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Economic Development and Food & Nutrition Security Nexus: Food for Thought

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WHAT DRIVES FOOD & NUTRITION (IN)SECURITY?

WHAT CHANGES THE STORYLINE ON REGIONAL FOOD DEMAND AND SUPPLY?

CAN WE KEEP OURSELVES IN THE LOOP OF ECONOMIC DEVELOPMENT?
(under a highly competitive but integrated world economy)

CAN MOST FAMILIES COPE AND HENCEFORTH BE FOOD- & NUTRITION-SECURED?

(http://www.fao.org/ag/magazine/0704

1. Over the past 50 years, human activity has altered ecosystems more rapidly and extensively than in any comparable period in history, largely to meet demand for food, fresh water, timber, fiber and fuel

2. About 60% of the ecosystem services" are being degraded or used unsustainably, and degradation could worsen further

Time to act globally!

6 Catastrophic Effects of Global Warming Happening Right Now

While there is proof beyond reasonable doubt that global warming is real, many people don't know that the effects are already taking hold. Here are six of the big ones.

Curated By
Lauren Kelly

Are there effects on food & nutrition security?

Coastal areas: rising sea levels

North America: less snow and more heat

Latin America: loss of biodiversity

Europe: glacial retreat

Africa: extreme drought

Asia: freshwater availability crisis

State of Undernourishment

(FAO, The State of Food Insecurity in the World 2014)

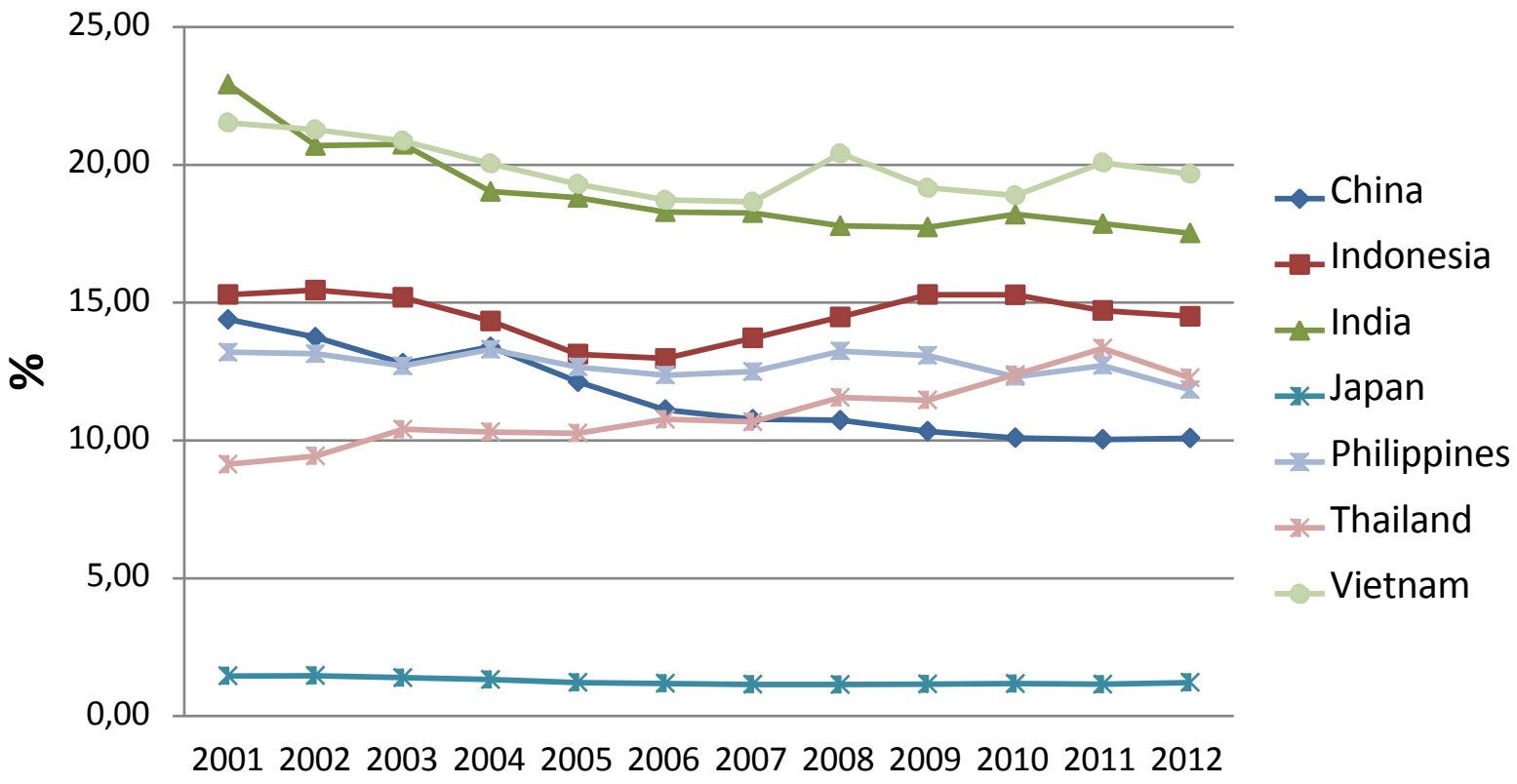
805 million - chronically undernourished in 2012-2014

Global – incidence fell from 18.7% to 11.3%
Developing countries – dropped from 23.4 to 13.5

Since 1990-92, 63 countries have reached the hunger target of MDG-1 and 25 countries have achieved the more stringent WFS target

The Millennium Development Goal

- halving the proportion of undernourished people in developing countries by 2015 is within reach
- Latin America and the Caribbean made the greatest overall progress in increasing food security
- Modest progress in sub-Saharan Africa and Western Asia, which have been afflicted by natural disasters and conflict
- Sustained political commitment at the highest level, with food security and nutrition as top priorities, is a prerequisite for hunger eradication



Challenge: Produce more with less

Food security

"exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO 2000)

Nutrition security

"condition when all people at all times consume food of sufficient quantity and quality in terms of variety, diversity, nutrient content and safety to meet their dietary needs and food preferences for an active and healthy life, coupled with a sanitary environment, adequate health and care" (CFS 2012)

Dual problem of:

UNDERNOURISHMENT (Undernutrition)

low dietary energy supply, wasting, stunting, underweight and low body mass index (BMI) ; leaves its victims prone to illness and early death

OVERNOURISHMENT

obesity is increasing; decreases productivity and increases the risk of heart disease, hypertension, diabetes and certain cancers

Common Deficiencies

- ❖ Iron deficiency anemia
- ❖ Iodine deficiency disorders
- ❖ Vitamin A deficiency blindness
- ❖ Calcium deficiency in pregnant and lactating women
- ❖ Severe vitamin C deficiency

- ✓ minerals and vitamins - are needed for proper growth, development and function

2 Major Issues at the HH Level (Weingärtner 2010)

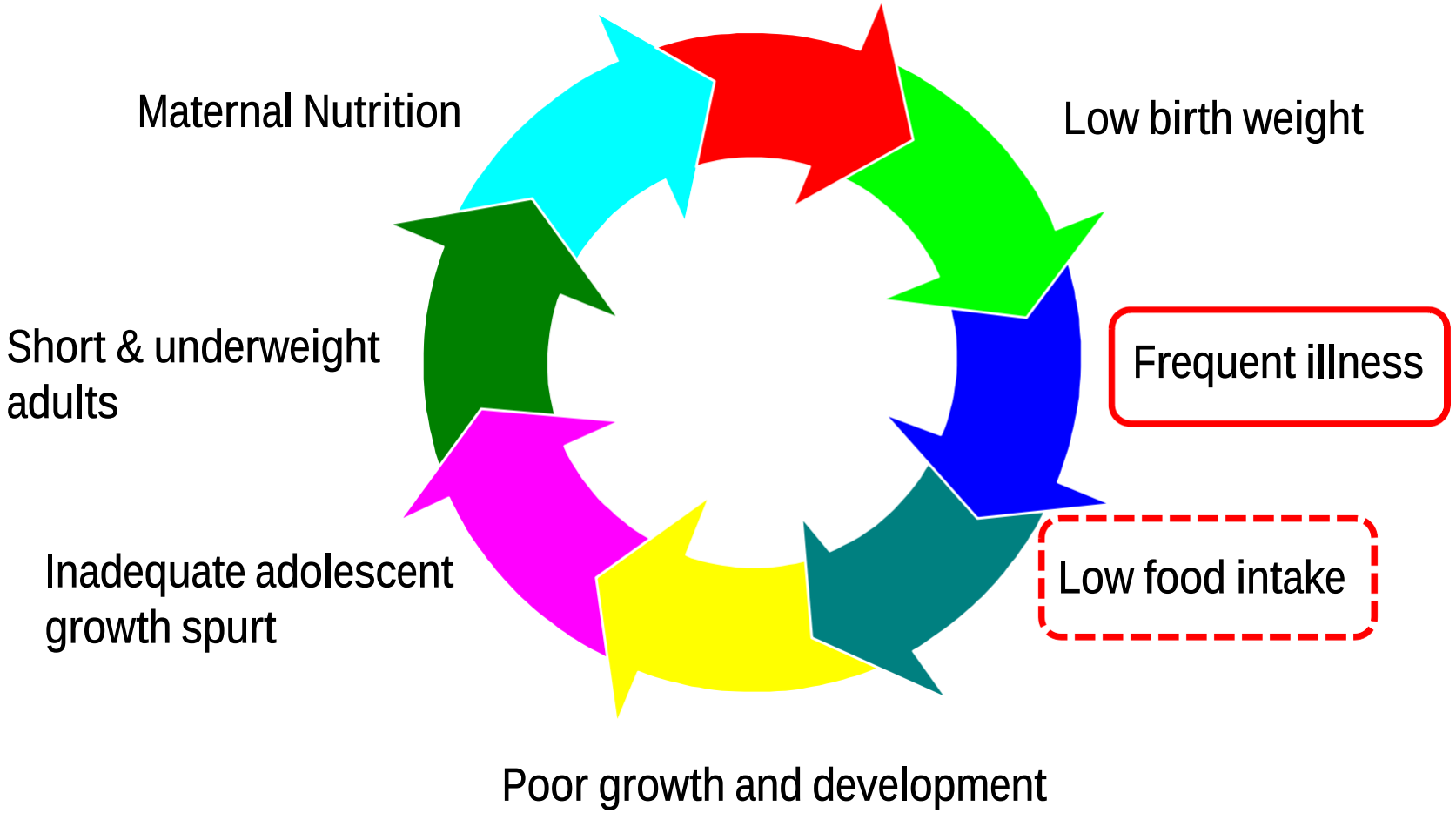
1

Household food demand (what food is being served on the table) and intra-household food distribution (who is to eat it)

2

Habits and knowledge about food processing and feeding practices

✓ influence the diet composition & biological utilization of the food

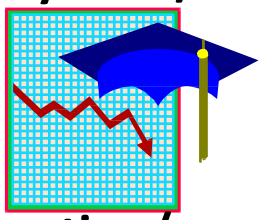

Maternal Nutrition
Low birth weight
Short & underweight adults
Frequent illness
Inadequate adolescent growth spurt
Low food intake
Poor growth and development

The Vicious Cycle of Malnutrition: In the Context of Underdevelopment

Unemployment/underemployment

Low food production

Low income



Low education/poor skills

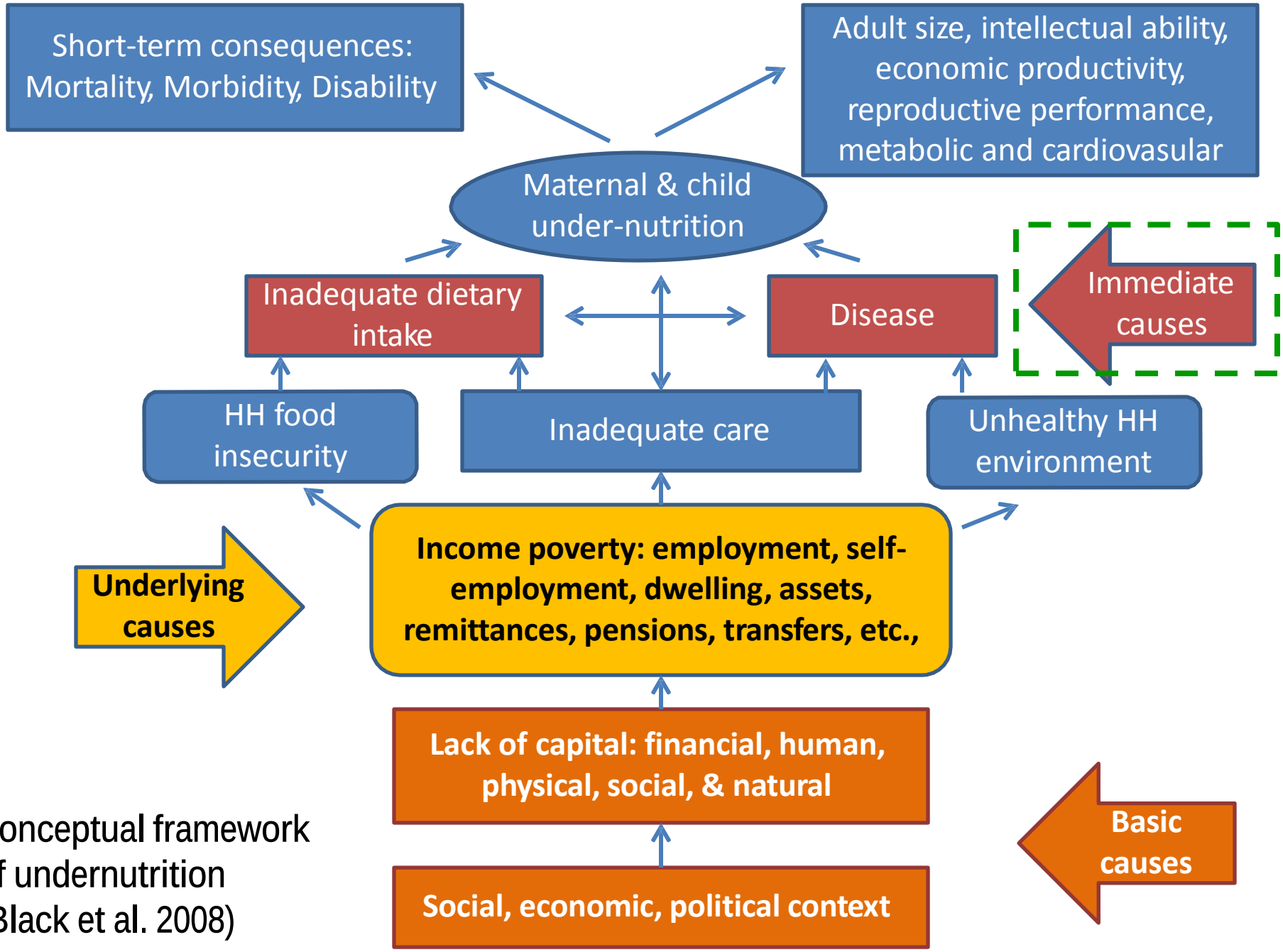
Lack of food supply

School drop-out

Malnourished child

(Disease/Death)

Low food intake



Conceptual framework of undernutrition (Black et al. 2008)

There is still much to learn!

Which algorithm?

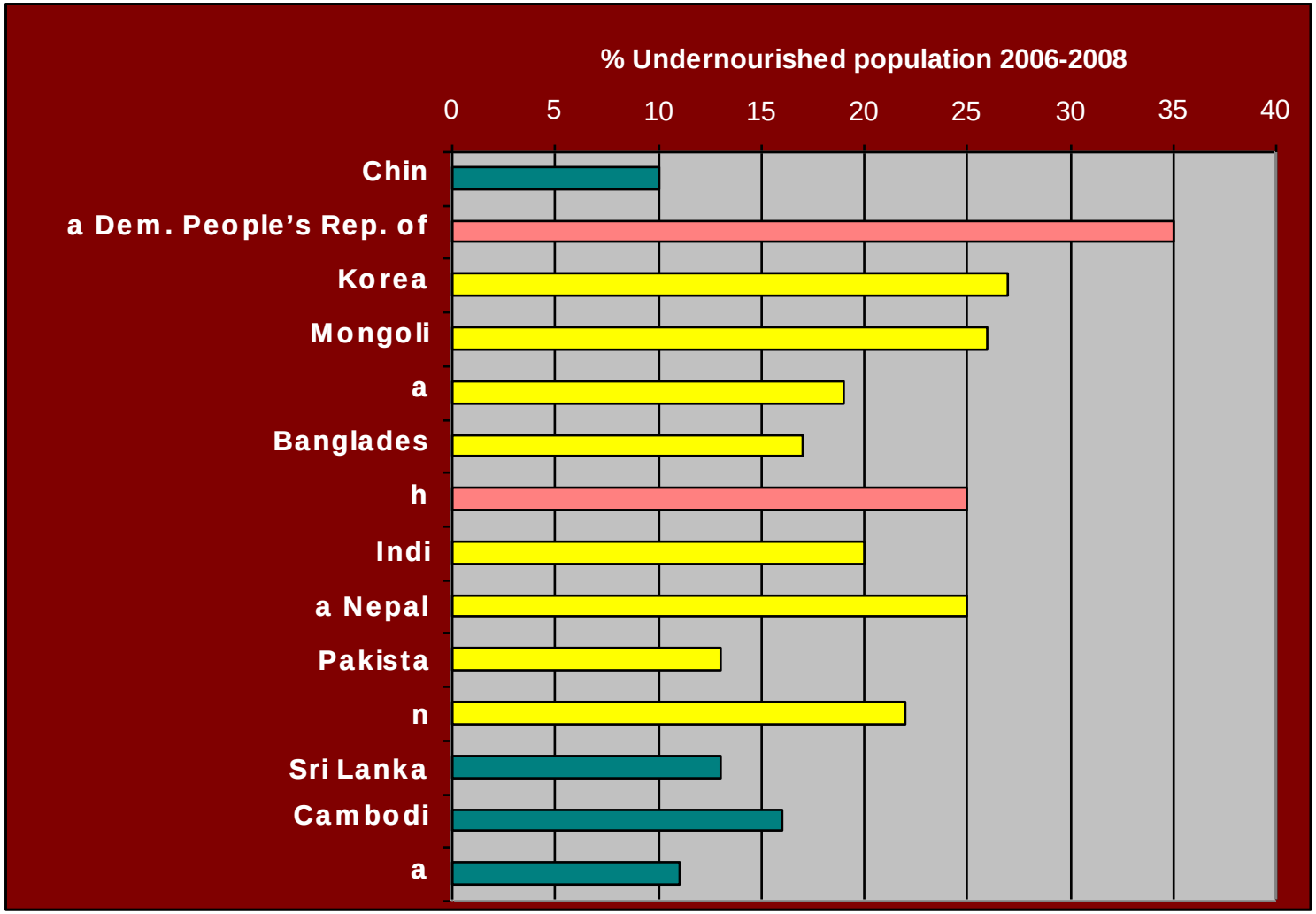
Hunger reduction requires an integrated approach

- Eradicate extreme poverty and hunger
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria, and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

Poverty headcount ratio at national poverty lines (% of population), selected countrieS

Cambodia	45 (2007)	17.7 (2012)
China	4.6 (1998)	N/A
India	37.2 (2005)	21.9 (2012)
Indonesia	17.8 (2006)	11.3 (2014)
Malaysia	5.7 (2004)	1.7 (2012)
Philippines	26.6 (2006)	25.2 (2012)
Thailand	23.4 (2006)	13.2 (2011)
Vietnam	20.7 (2011)	17.2 (2012)

Aspiration – Food Security for all



FAO (2011) The State of Food Insecurity in the World as cited in Olaf Thieme 2011

Profound structural changes on the ground?

Demand-side Factors

rapid increase in consumption of livestock products - per capita consumption has markedly outpaced growth in consumption of other major food commodity groups

(i) driven by economic growth and rising per capita incomes
- country cases and regional perspective

(ii) urbanization - has a significant effect on the consumption (independent of income levels)

-growing concentration of animals in cities as people tend to move livestock activities to urban areas

Demand-side Factors

- income growth and urbanization will continue to catalyze growth of modern and/or high end markets across the country

- diverse food requirements and quality demand based on increasing purchasing power

- transparency in food chain “from farm gate to food plate”
- increasing consumer discern from food availability towards quality, safe and nutritious food
- expected change in the food basket

Demand-side Factors . . . *continuation*

(iii) natural-resource endowment - affects the relative costs of different food commodities

access to marine resources favors consumption of fish while access to natural resources for livestock production favors consumption of livestock products

(iv) cultural reasons - influence consumption habits

Supply-side Factors

1. Favorable (unfavorable) long-run trends in the prices of inputs

    -seed, chemical, feed grain prices and consequences on use
    -fuel prices and consequences on production and post-production costs

2. Technological change

    -developments and innovations in all aspects of production from breeding to disease control, processing, transportation and marketing

2. Technological change

(i) private research and development efforts
- impacts on smallholders? commercial producers?

(ii) foci of R&D
-impacts on poor people? externalities related to the environment or public health?

(iii) genetic advances & productivity growth
-true for all sub-sectors? for temperate as well as tropical low-input regions?

(iv) technological innovations in processing, transportation, distribution and marketing (value chain)
- wider use of cold chains? longer shelf-life?
- increasing emphasis on global sourcing and marketing

Human-Ecosystem Interface

Mandate: improvement in the resource use efficiency and at the same time reduction of negative environmental externalities

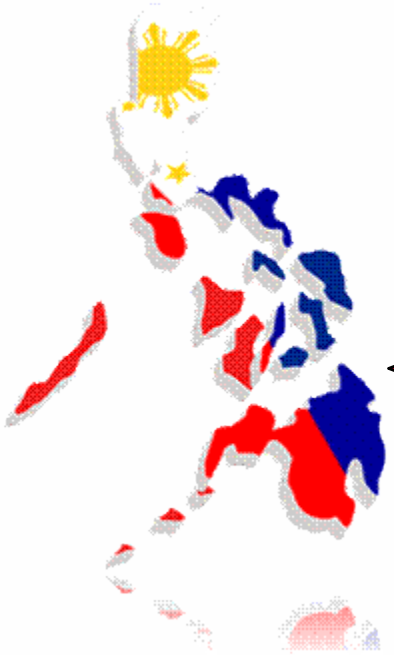
- proper incentives, regulations and technology

  creative measures against global greenhouse gas (GHG) emissions

  geographic concentration of production to balance the absorptive capacity of “wastes” of an area

  relocating production away from human population centers e.g., *trans-boundary animal diseases (emergency response capability)*

YEAR	POPULATION
1000	0.275
1500	0.450
1650	0.500
1750	0.700
1804	1.000
1850	1.200
1900	1.600
1927	2.000
1950	2.550
1960	3.000
1974	4.000
1980	4.500
1987	5.000
1999	6.000
2011	7.000
2020	7.700
2024	8.000
2030	8.400
2040	9.000
2050	9.500
2062	10.000



13,900 additional mouths to feed after our 2-day meeting

Question of food and nutrition security, if not properly handled

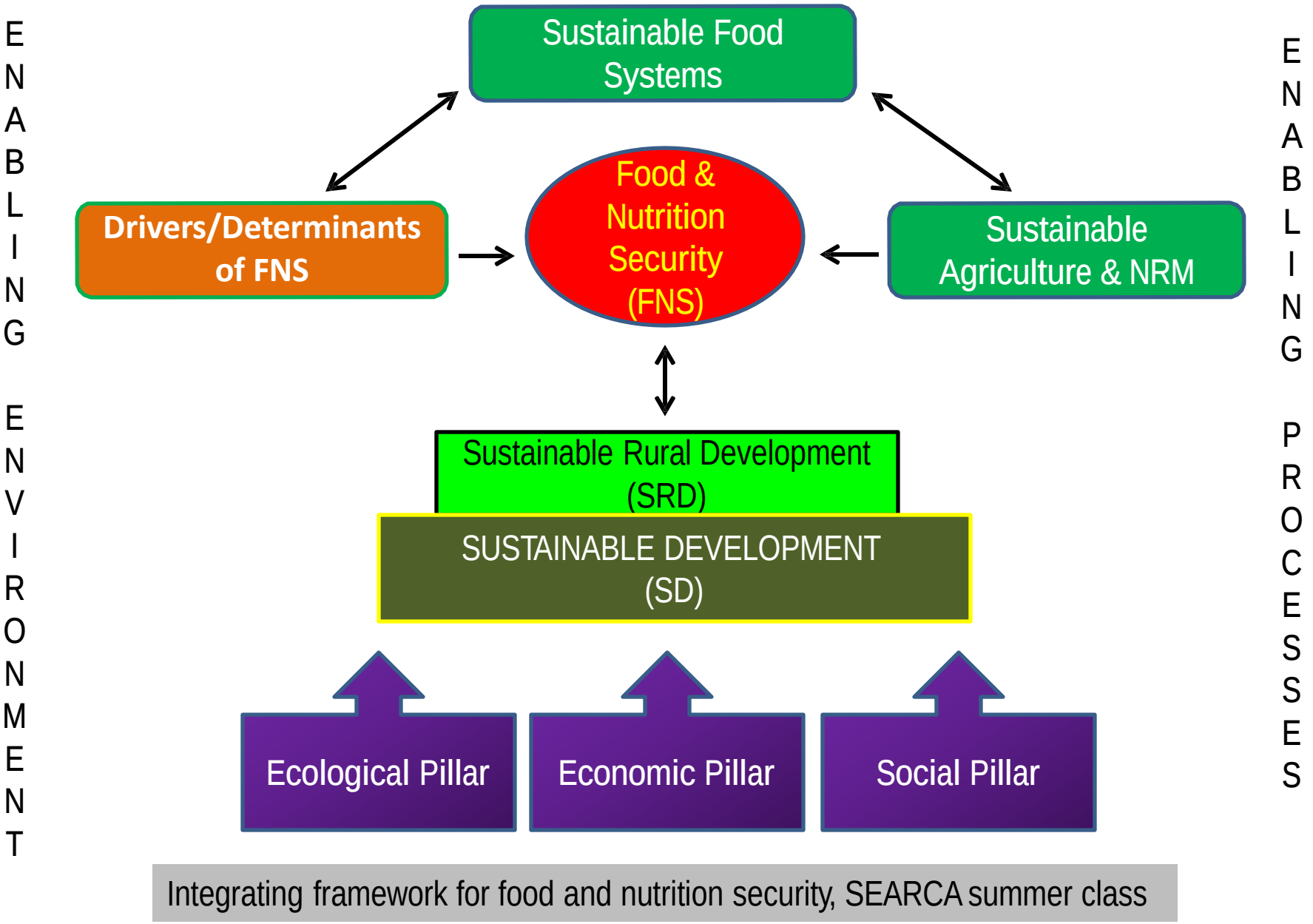
Rhetorics over time (Falcon 1995)

1.“Can the world produce enough food?”

2. “Can the world produce enough food *at reasonable prices?"*

3. “Can the world produce enough food at reasonable prices *and provide access to food by the poor?"*

4.Can the world produce enough food at reasonable prices, provide access to food by the poor, *and not destroy the environment in the process?"*



Integrating framework for food and nutrition security, SEARCA summer class


Thanks