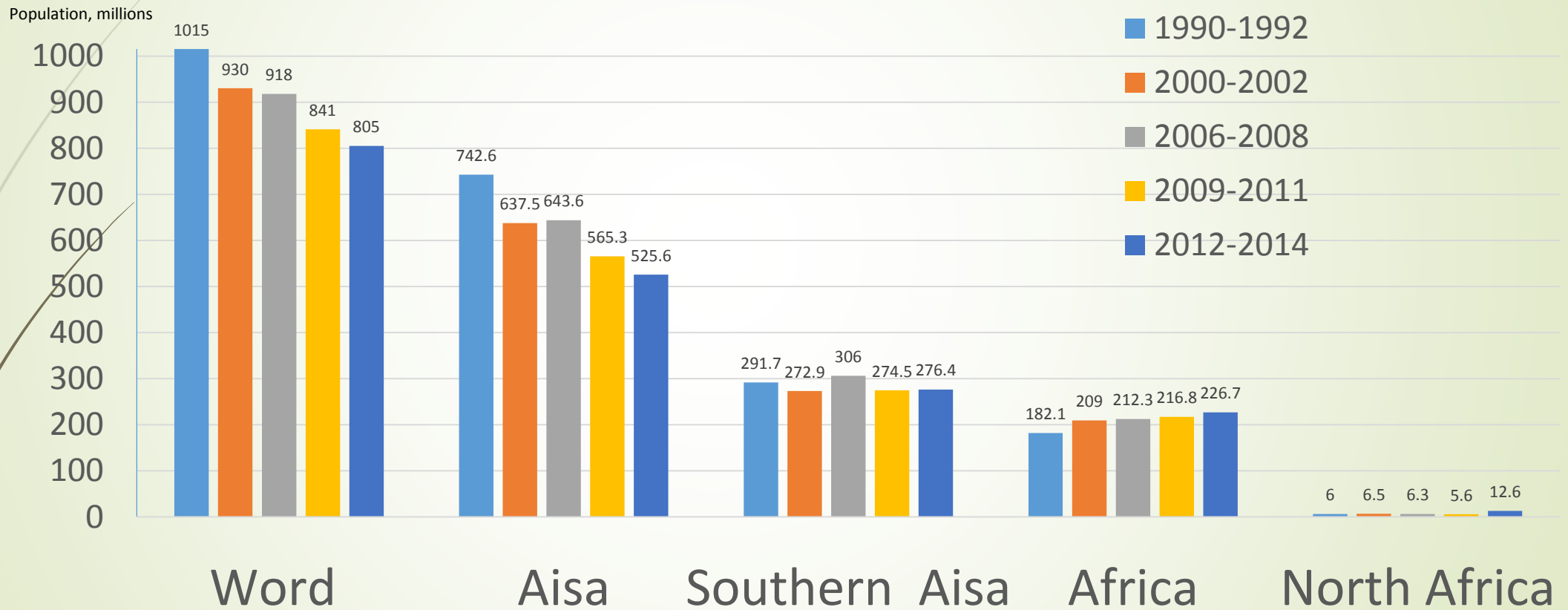
Prevalence of undernourishment in total population (%)

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Source: http://www.fao.org/hunger/en/?fb_locale=ja_JP

Figure 4. Number of undernourished in selected regions from 1990 to 2014.



III. Food Security in East Asia

- **Difference between East Asia and global situation**
 - Asia : the increase in the number of food-insecure people of 4 percent from 2007 to 2008 was more a reflection of population growth than deepening food insecurity .

- **Factors affected most regions in East Asia**
 - ✓ cyclones,
 - ✓ floods,
 - ✓ droughts,
 - ✓ continuing conflicts
 - ✓ civil strife

Major Challenges in East Asia

- Small Farm Structure: How to Connect with Global Supply Chain and World Market
- Price Transmission Mechanisms
- Policy Intervention and Human Response
- Climate Change Adaptation
- Internalize External Environmental cost

IV. Policy Response in East Asia- **Consumer Orientated**

	Tax	Social		Market	
	Taxes / customs	Food subsidies	Safety net & other	Price controls	Release stocks
Cambodia					
China					
Indonesia					
Japan					
Malaysia					
Mongolia					
Philippines					
North Korea					
Thailand					

Source: FAO, July 2008, Crop Prospects and Food Situation, No. 3

IV. Policy Response in East Asia- **Producer Orientated**

	Production support	Market management
	Producer credit & other	Minimum producer prices & other
Cambodia		
China		
Indonesia		
Japan		
Malaysia		
Mongolia		
Philippines		
Republic of Korea		
Thailand		

Source: FAO, July 2008, Crop Prospects and Food Situation, No. 3

IV. Policy Response in East Asia- **Trade Orientated**

	Import	Export	
	Import tariffs & other	Quantitative export controls	Export price control & tax
Cambodia			
China			
Indonesia			
Japan			
Malaysia			
Mongolia			
Philippines			
Republic of Korea			
Thailand			

Source: FAO, July 2008, Crop Prospects and Food Situation, No. 3

IV. Policy Response in East Asia

- Most of the East Asian countries' government interventions focus on short-term measures such as reducing domestic food prices through changes in trade policies or changes in domestic taxes or subsidies.
- Despite these efforts, the severity of the food insecurity renders national action inadequate and requires multilateral cooperation.
- The establishment of a regional food reserve as a long-term measure would serve to stabilize extreme price fluctuations in the international market.

V. Concluding Remarks-Food Security

- ▶ **It is a big challenge for East Asian countries to deal with rising food prices.**
 - ▶ Brahmbhatt and Christiaensen (2008)
 - ▶ Setting greater international engagement and collaboration to address the competing demands of energy and food security.
 - ▶ Demeke et al. (2009)
 - ▶ Policies include releasing food stock to the market, reducing tariffs, price control, and export restriction.

- ▶ **More analysis and international dialogue is needed to decide**
 - ▶ whether the benefits from the current mix of policies really justifies the costs,
 - ▶ whether a new global deal can be struck covering both clean energy and food.

The quiet revolution in Asia's rice value chains

Synthesis of quiet revolution processes in rice value chains in Asia

Transformation in:	Upstream	Midstream	Downstream
Technology	<ul style="list-style-type: none"> ● Widespread use of chemical fertilizer, pesticides, and fungicides ● Variation in use of herbicides and in commercialization of seed sector ● Generalized diffusion of small-farm mechanization 	<ul style="list-style-type: none"> ● Upgrading and upscaling of milling equipment ● More expensive milling equipment 	

Source: Reardon et al., "The quiet revolution in Asia's rice value chain," Forthcoming in Annals Of The New York Academy Of Sciences (2014).

The quiet revolution in Asia's rice value chains

Synthesis of quiet revolution processes in rice value chains in Asia

Transformation in:	Upstream	Midstream	Downstream
'Marketing and finance	<ul style="list-style-type: none"> • Increasing commercialization of paddy farms • Increasing disintermediation • Disappearance of tied-output credit markets 	<ul style="list-style-type: none"> • Increasing disintermediation • Emerging vertical integration/coordination • Emergence of packing and branding in rice • Decline of custom milling • Geographical lengthening of value chains • Emergence of contractual relationships of mills with wholesalers 	<ul style="list-style-type: none"> • Diversification of marketed products • Increasing emergence in retail of mill-branded rice

Source: Reardon et al., "The quiet revolution in Asia's rice value chain," Forthcoming in Annals Of The New York Academy Of Sciences (2014).

The quiet revolution in Asia's rice value chains

Synthesis of quiet revolution processes in rice value chains in Asia

Transformation in:	Upstream	Midstream	Downstream
Structure	<ul style="list-style-type: none">• Increasing heterogeneity in farm land holdings• Land concentration in some zones	<ul style="list-style-type: none">• Decrease of the share of the small mill• Reduction of the role of village trader	<ul style="list-style-type: none">• Emergence of supermarkets

Source: Reardon et al., "The quiet revolution in Asia's rice value chain," Forthcoming in Annals Of The New York Academy Of Sciences (2014).

V. Concluding Remarks

➤ Food Security in Asia and the Changing Role of Rice

- In East Asia, rice's share has dropped from about a fifth of agricultural output to less than a tenth.
- In Southeast Asia, agricultural output has dropped steadily, but slowly.
- In 1961 agriculture was 3.7 times as important to Asian economies as to the world as a whole, and this ratio had climbed to 5.2 times as important in 2007.
- Despite the rapid transformation of Asian economies, agriculture remains very important because structural transformation takes generations.

**Thank You &
Comment Welcome**

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