The State of Food Security in the Asia Pacific

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State of Food Security in Asia

Is there a problem?

- 947 Million Asians live on less that US$ 1.25 per day (UN MDG Summit, 20-22 Sept 2010)
- Asia is home to 2/3rds of the world's poor and hungry
- Asia is home to the largest number of hungry and malnourished (580 million) with over 40% in China and India alone.
- Destabilizing factors persist
  - ***Economic uncertainty, competition for land,***
  - ***Rapid urbanization, an increasing population***
  - ***Climate change, unseasonal weather patterns,***
  - ***Failing water availability, energy security and***
  - ***Resource scarcity, Degradation of the natural resource base trends***

Contrasting pictures of reality!

Spectacular increase in number of millionaires in Asia!

Spectacular advances in Science & Technology!

Spectacular economic growth in Asia!

Number of Poor has increased!

MDG Goals unlikely to be met!

More people now live in cities!

Average Crop yields have stagnated!

Re-emergence of Food Security as an issue of concern!

Most small farmers have not improved their livelihoods!

Riots, instability spread as food prices skyrocket

14 April, 2008

(CNN) -- Riots from Haiti to Bangladesh to Egypt over the soaring costs of basic foods have brought the issue to a boiling point and catapulted it to the forefront of the world's attention, the head of an agency focused on global development said Monday. "*This is the world's big story,"* said Jeffrey Sachs, director of Columbia University's Earth Institute. "The finance ministers were in shock, almost in panic this weekend," he said on CNN's "American Morning," in a reference to top economic officials who gathered in Washington. "There are riots all over the world in the poor countries ... and, of course, our own poor are feeling it in the United States."

World Bank President Robert Zoellick has said the surging costs could mean "seven lost years" in the fight against worldwide poverty.

Long era of cheap food is over!

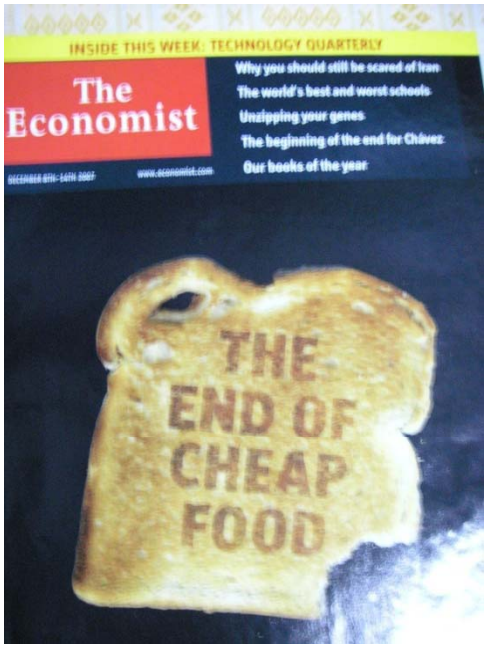
Date: Page last updated at 09:00 GMT, Thursday, 29 May 2008 10:00 UK

By David Loyn
International development correspondent, BBC News

Peering just a few months ahead to estimate food prices has been a tough game recently.

Peering 10 years ahead might seem impossible, especially when some of the assumptions made for the new UN Food and Agriculture Organization report already look questionable.

For example, one key assumption made is that crude oil prices will peak at $104 a barrel by 2017, within variations along the way. The price is already well above that, and some reputable analysts are now predicting oil will go to $200 a barrel.



High oil prices push up costs for farmers in the developed world. Fertiliser needs oil for its manufacture, while shipping costs have risen substantially.

But it is the poorest in the world who face the bleakest future - 800 million people who did not have enough to eat on a daily basis even before the recent huge rise in prices.

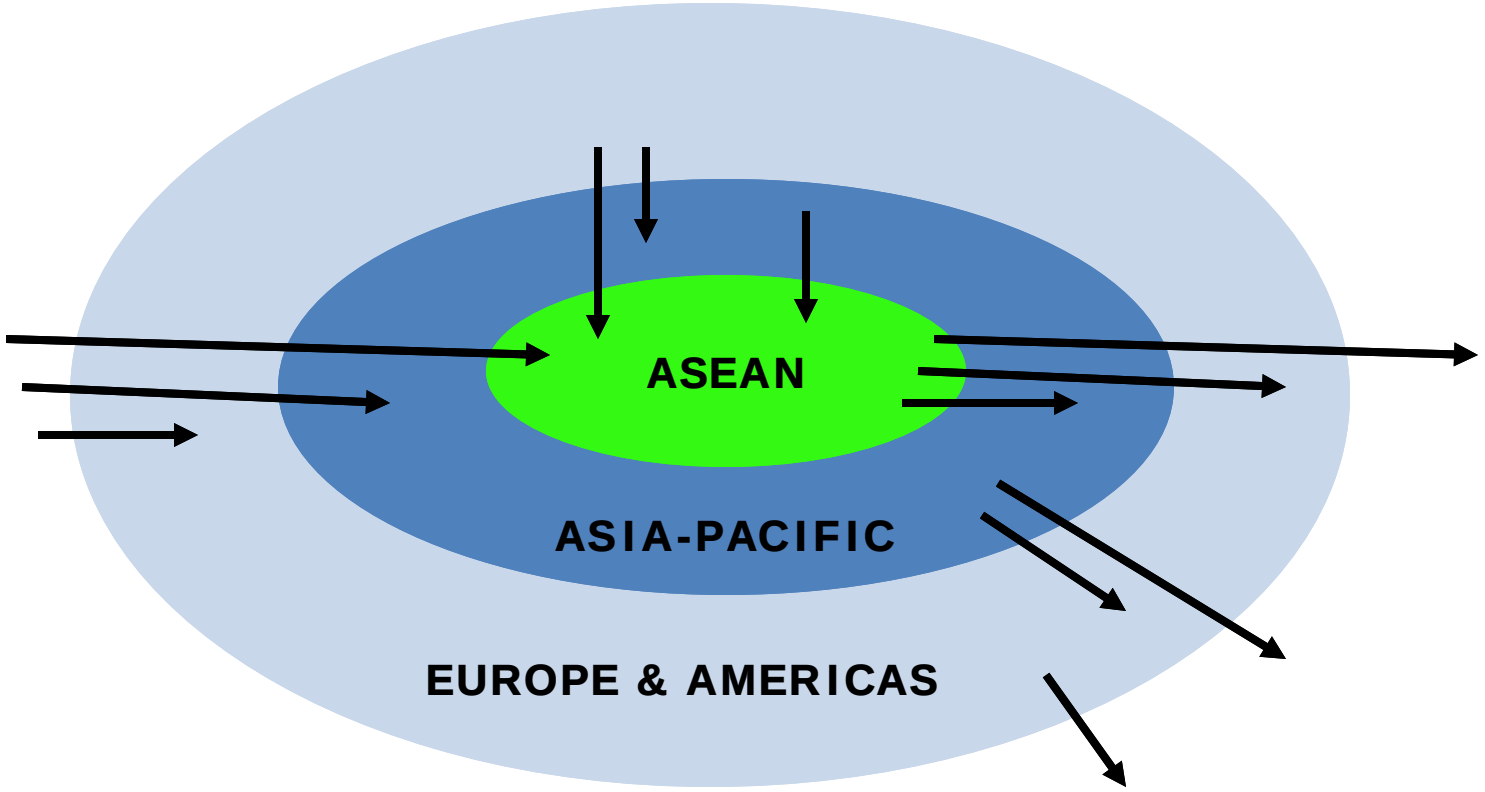
*"**Food Security** exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life."*

(Food and Agriculture Organization, U.N.)

Security for Whom?

- **Individual**
- **Family Unit (Households)**
- **Communities (Country)**
- **Regions**

Conceptualization of the inter-relationships between Food Supply and Demand at regional and global levels



Global Food Supply Chain

Main Threats to Food Security

Transitory Food Security

- Weather disruptions and pest outbreaks
- Rising energy prices
- Competition from energy sector
- Policy changes e.g. trade
- Lower holdings of cereal stocks
- Diversion from staple to cash crops
- Conflict/Terrorist activities
- Economic factors

•Etc.

I. <u>Food Availability</u>
Production
Imports
Stockpiles

II.<u>Food Access (Physical)</u>
Access to markets
Infrastructure

III. <u>Food Access (Economic)</u>
Employment
Overseas Remittances
Foreign Direct Investment
Trade

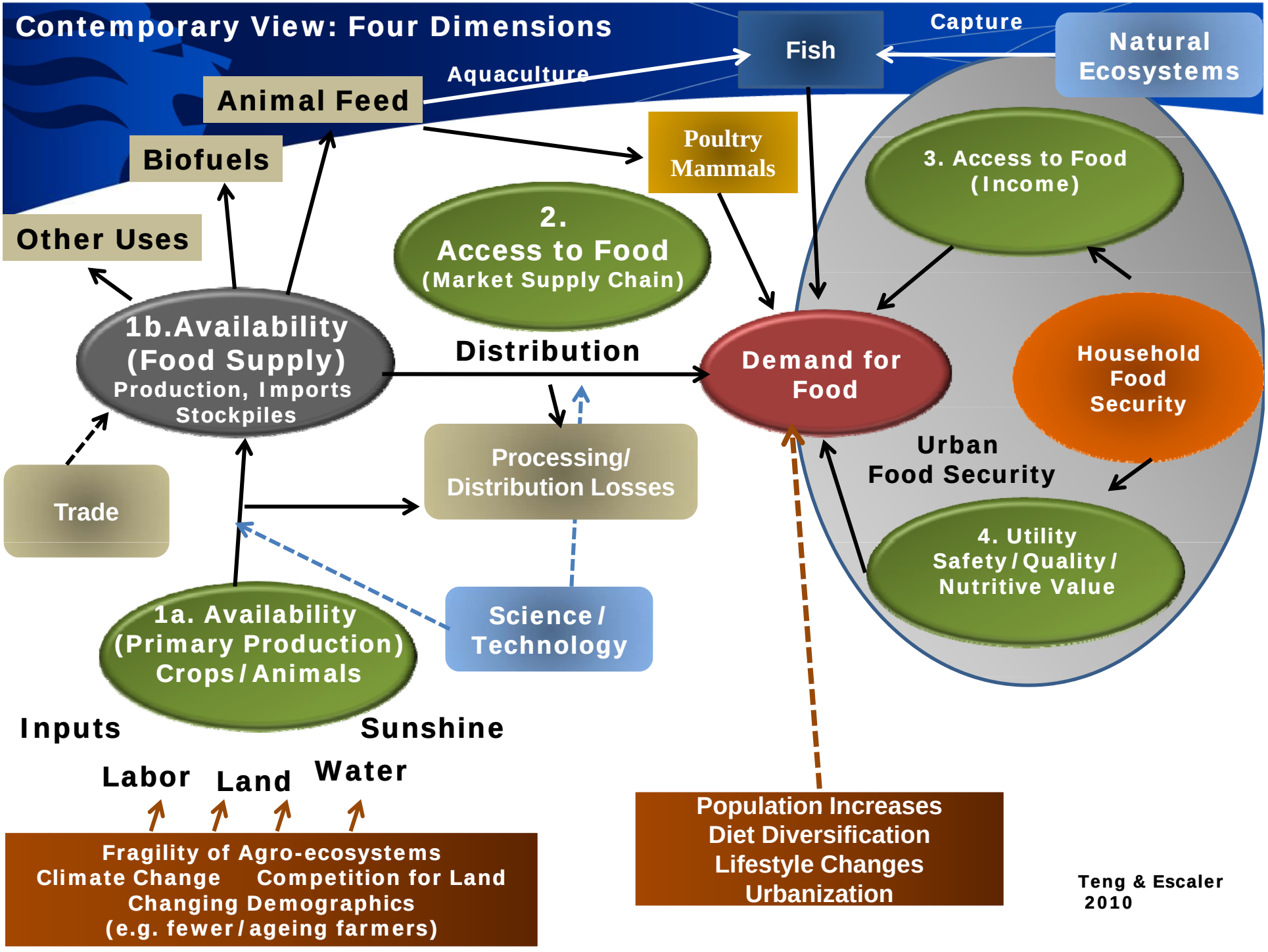
<u>IV. Food Utilization</u>
Health and nutrition
Sanitation/Hygiene
Storage/processing facilities
Clean water

Chronic Food Security

- Demographic changes
- Poverty
- Underinvestment in infrastructure/tech.
- Climate change
- Fragility of agro-ecosystems
- Unfriendly policies towards farmers
- Declining no. of farmers
- Globalisation

•Etc.

Four Dimensions of Food Security



Teng & Escaler 2010

Food Security Dimension I:
Availability

Food Security Dimension II:
Access

Crop	Item	2006/07	2009/10
Corn (Maize)	Global/Asia Production, Million M T	698.0	810.9/190.1
	Global Exports, Million M T (% of global production)	84.4 (12%)	88.8 (11%)
	Asian Imports, Million MT (% of Global Exports)	43.3 (51%)	36.2 (41%)
Rice (Milled)	Global/Asia Production, Million M T	417.0	441.0/383.4
	Global Exports, Million M T (% of global production)	29.0 (7%)	30.1 (7%)
	Asian Imports, Million MT (% of Global Exports)	7.4 (25%)	7.9 (26%)
Wheat	Global Production/Asia, Million M T	594.0	680.0/ 242.1
	Global Exports, Million M T (% of global production)	110.0 (19%)	134.0 (19.8%)
	Asian Imports, Million MT (% of Global Exports)	28.8 (26%)	35.0 (26%)
Soybean (For Meal)	Global Production, Million M T	153.8	163.8
	Global Exports, Million M T (% of global production)	54.6 (35%)	55.3 (34%)
	Asian Imports, Million MT (% of Global Exports)	12.8 (24%)	13.9 (25%)

FIGURE 23
World cereal production and utilization

* Data refer to the calendar year of the first year shown.
** Forecast

Source: FAO.

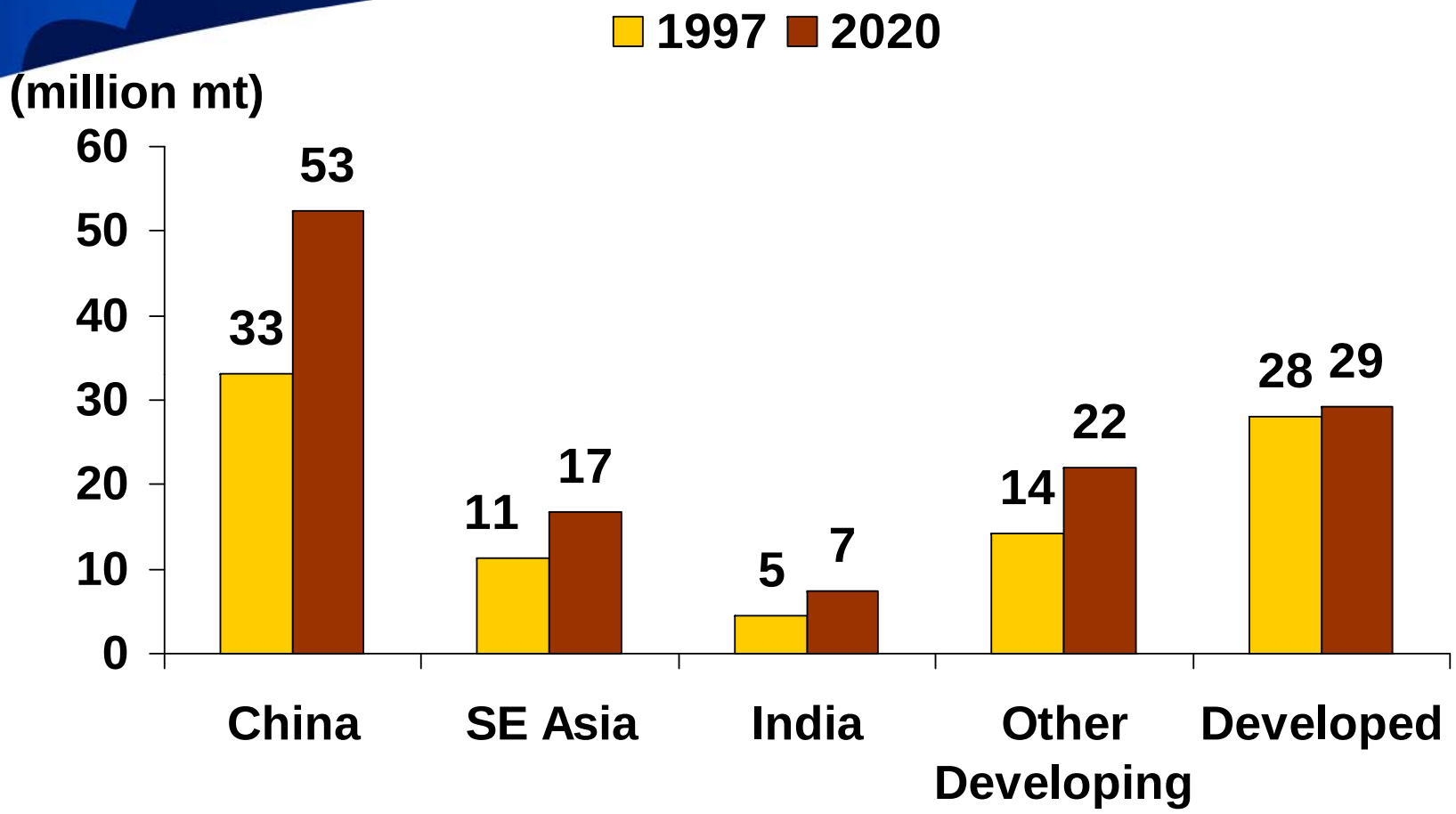
[5] FAO. *Crop prospects and food situation*, No.1, April 2006.

ASEAN: Agri-Food Trade Balances, 2007. US$B
-- R. Dy. 2009

Country	Exports	Imports	Surplus (Deficit)
Indonesia	23.4	10.5	12.9
Malaysia	20.5	10.6	9.9
Thailand	25.0	8.4	16.6
Vietnam	11.7	6.1	5.6
Cambodia	0.1	0.3	(0.2)
Laos	-	-	-
Myanmar	-	-	-
Brunei	*	*	*
Philippines	3.2	4.3	(1.1)
Singapore	6.0	8.3	(2.3)

ASEAN	89.9	53.2	36.7
WORLD	1128.o	1128.0	

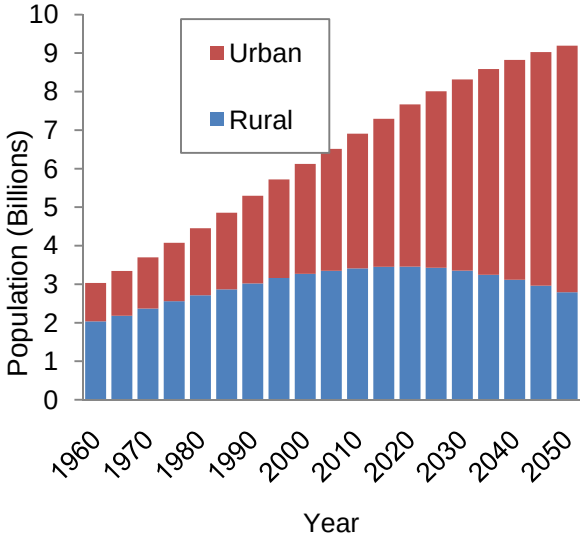
Food Fish Demand, 1997 and Projected 2020



From: Fish to 2020. Joint Study between IFPRI and WorldFishCentre using IMPACT model. Released in 2003.

TRENDS WHICH AFFECT THE AVAILABILITY/ PHYSICAL ACCESS DIMENSIONS OF FOOD SECURITY

- Changes in sources of demand
  - Urbanising population; 50% in 2008,70% by 2025
  - Ageing population (includes farmers)
  - Increase demand for fish, meat and vegetables



9 Billion by 2050

800 million people involved in urban agriculture and contribute to feeding urban residents

Low-income urban dwellers spend between 40%-60% of their income on food per year

Stress Factors on the natural resource base

Soil

- Degradation (Erosion, Salinization, etc.)

Water

- Pollution by industrial and agricultural effluents

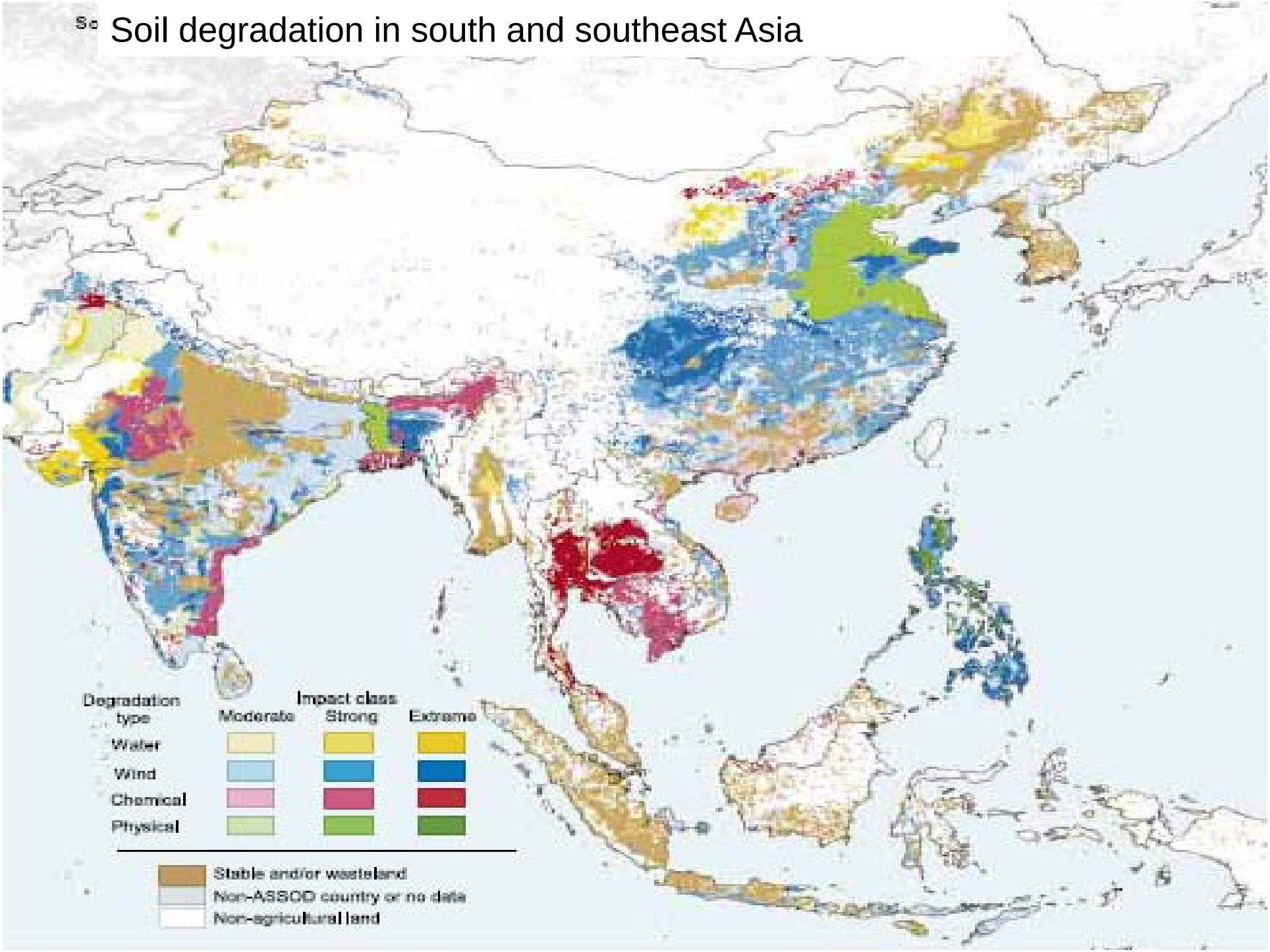
Air

- Pollution by natural and anthropogenic sources

Global Climate Change (GCC)

- Temperature (global warming)
- Light (global dimming)

Soil degradation in south and southeast Asia



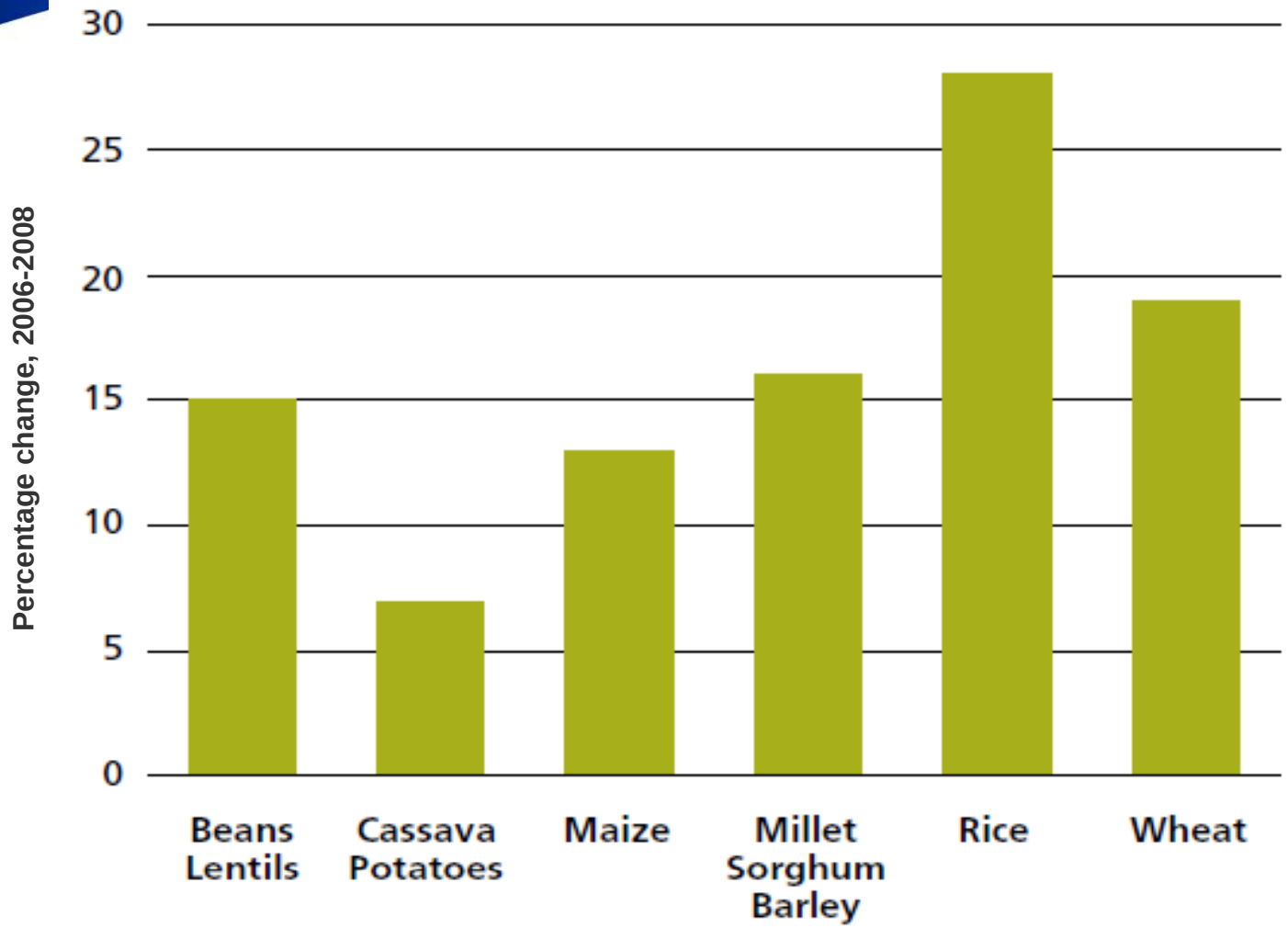
References

- <http://www.rsis.edu.sg/NTS/resources/research_papers/MacArthur%20Working%20Paper_Paul_Teng_and_Margarita_Escaler.pdf> Working Paper.

  Food (In)Security in Urban Populations By Paul Teng and Margarita Escaler The food crisis at the end of the last decade and the resulting food riots that occurred in cities all over the world exposed the vulnerability and fragility of the current global food system and highlighted the increasing problem of urban food security. Urban households were among the hardest hit by the food and economic crises as they saw their purchasing power decline drastically. Though aggregate world food availability was relatively good during this period, access to that food by the urban poor had been severely compromised. This working paper aims to analyse the factors that influence urban food security and argues the case for why an urban focus will increasingly matter in the international discourse on food security. A truly “systems approach” will be needed to study and deal with the many inter-related factors and players in food security. Too often have professional communities maintained disciplinary barriers when addressing such complex problems.

Food Security Dimension III:
Economic Access

Food Price Crisis



Source: The State of Food Insecurity in the World, FAO (2009).

Financial Crisis and Developing Nations

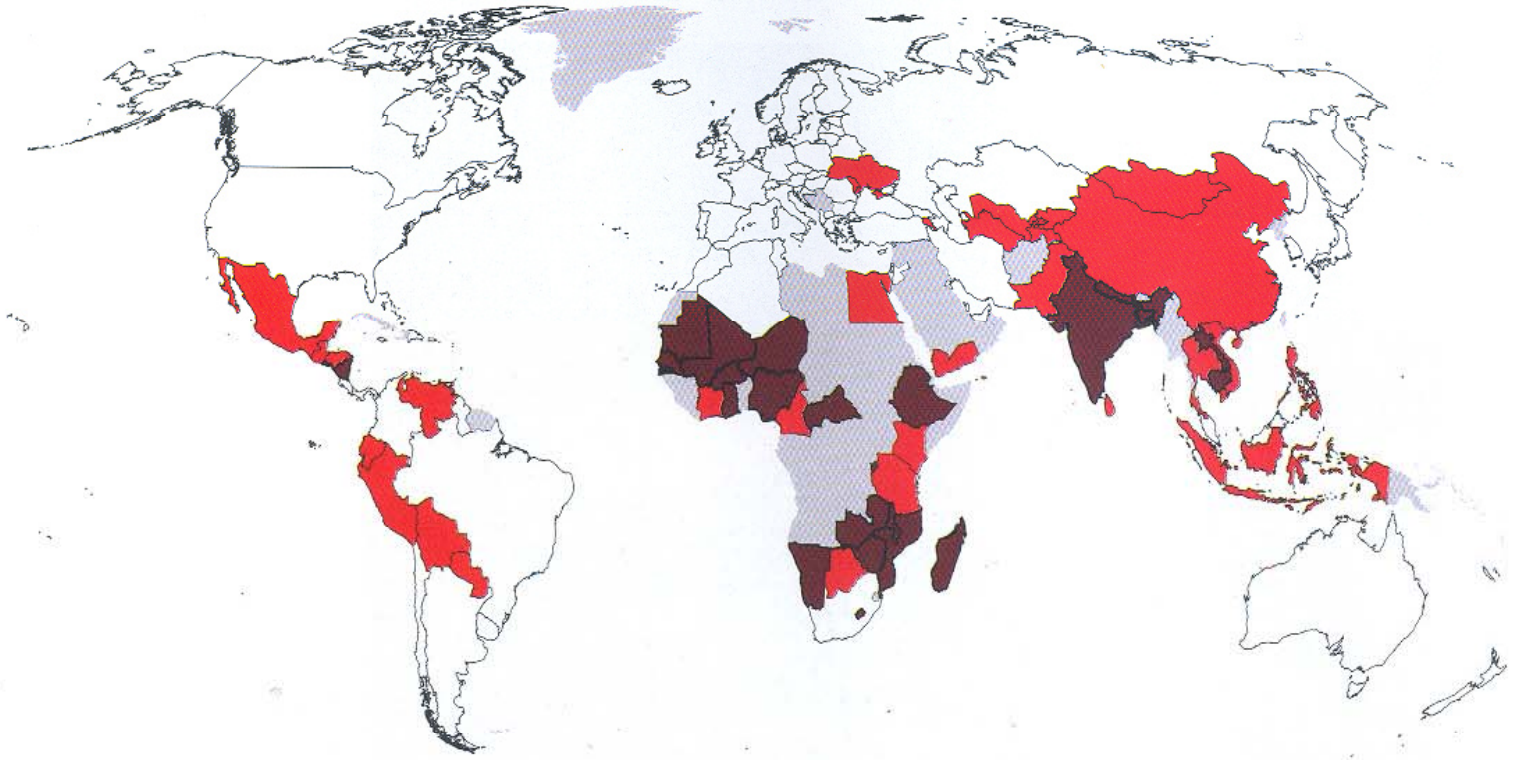
- Higher unemployment
- Lower capital inflows
  - Remittances,
  - Foreign Direct Investment
  - Overseas Development Aid,

- Reduced export opportunities
- Fewer policy options due to global nature of crisis:
  - No currency devaluation
  - No external borrowing

Source: The State of Food Insecurity in the World, FAO (2009)..

Jeffrey Sachs. 2005. The end of Poverty. Penguin

Map 1: Moderate Poverty and Extreme Poverty

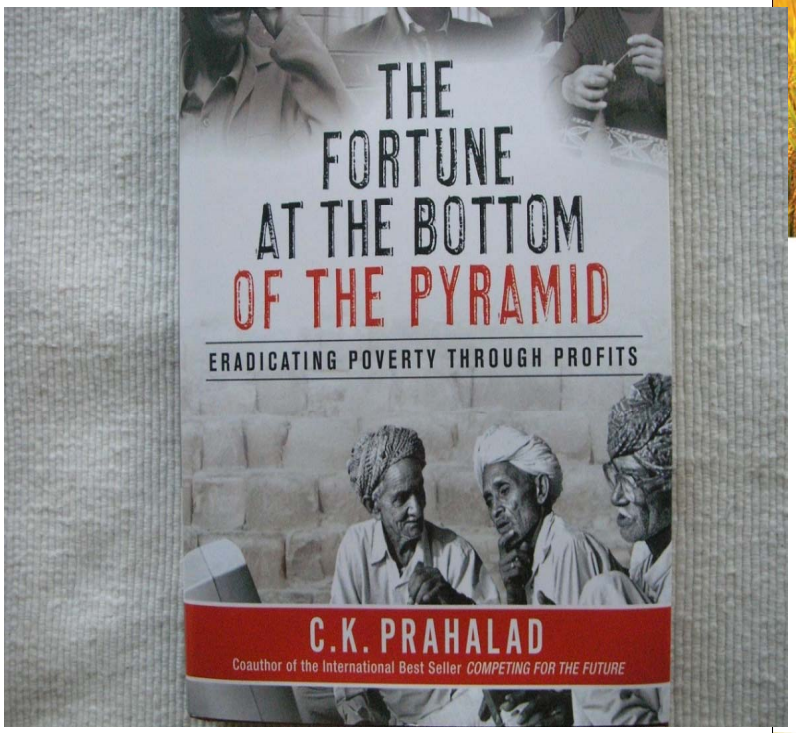


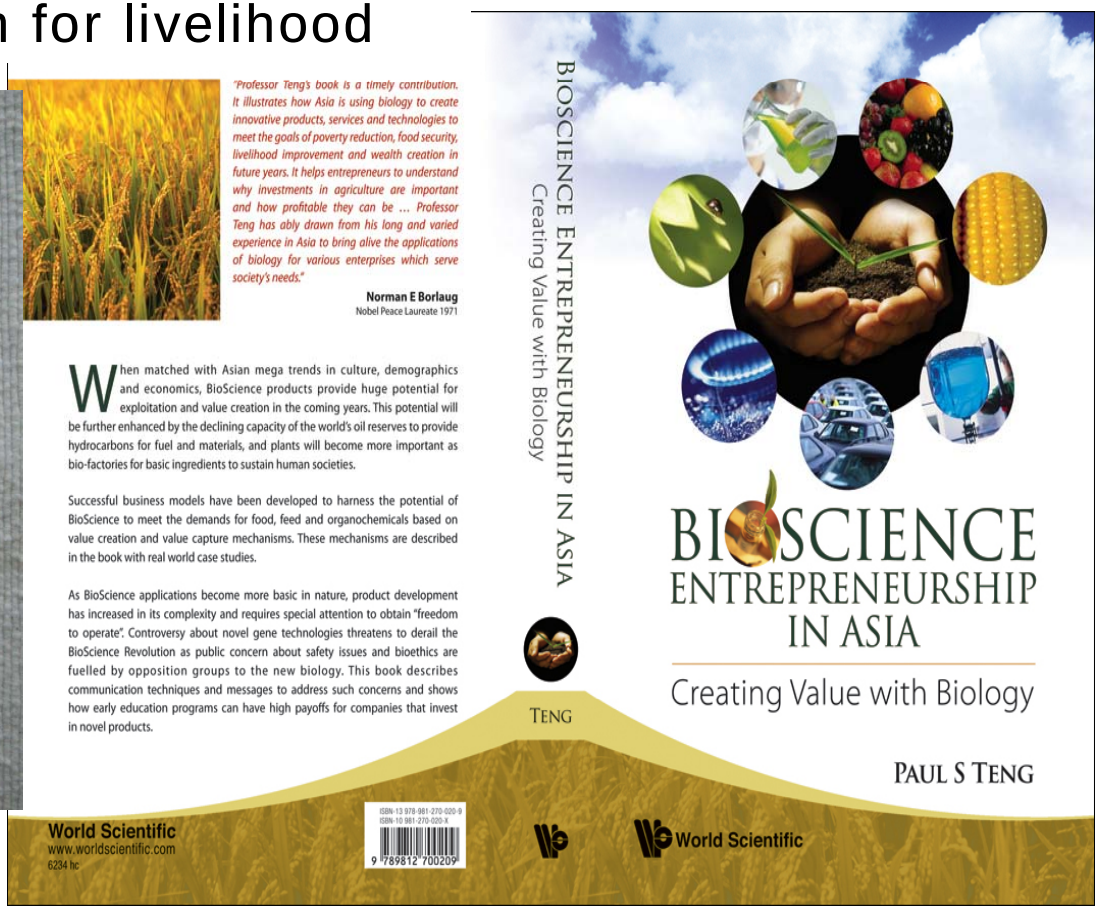
Moderate Poor (more than 25% of population lives below $2 per day)
Extreme Poor (more than 25% of population lives below $1 per day)
No Data

Source: Data from World Bank (2004).
Map uses most recent available data.

Improving economic access for the poor: Adding value

- Empowerment of small growers
- "Bottom of pyramid" phenomenon
- Science + Technology + Entrepreneurship
  = Surplus food plus cash for livelihood





Food Security Dimension IV:
Utility
(Safety, Nutrition,Quality)

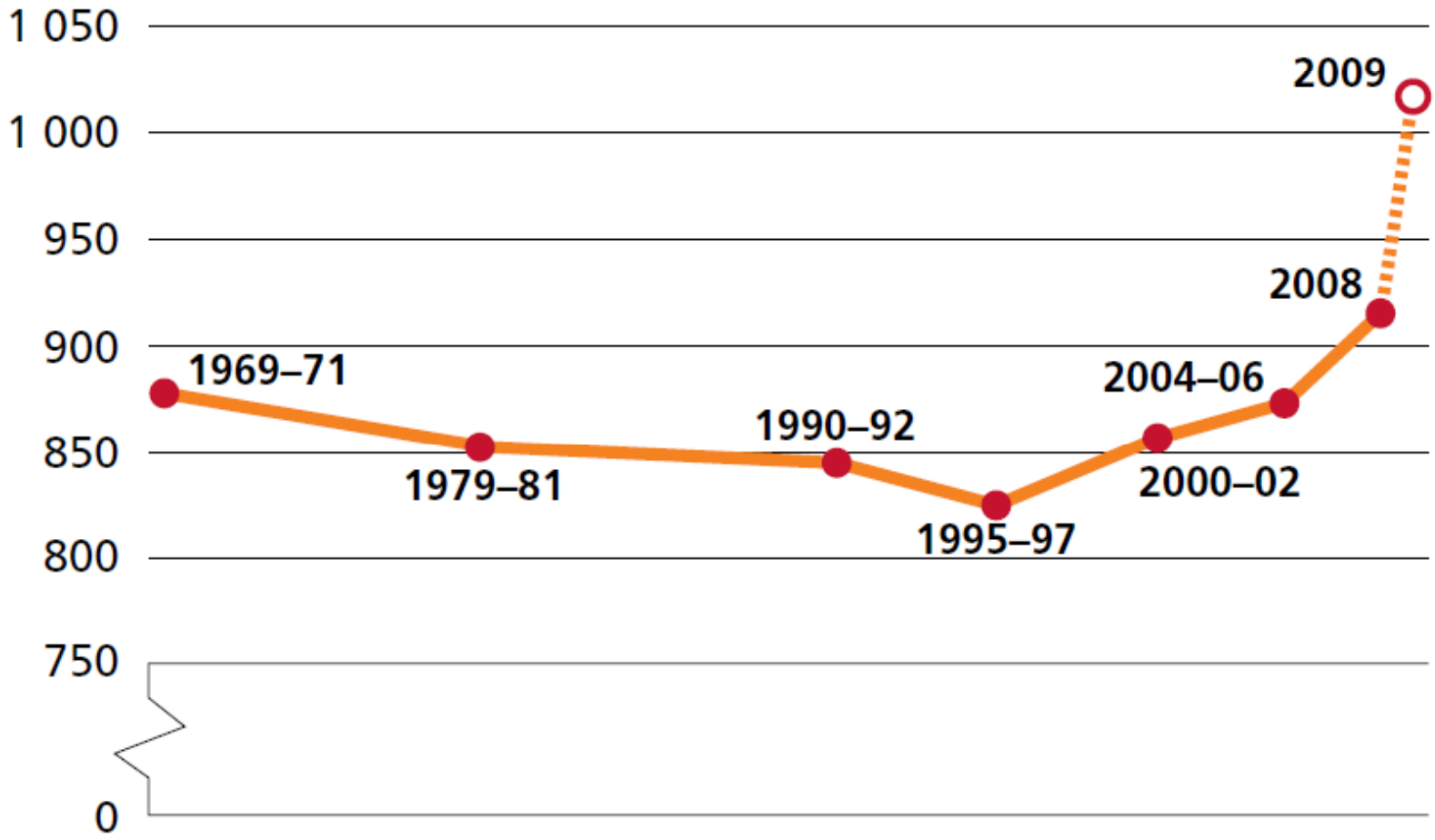
Basic Terms and Definitions

- **UNDERNOURISHMENT**: describes the status of persons, whose food intake regularly provides less than their minimum energy requirements (MDG indicator of Hunger)
- **UNDERWEIGHT**: Weight for Age, measured in children under 5 years of age. (MDG indicator of Hunger)
  - Moderate = 2 std deviations below the reference standard;
  - Severe = 3 std deviations below the reference standard;
- **WASTING**: Weight for Height. Measure of acute malnutrition.
- **STUNTING**: Height for Age. Measure of chronic malnutrition

Courtesy: Michael Sheinkman, WFP, Thailand

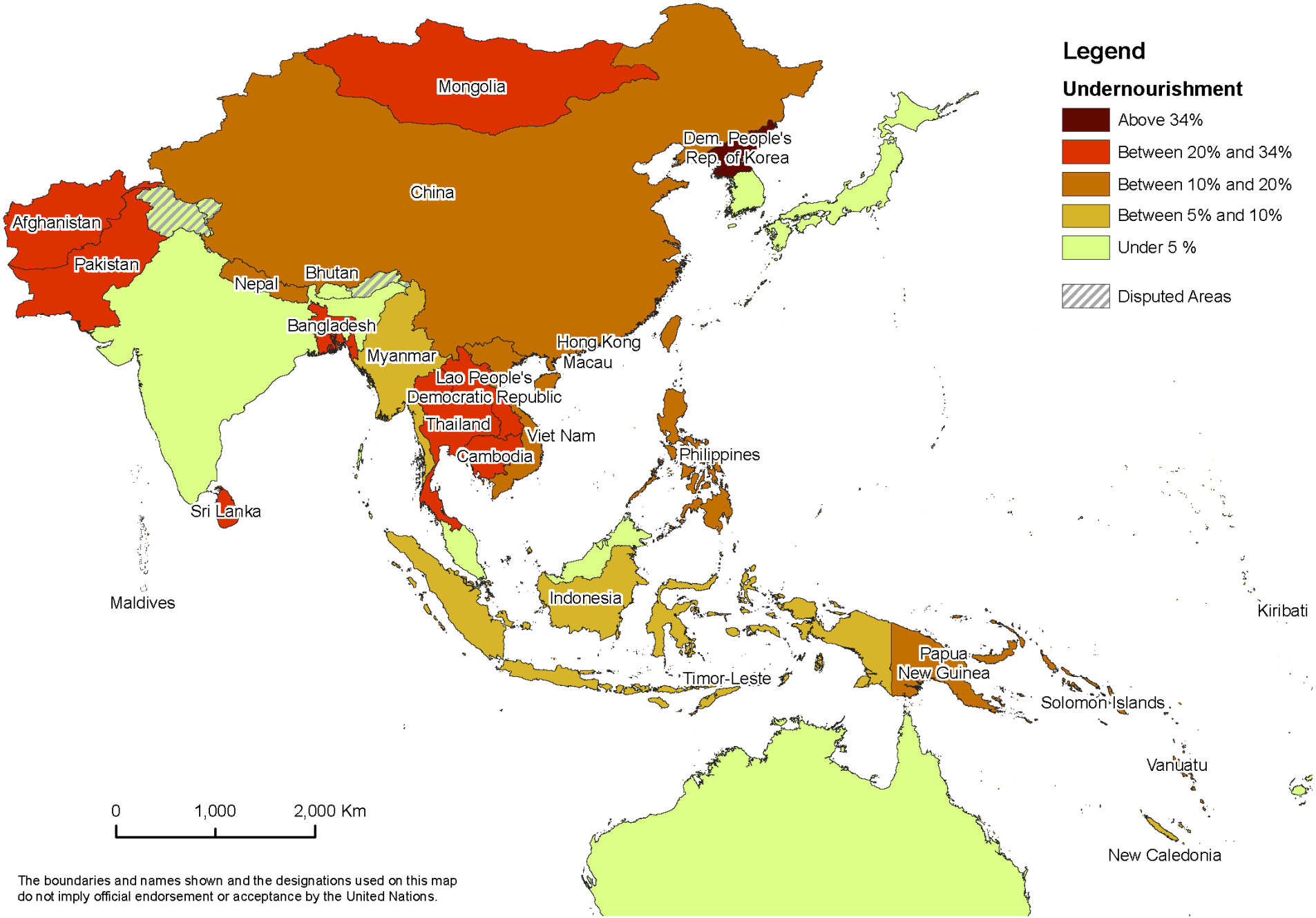
Trends in World Hunger

Of the estimated 1.02 Billion of hungry people, 642 Million live in the Asia-Pacific



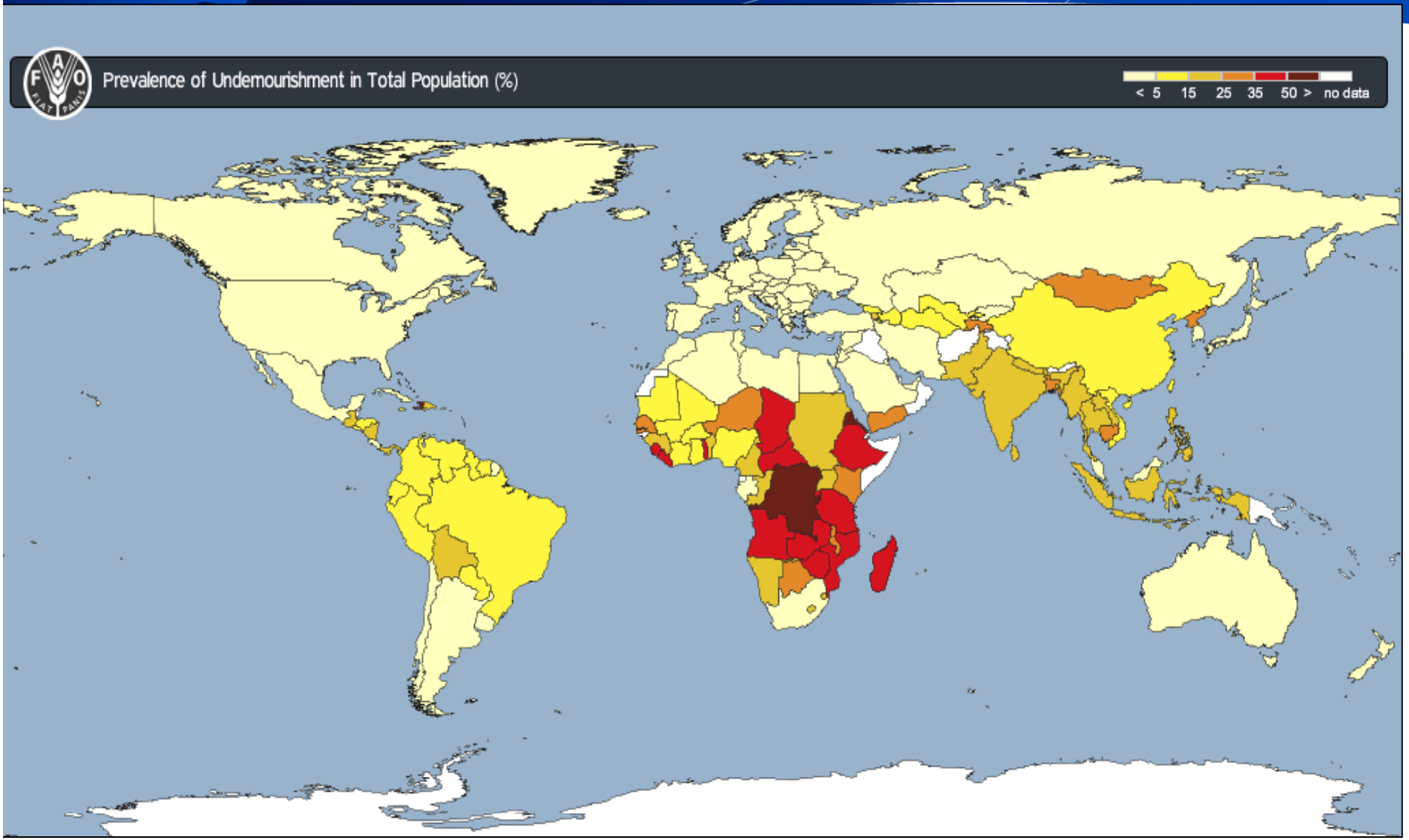
Source: The State of Food Insecurity in the World, FAO (2009). Value for 2009 is a projection.

Prevalence of Undernourished (MDG indicator)



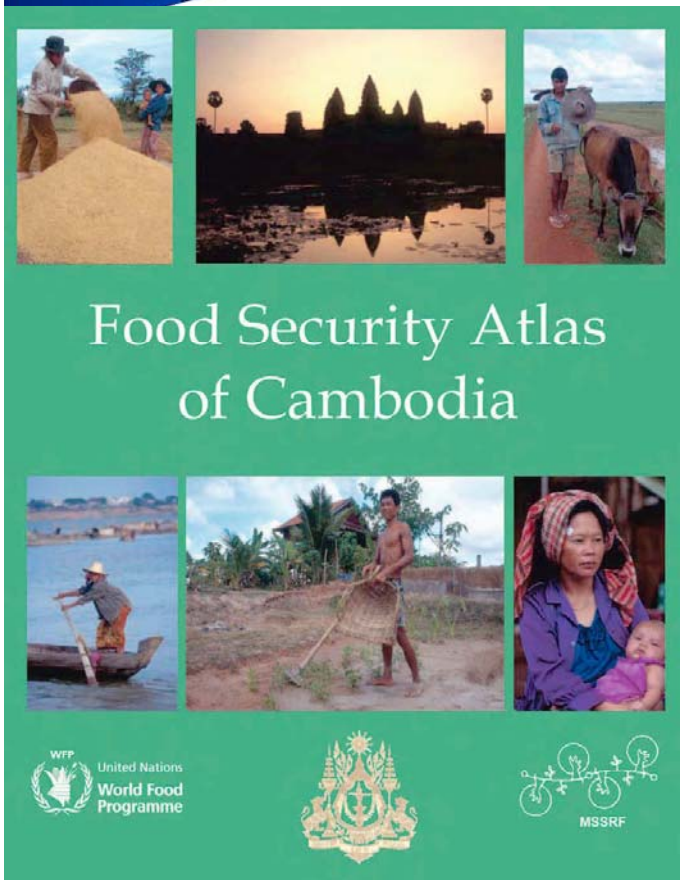
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

World Hunger Map



Source: The State of Food Insecurity in the World, FAO (2009).

Food Security Atlas – SE Asia



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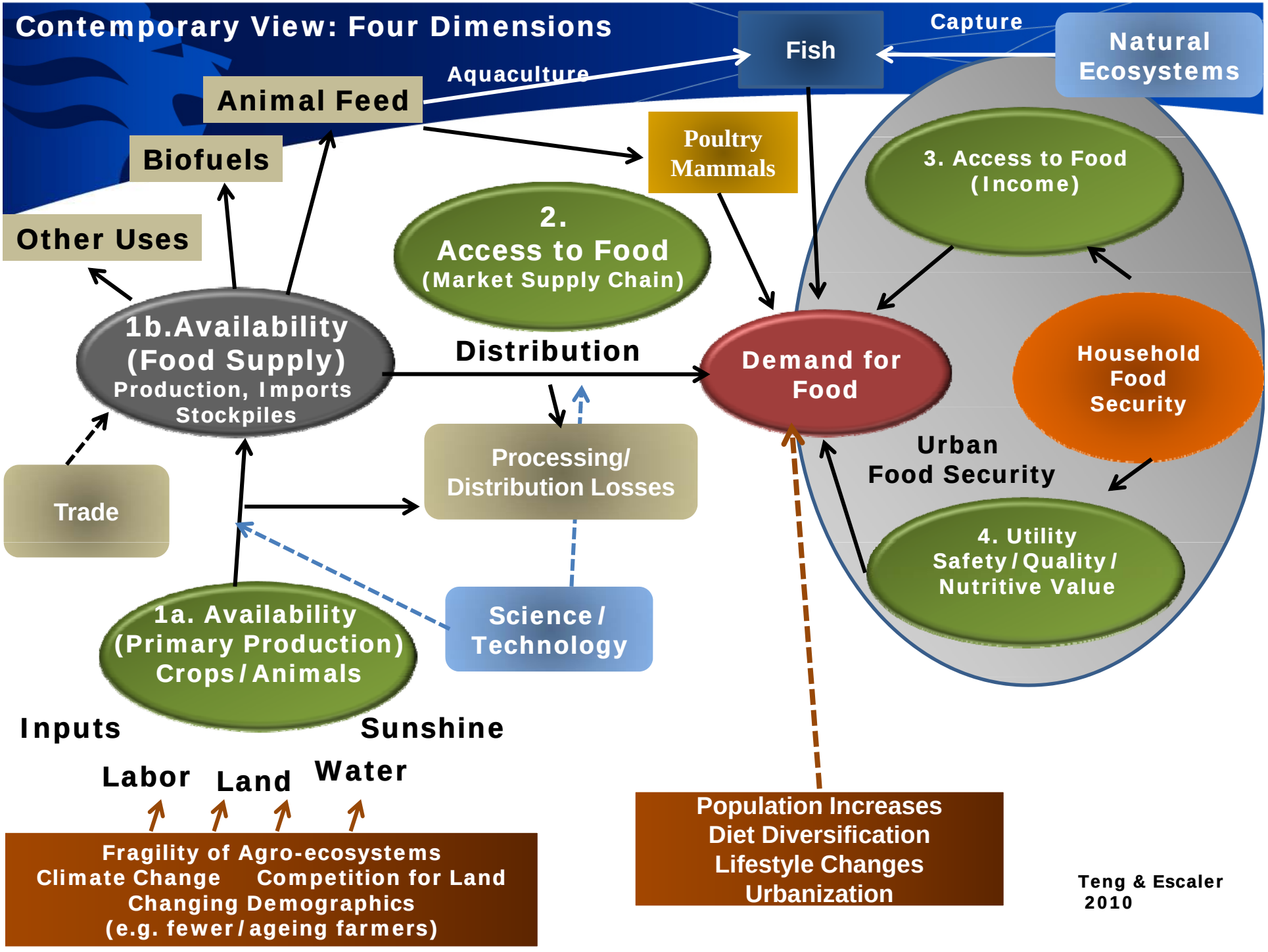

Teng & Escaler 2010

New Vision for Agriculture Initiative
Proposed Index for Assessing Progress – The Spidergraph