

# Nutrition in the Post-2015 Context



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# Presentation

- Different Dimensions of Malnutrition
- Consequences
- Food Security and Nutrition
- Looking forward
- Key Points

# Nutrition Goes Beyond Food Security

- Multiple causes requires multi-sectoral response
- Health
- Water Sanitation
- Education
- Social Protection

Nutrition is important for ..



# Wasting or Acute Malnutrition

Source WHO



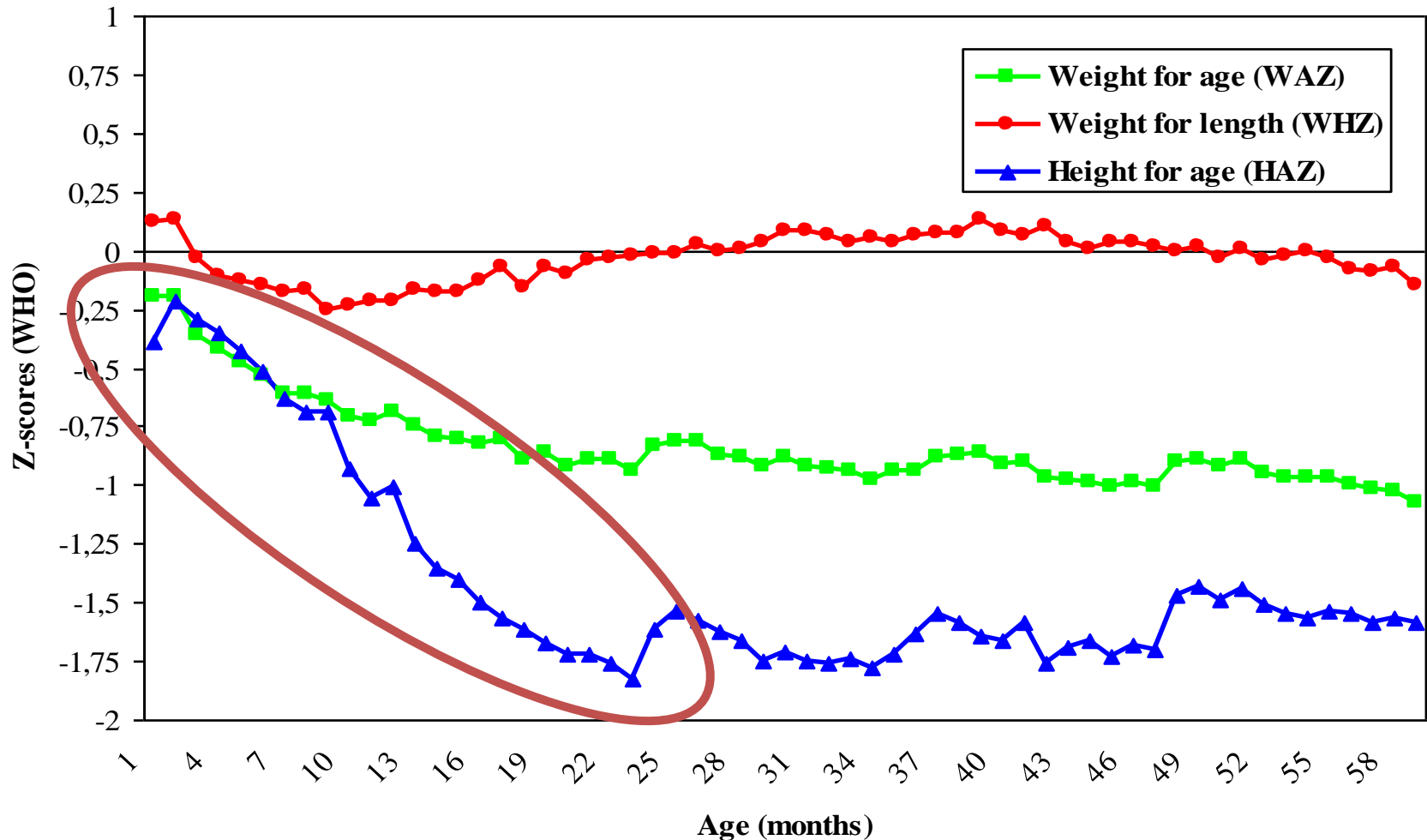


# Guatemalan children, significantly stunted



Nine-year-old children in Guatemala are significantly shorter than the World Health Organization's global average height for their age. Chronic malnourishment, which causes stunted growth, is an epidemic in Guatemala. In rural villages, more than 80 percent of the population is stunted. (ABCNews)

# Growth faltering due to poor nutrition

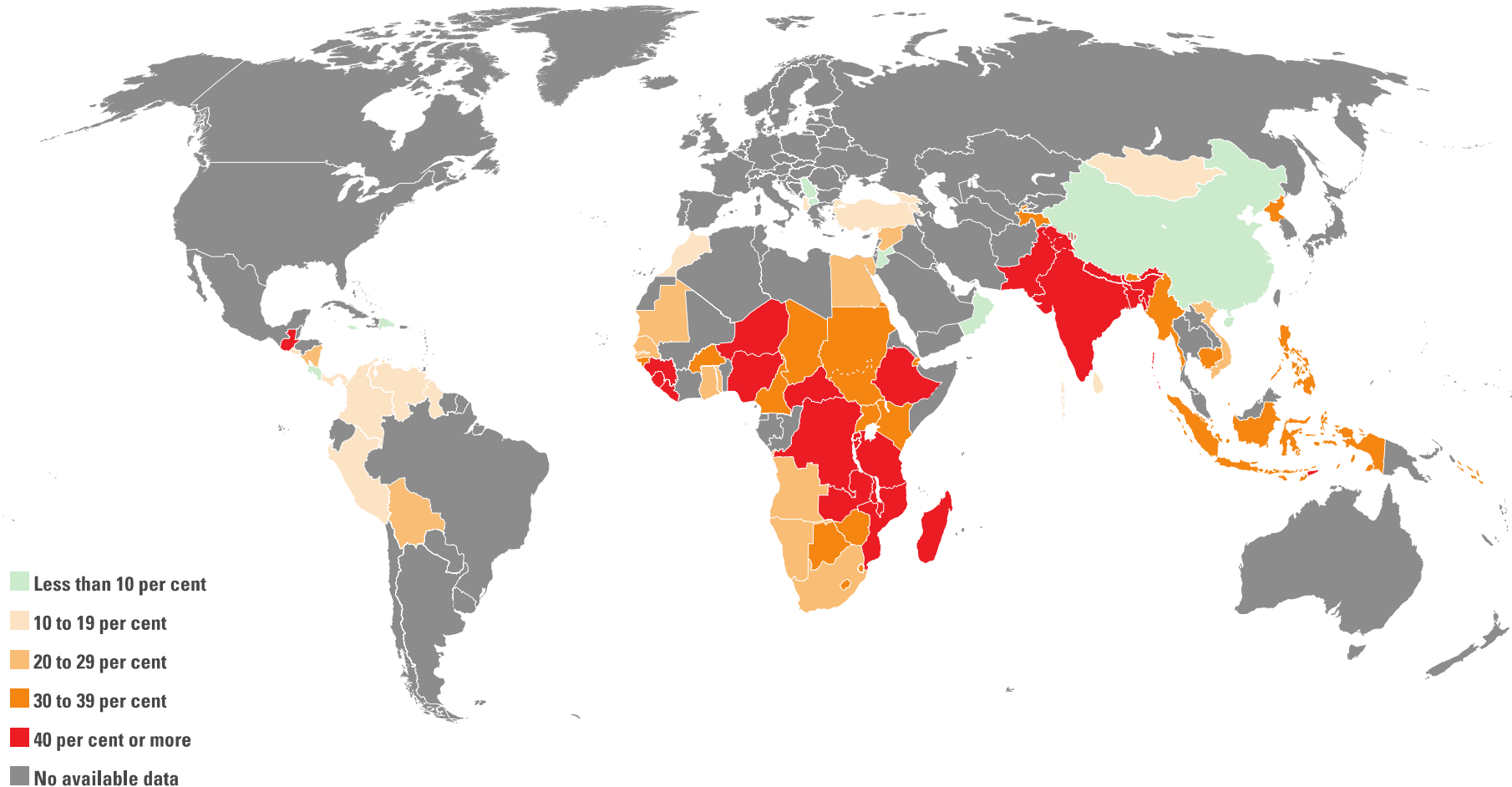


Source: Victora CG, de Onis M, Hallal PC, Blössner M, Shrimpton R.  
Worldwide timing of growth faltering: revisiting implications for  
interventions using the World Health Organization growth standards.  
Pediatrics, 2010

# Stunting Prevalence is Highest in sub-Saharan Africa and South Asia

**FIGURE 4** Stunting prevalence is highest in sub-Saharan Africa and South Asia

Percentage of children under age 5 who are moderately or severely stunted

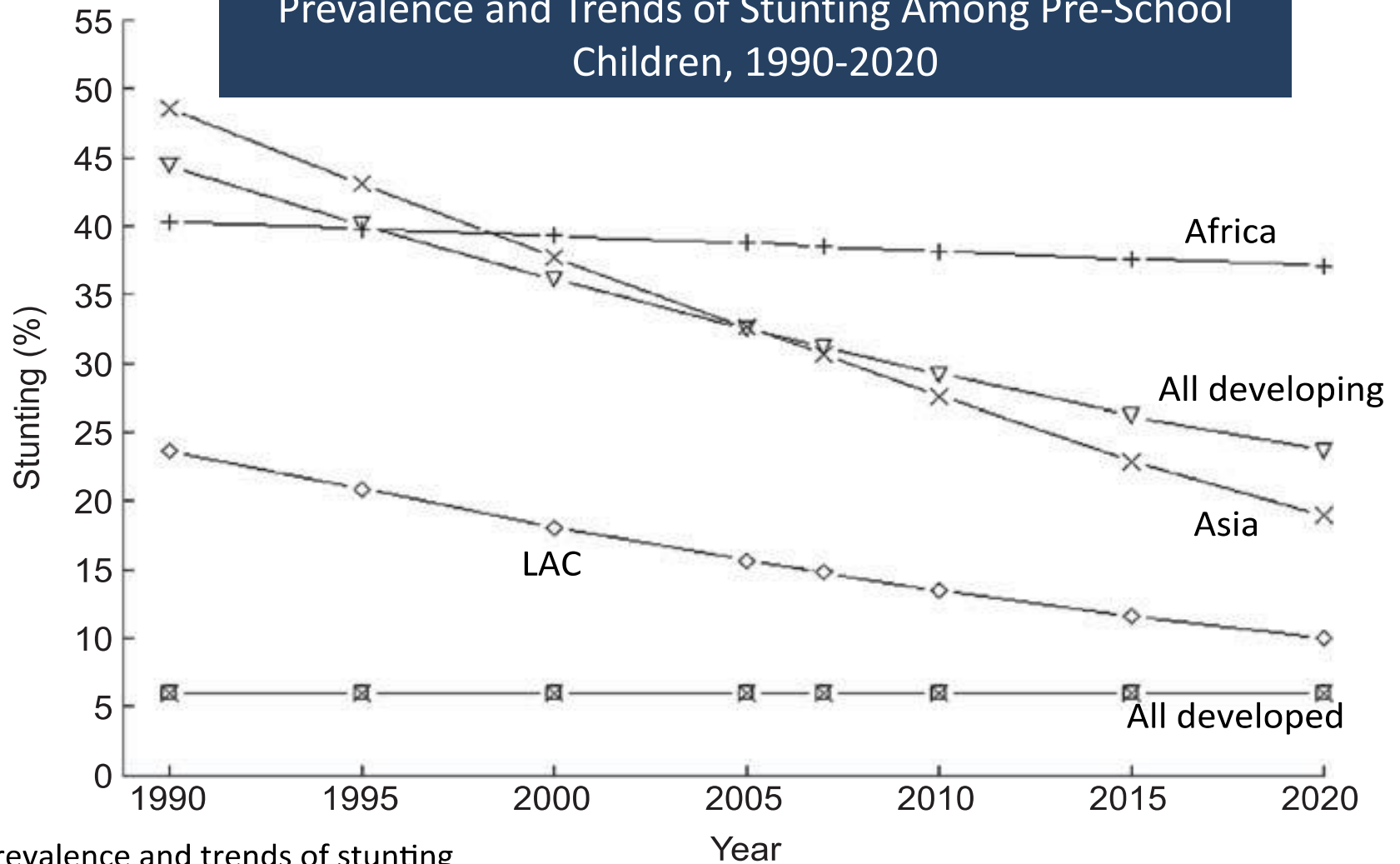


**Note:** Data are from 2007 to 2011, except for India.



# Greatest Need:

## Prevalence and Trends of Stunting Among Pre-School Children, 1990-2020

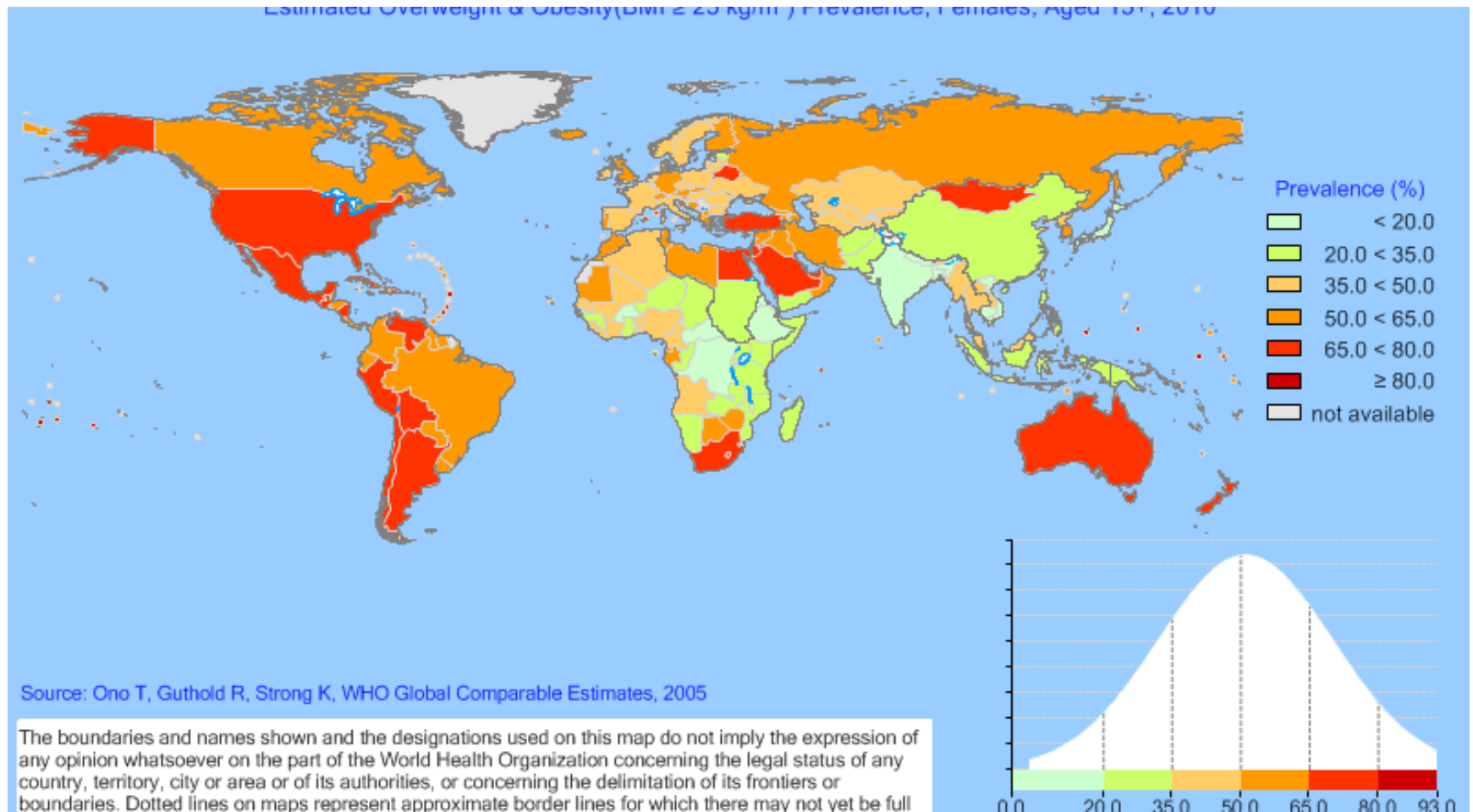


Prevalence and trends of stunting among pre-school children, 1990–2020. Mercedes de Onis, Monika Blossner and Elaine Borghi. Public Health Nutrition 2011

# Micronutrient deficiencies – Hidden Hunger



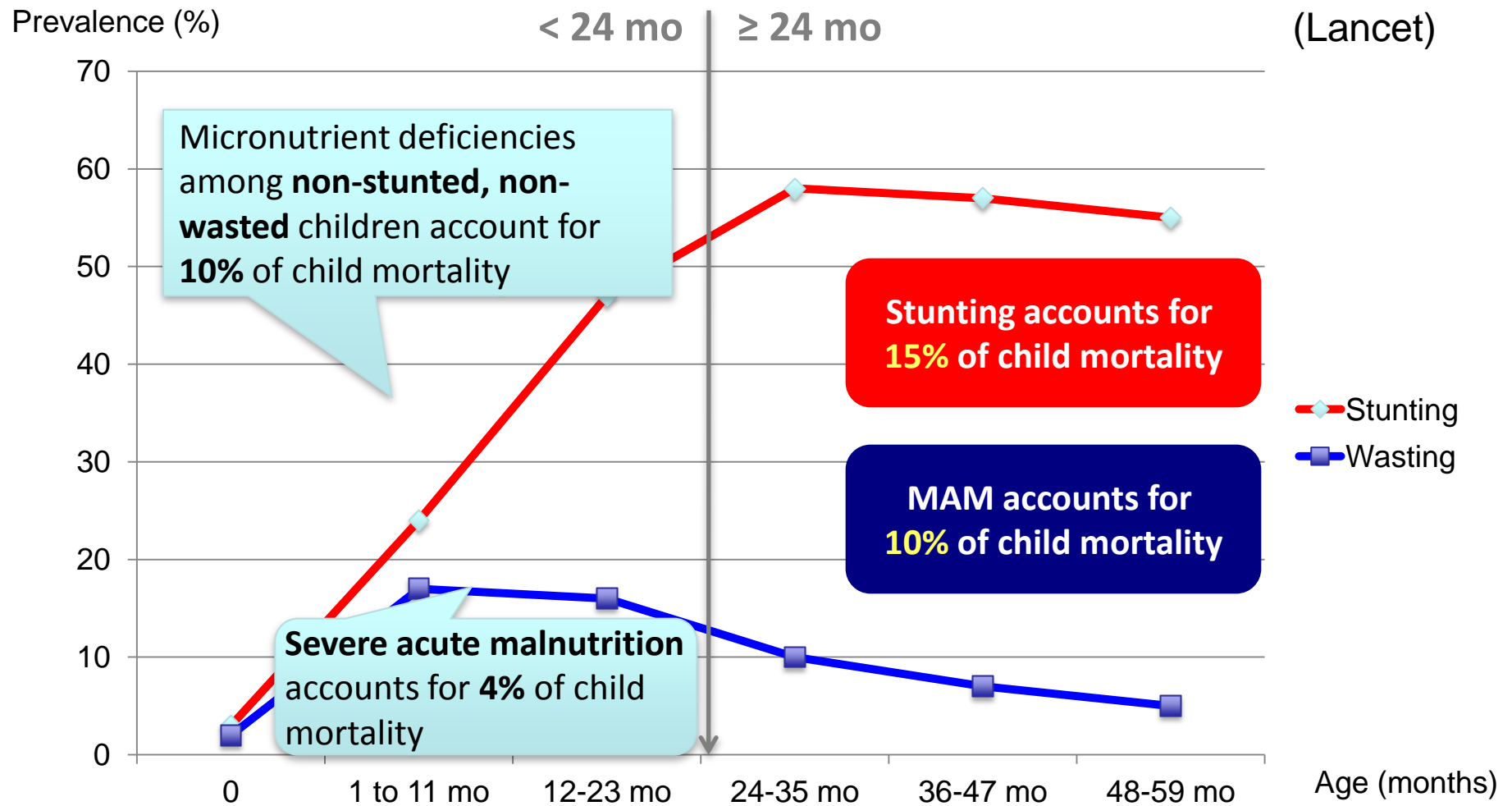
# Overweight and Obesity among women >15 years



# Consequences of Malnutrition

- Morbidity and Mortality
- Impaired cognitive ability
- Lower school attainment
- Intergenerational impact
- Increased susceptibility to chronic disease
- Health costs
- Lower work productivity
- Increased poverty

# Undernutrition and child mortality



# Underweight (no data for stunting) is still the biggest single risk factor for the attributable burden of disease in most of Sub-Saharan Africa and 4<sup>th</sup> in South Asia

**Ranking legend**

1-5	6-10	11-15
16-20	21-25	26-30
31-35	36-40	>40

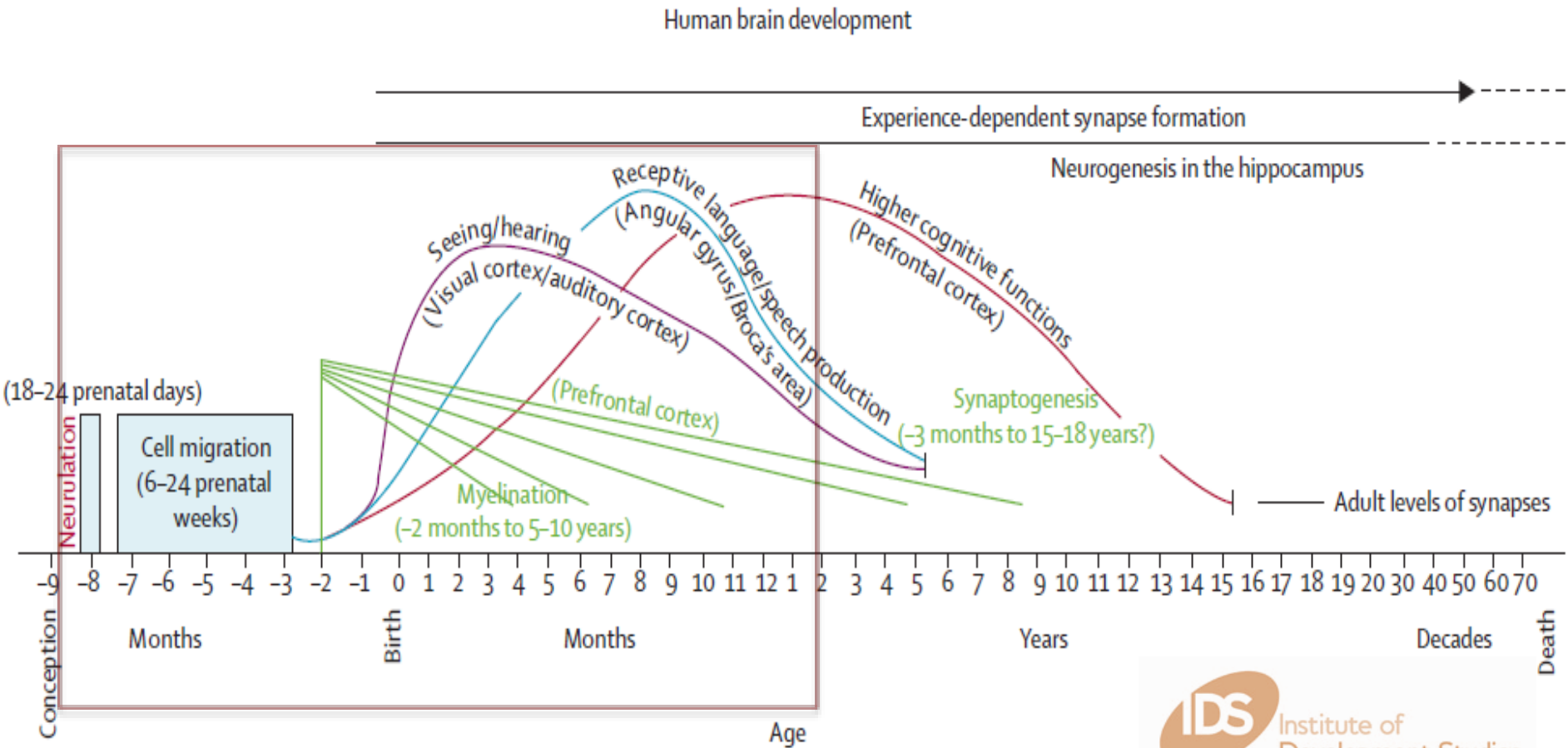
Risk factor	Global	South Asia	Oceania	Southern sub-Saharan Africa	Eastern sub-Saharan Africa	Central sub-Saharan Africa	Western sub-Saharan Africa
High blood pressure	1	3	6	2	6	5	6
Tobacco smoking, including second-hand smoke	2	2	3	5	7	12	10
Alcohol use	3	8	5	1	5	6	5
Household air pollution from solid fuels	4	1	4	7	2	2	2
Diet low in fruits	5	5	9	8	8	11	13
High body-mass index	6	17	2	3	14	18	15
High fasting plasma glucose	7	7	1	6	10	13	11
Childhood underweight	8	4	8	9	1	1	1
Ambient particulate matter pollution	9	6	32	25	10	14	7
Physical inactivity and low physical activity	10	11	7	11	15	15	16

Risk factors ranked by attributable burden of disease, 2010

Lancet. Vol 380 December 15/22/29, 2012



# Human Brain Development in the First 1,000 Days



Thompson, R.A. & Nelson, C.A. (2001). Developmental science and the media: Early brain development. *American Psychologist*, 56(1), 5-15.

# Brain Development

**Normal**



**Malnourished**



# Stunting at the age of two

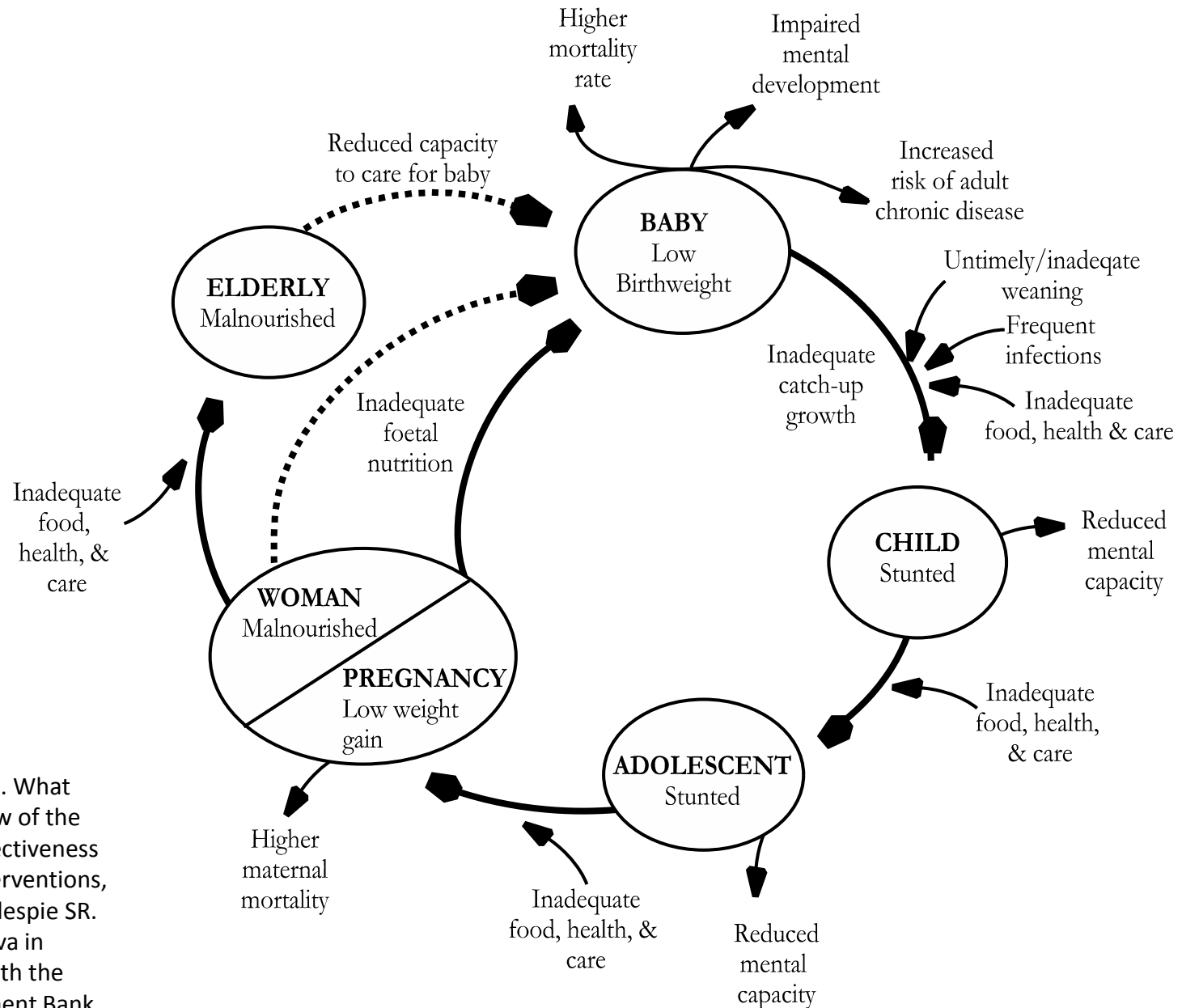
- **Irreversible**

- Deprives these children from full potential
- Deprives them from equal opportunities for the rest of their life
- Deprives the communities, societies, countries, and the world from its full human potential

# Nutrition and School Performance

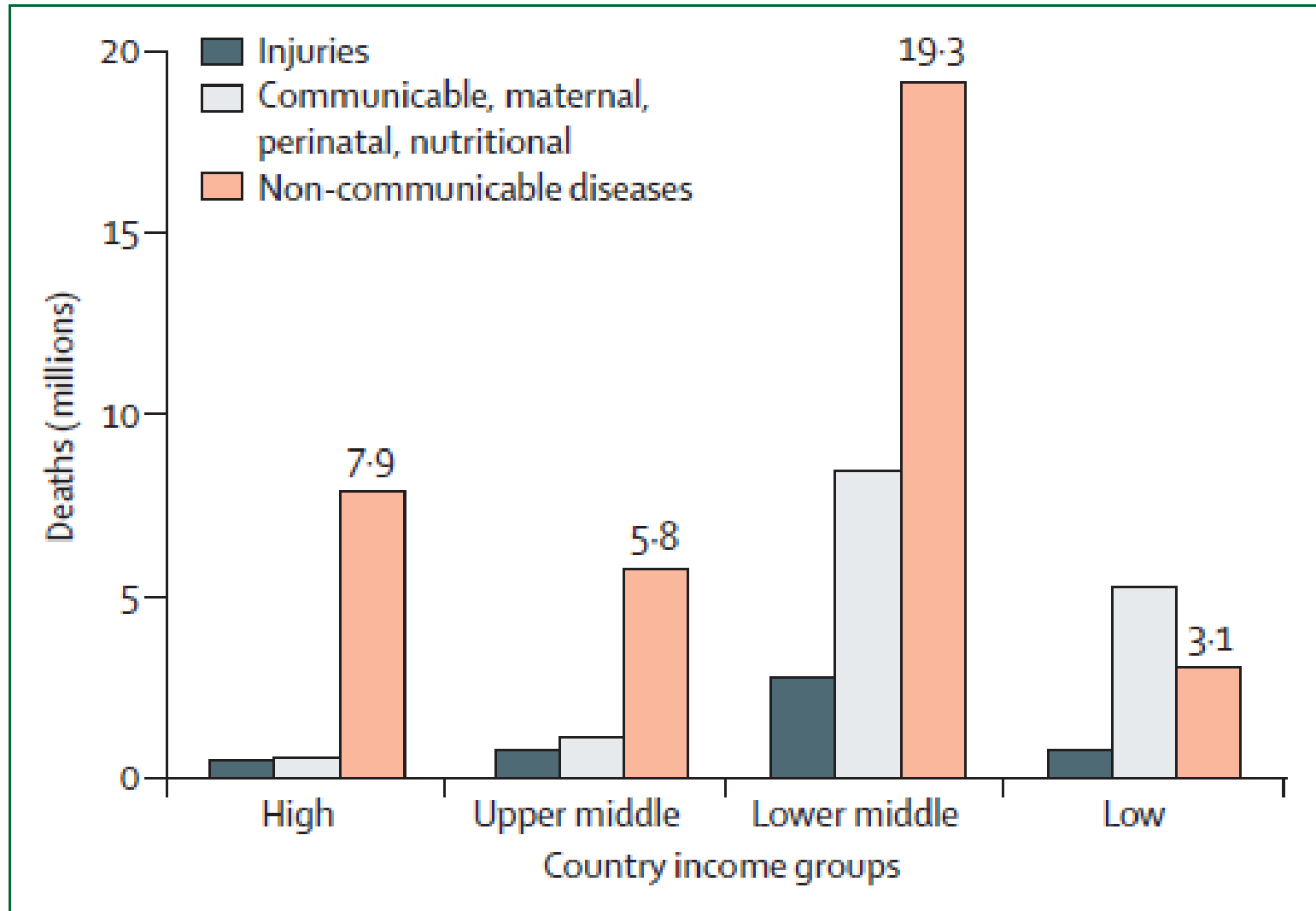
- Children not stunted at 3 years of age:
  - Higher attained grade
  - Better test scores
- Recent Guatemala study – 25 year follow-up: a nutrition intervention in early childhood resulted in women staying in school 1.2 more years
- Both maternal and paternal education are strong determinants of child stunting

# This Life Cycle model became popular in the 2000s



ACC/SCN (2001). What Works? A Review of the Efficacy and Effectiveness of Nutrition Interventions, Allen LH and Gillespie SR. ACC/SCN: Geneva in collaboration with the Asian Development Bank

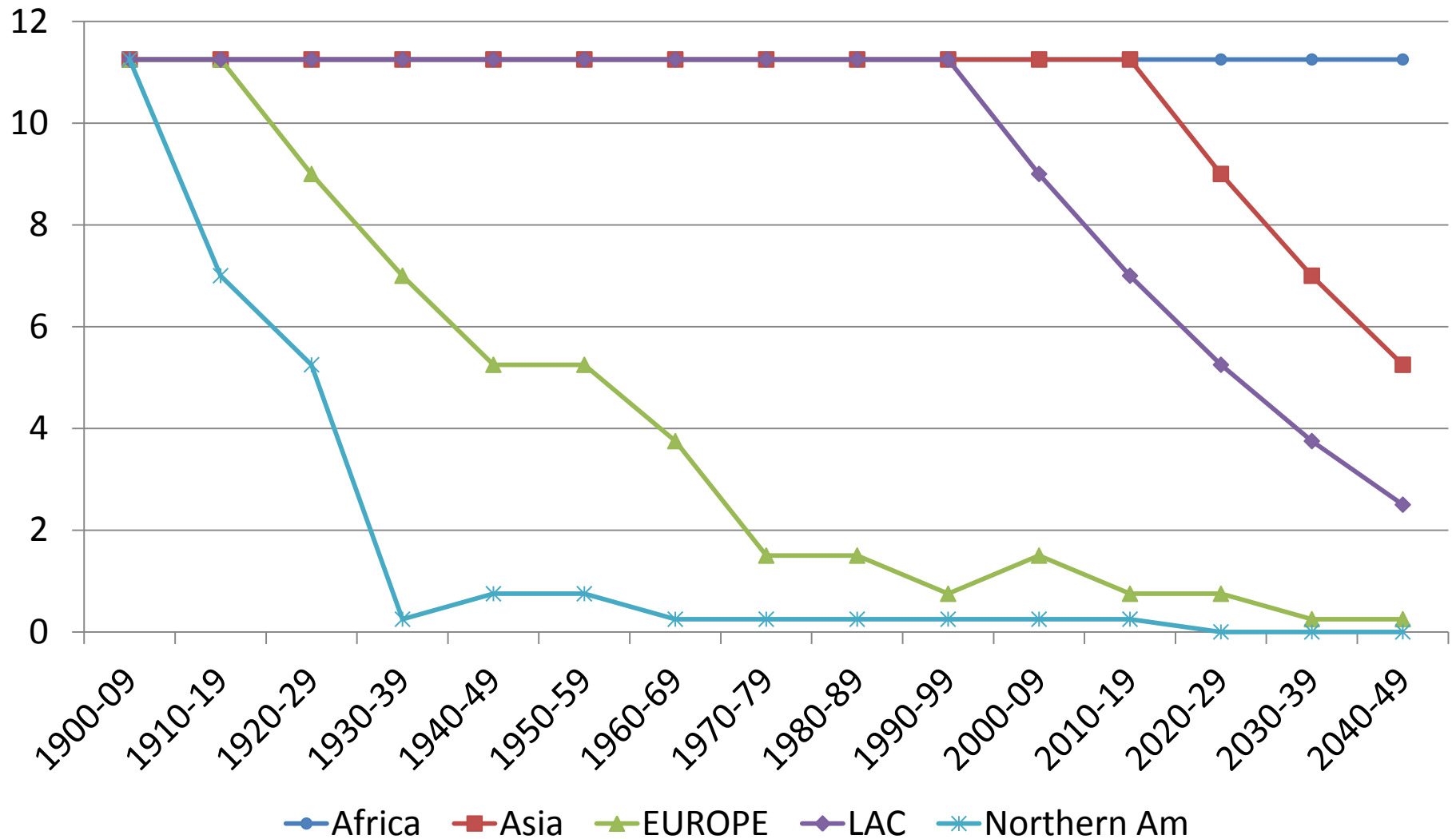
# Non communicable disease is the leading cause of death in all but the poorest countries, 2008



Source: Beaglehole , Lancet (2011)<sup>20</sup>



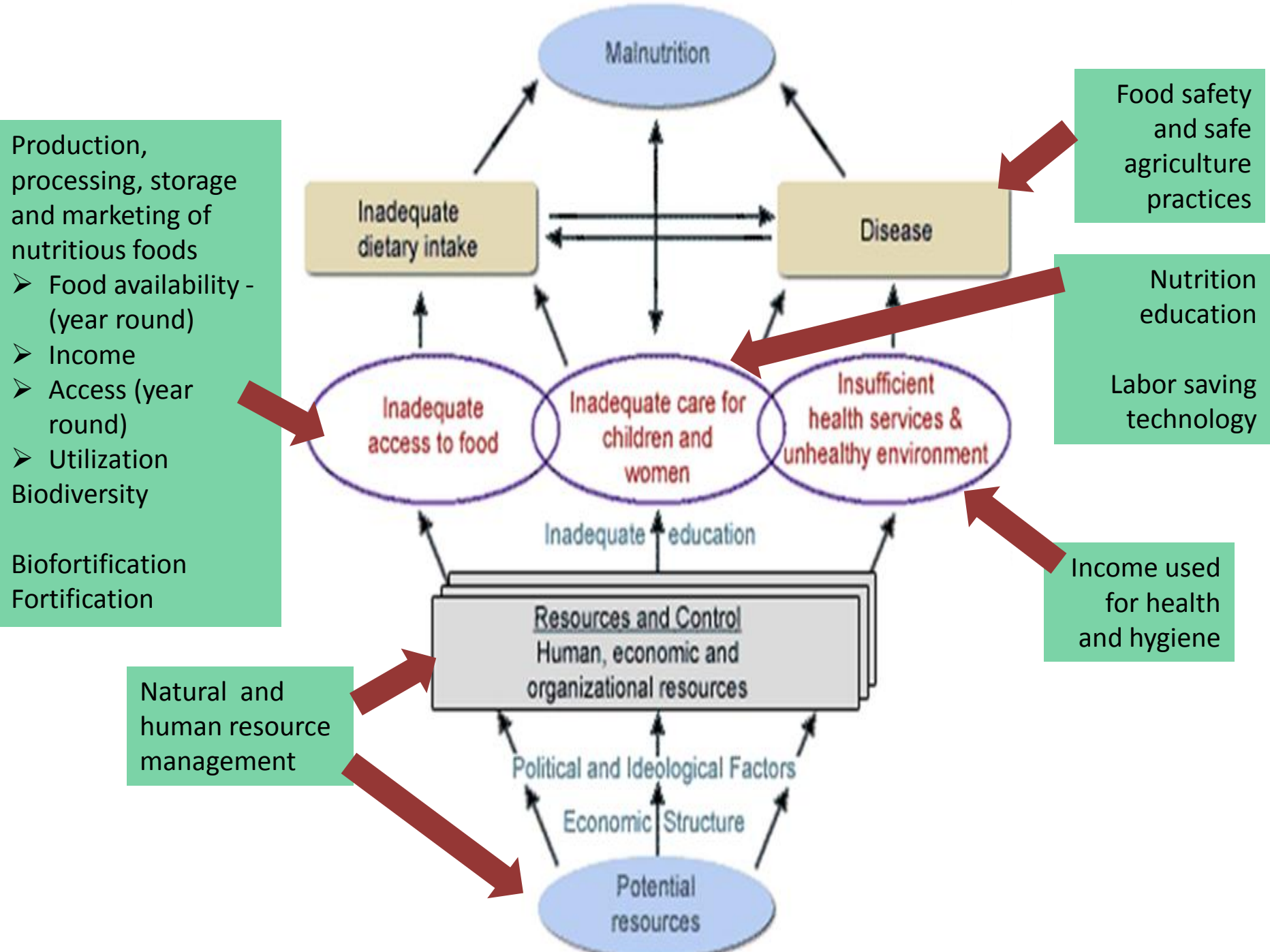
# Estimated % of GNP lost due to poor nutrition, 1900-2010, and projections to 2050



Malnutrition. Global economic losses attributable to malnutrition 1900– 2000 and projections to 2050. Sue Horton and Richard H. Steckel. 2013. In "The Economics of Human Challenges", ed B. Lomborg. In Press. Cambridge University Press.

# Nutrition and Food Security Linkages

- Availability
- Access
- Utilization
- Stability



# Nutrition and Food Availability

- Availability of nutritious foods, of nutrients
- Food Diversity
- Nutrition is often at the individual level or focused on specific target groups
- Processing – food fortification – is critical
- Food wastage – most commonly of nutritious foods



# Nutrition and Food Access

- Economic access (affordability)
- Physical access (markets)
- Food price variability
- Many successful Social Protection (safety nets) programmes include special foods for children



# Nutrition and Utilization





# Nutrition and Utilization

- Consumption – foods/nutrients
- Beyond food security–
  - Breastfeeding, complementary feeding practices
  - Health water sanitation – Illness impacts on nutrient absorption and use and increases requirements



# Looking forward

- Food price volatility – nutrients or calories?
- Climate change – increase in shocks, longer term impacts on food production and health
- Increase in food requirements vs. availability
- Links between systems
- Measuring malnutrition – same tools
- Elevate nutrition as part of the global conversation on sustainability

# Key Points

- There can be no sustainable development if we do not eradicate hunger and poverty
- Malnutrition is universal in its three dimensions
- Nutrition is multi-sectoral – in causality and in response
- Risk that nutrition - in all its dimensions - will get lost in the post-2015 process
- Preventing malnutrition immediately and sustainably



Thank You

