



From Food Security to Nutrition Security



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(With Inputs from Sambuddha Goswami)

Scope of This Presentation:

Complexity of the Nutrition Challenge

- SDG 1
 - End Poverty in All Its Forms Everywhere
- SDG 2
 - End Hunger, Achieve food security and Improved nutrition and promote sustainable agriculture;
- 17 SDGs, 169 Targets and 232 Indicators
- SDG 2 includes 8 (5+3)Targets and 13 (9+4) Indicators
- **Obesity has been missing in action in SDG 2**—Child obesity is one of the sub-targets in World Health Assembly (WHA) targets for 2025 and
- Adult Obesity is a growing menace

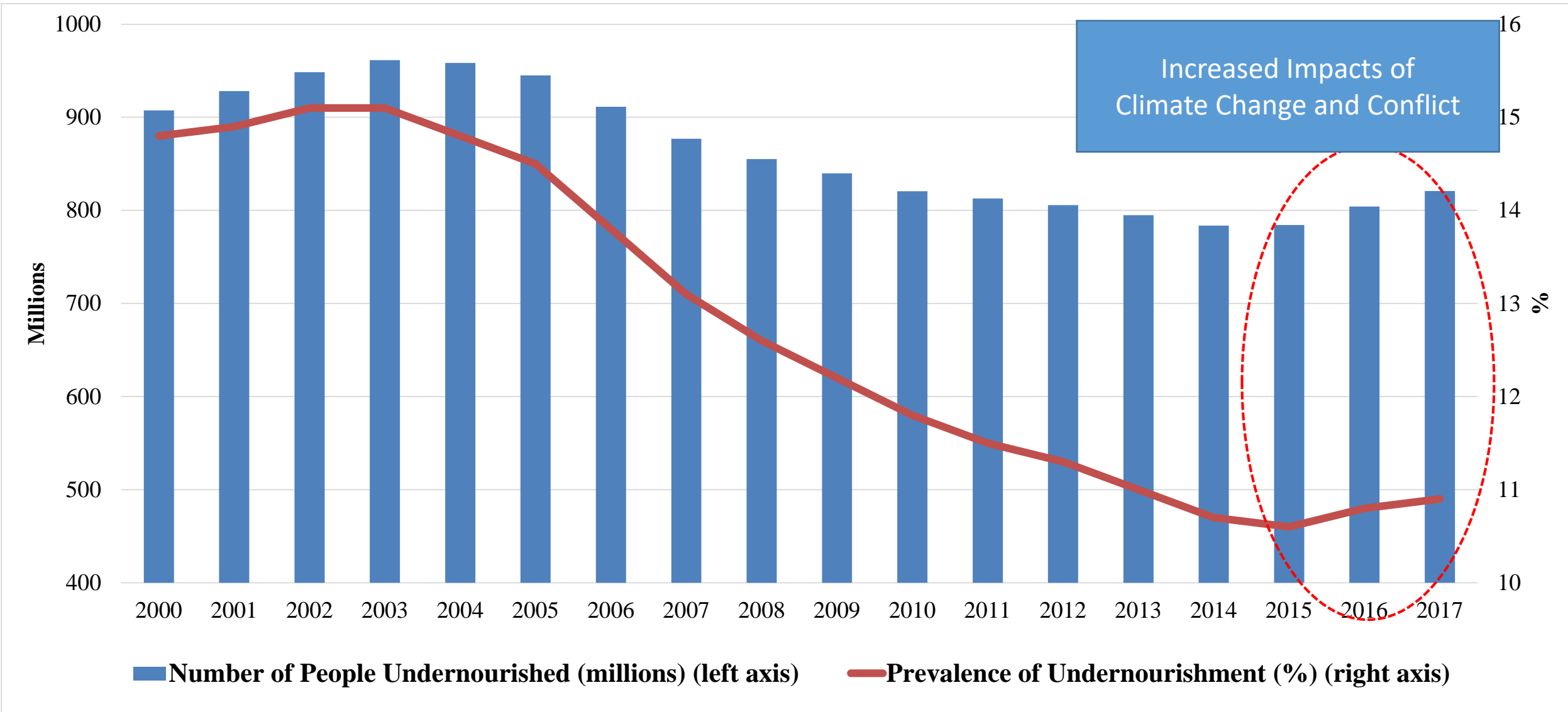


Issues Not Covered In this Presentation - Particularly Solutions

- Impacts of Food Price Policies on Food Production & Consumption
- Information to consumers
- Safety-nets-Cash, Food, Employment, School Feeding Programs
- Role of Markets/Value Chains
- Dealing with the Food Wholesalers, Retailers, Sugary beverage industry—
CSR Not enough.
- Foreign Direct Investment
- Food Safety
- Food Wastage
- Role of regulation.

Prevalence and Number of Undernourished People in the World (2000–2017)

The number of undernourished people in the world has been on the rise since 2014, reaching an estimated 821 million in 2017



*Multiple Measures of Hunger and Malnourishment and **Life Cycle Effects on Health***

- ❑ : 821 million or 1 in every 9 people hungry in the world in 2017
 - in Asia: 515 million
 - in Africa: 256.5 million
 - in Latin America and the Caribbean: 39 million
- ❑ Children under 5 affected by stunting (low height-for-age): 150.8 million (22.2%)
- ❑ Children under 5 affected by wasting (low weight-for-height): 50.5 million (7.5%)
- ❑ Children under 5 overweight (high weight-for-height): 38.3 million (5.6%)
- ❑ Percentage of women of reproductive age affected by anaemia: 32.8%
- ❑ Percentage of infants aged below 6 months who were exclusively breastfed: 40.7%
- ❑ Adult obese: 672 million (13% or 1 in 8 adults)
- ❑ Diabetes
- ❑ Heart
- ❑ Cancer



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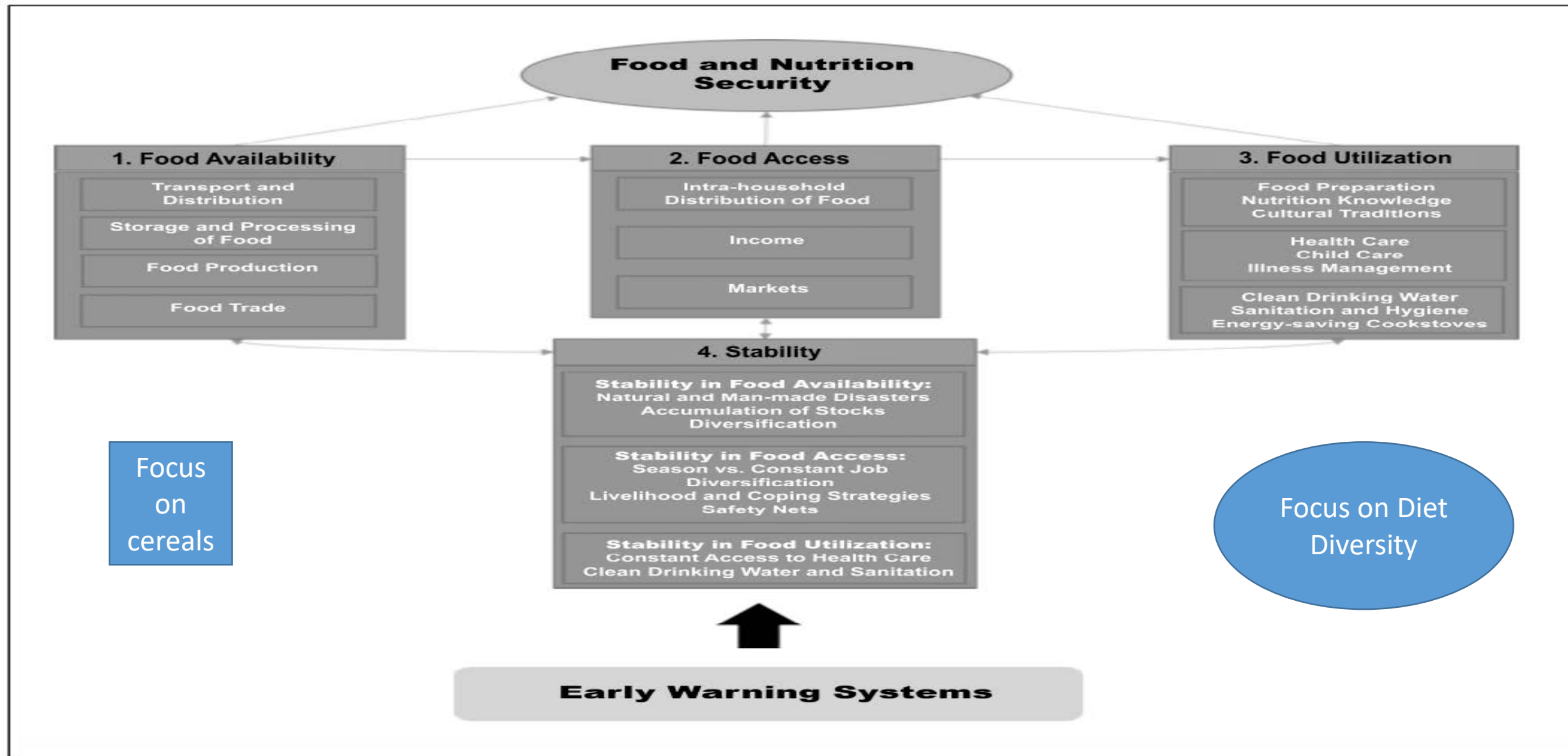
Source: <http://www.fao.org/news/story/en/item/1152031/icode/>

The Evolving Concepts of Food Security and Nutrition

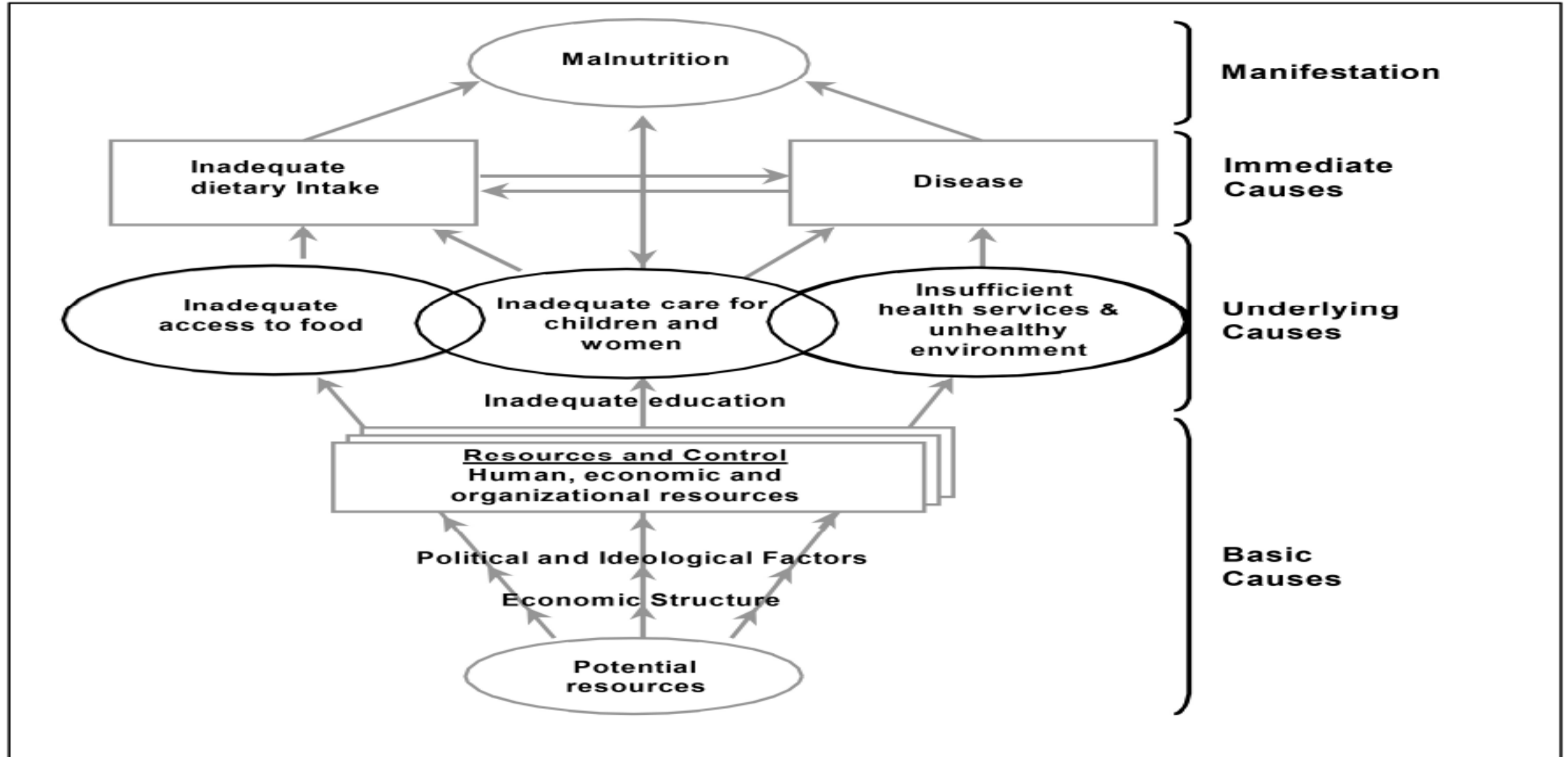
**From Macro (Global and National) to Micro
(Household) and Individual**



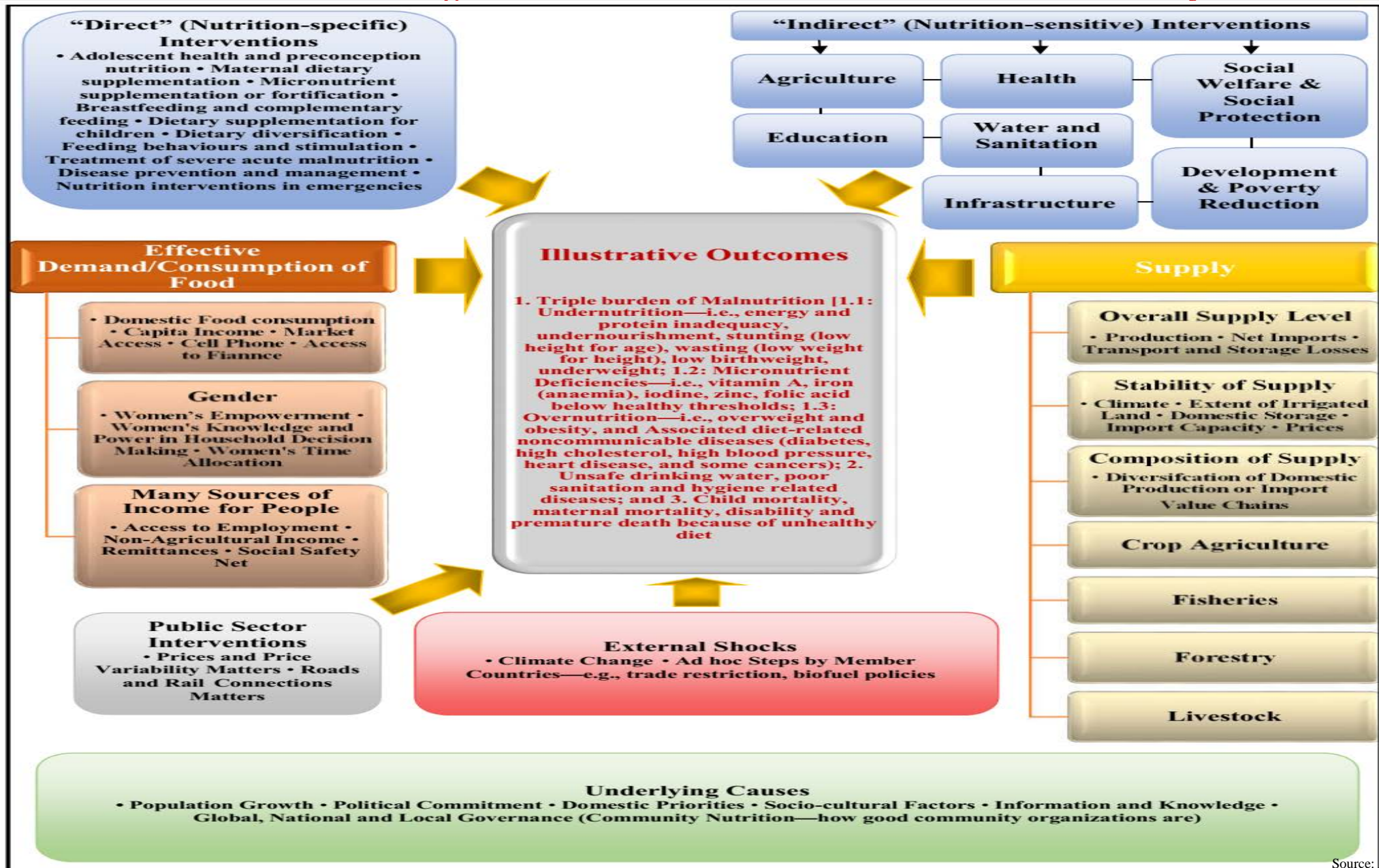
FAO's Macro Picture: Four pillars of food and nutrition security with interactions across pillars



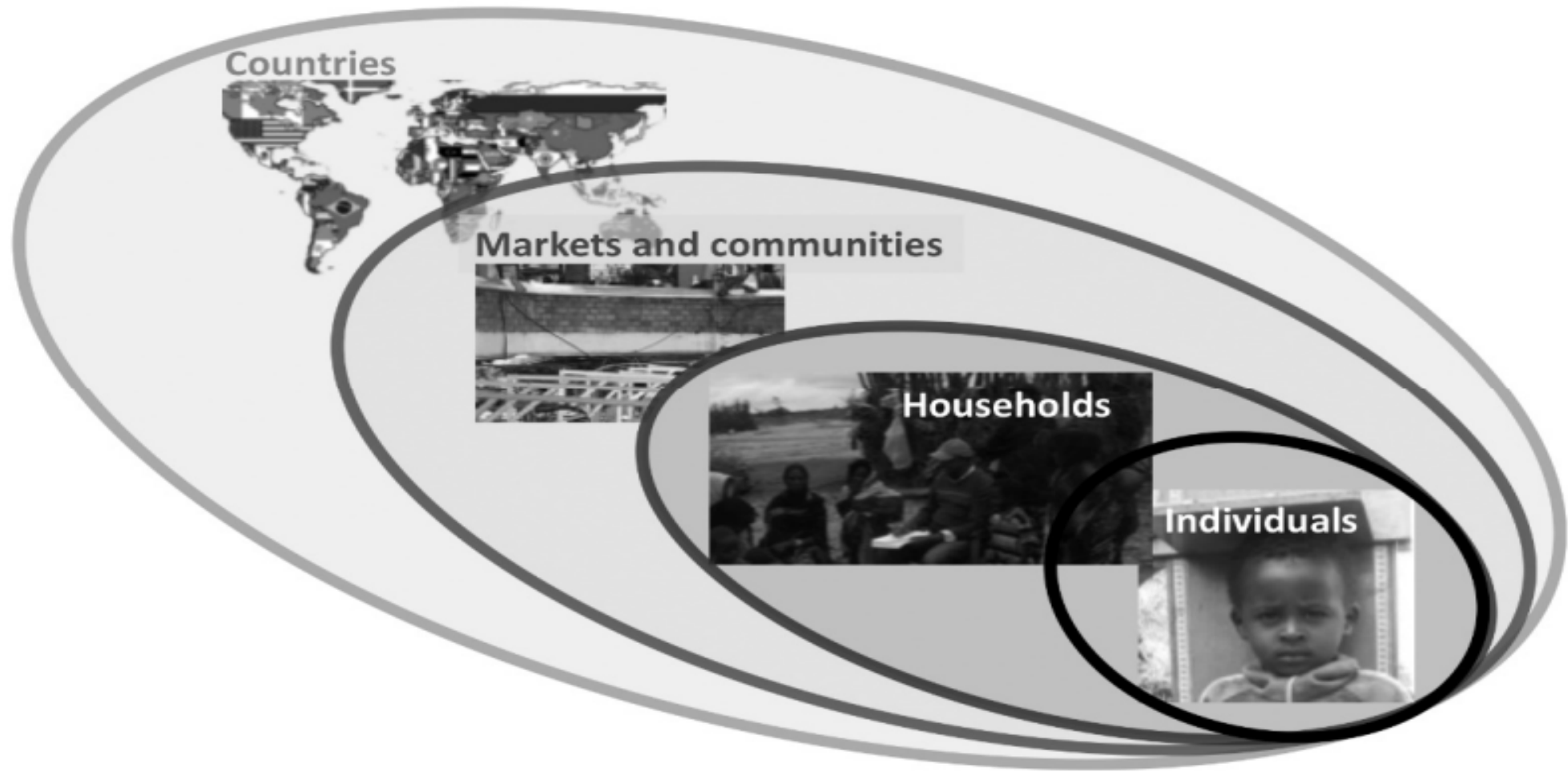
The UNICEF framework focused on Women and Children of causality in malnutrition



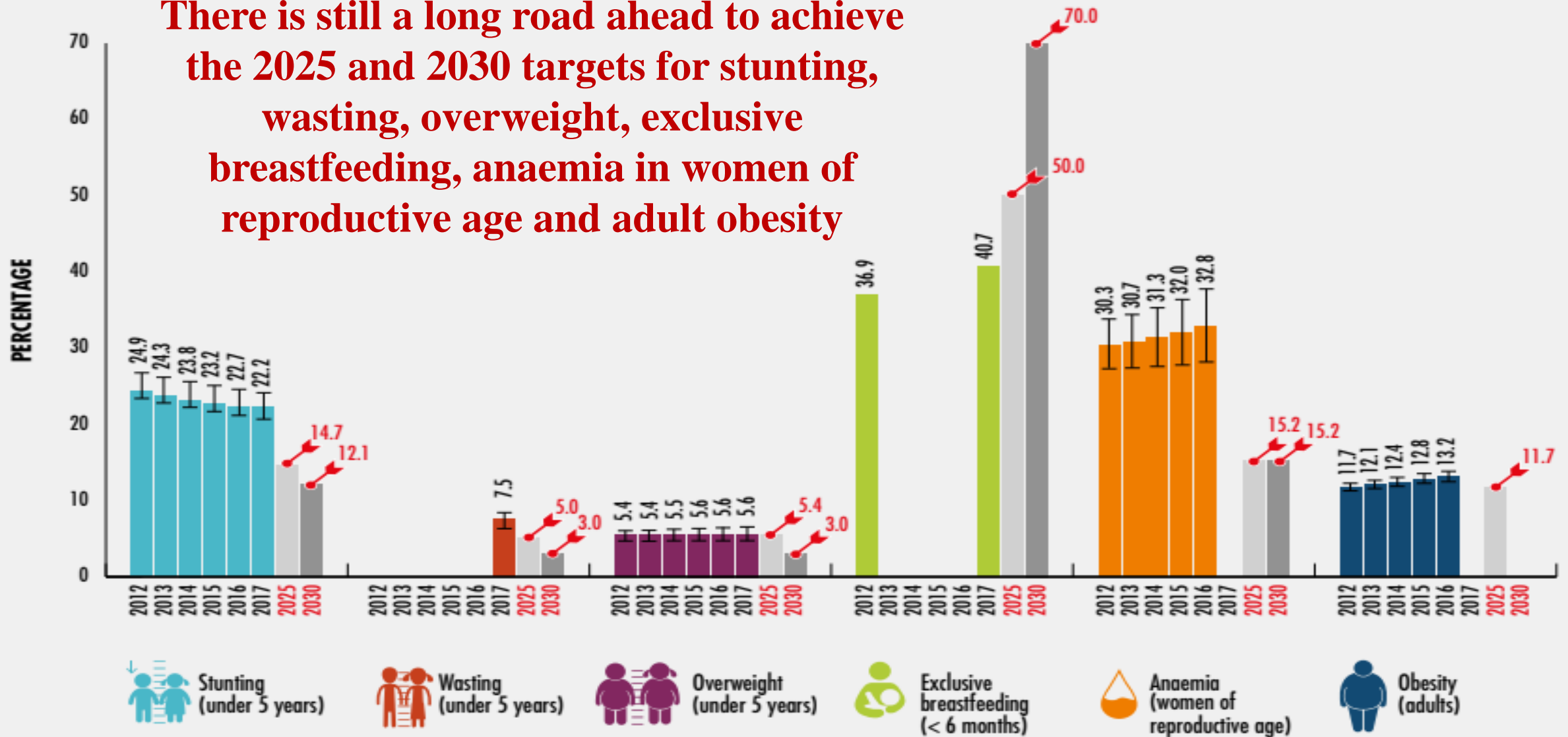
Towards An Integrated Framework for Food and Nutrition Security



The socioecological approach to food and nutrition security measurement

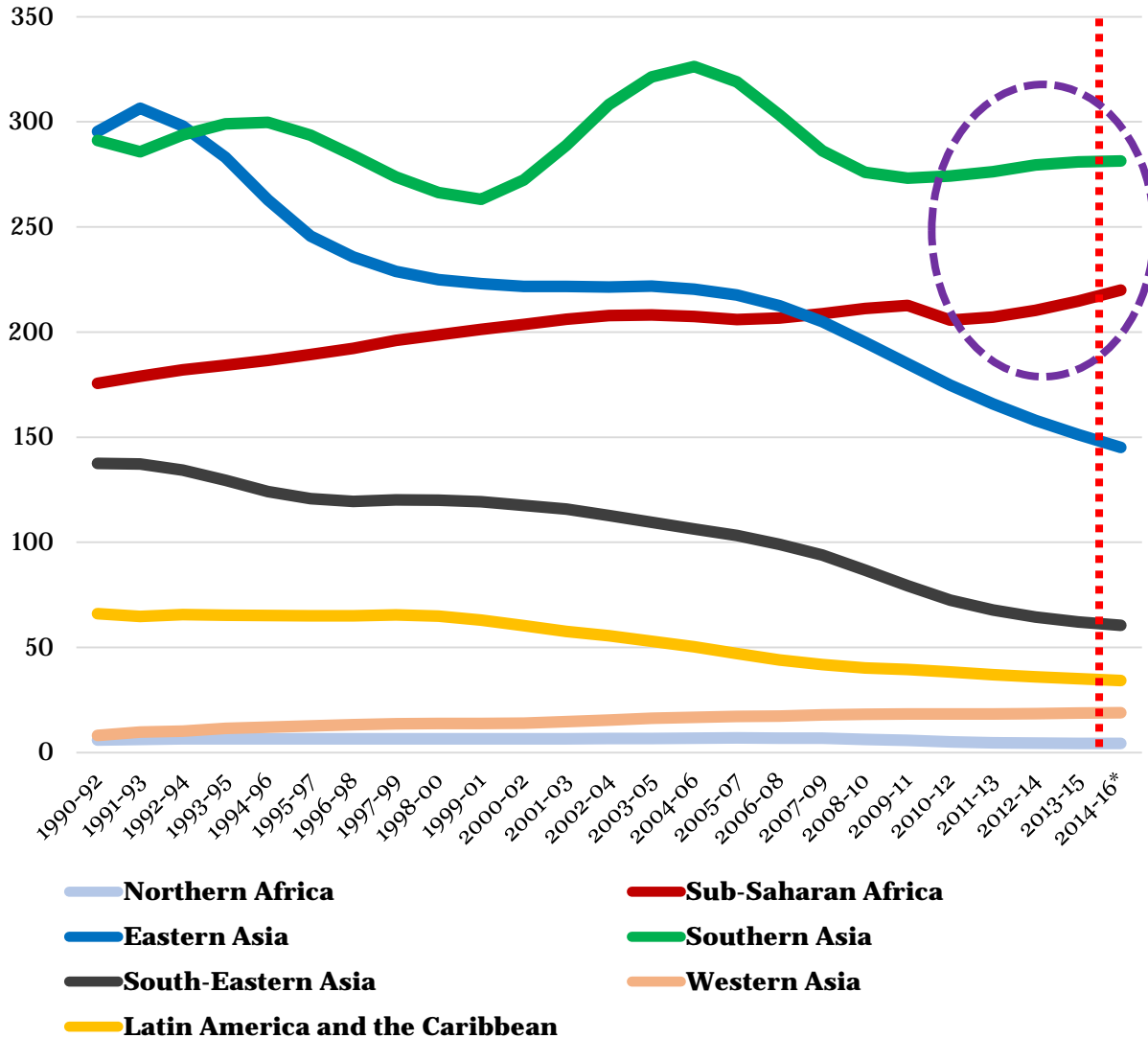


There is still a long road ahead to achieve the 2025 and 2030 targets for stunting, wasting, overweight, exclusive breastfeeding, anaemia in women of reproductive age and adult obesity

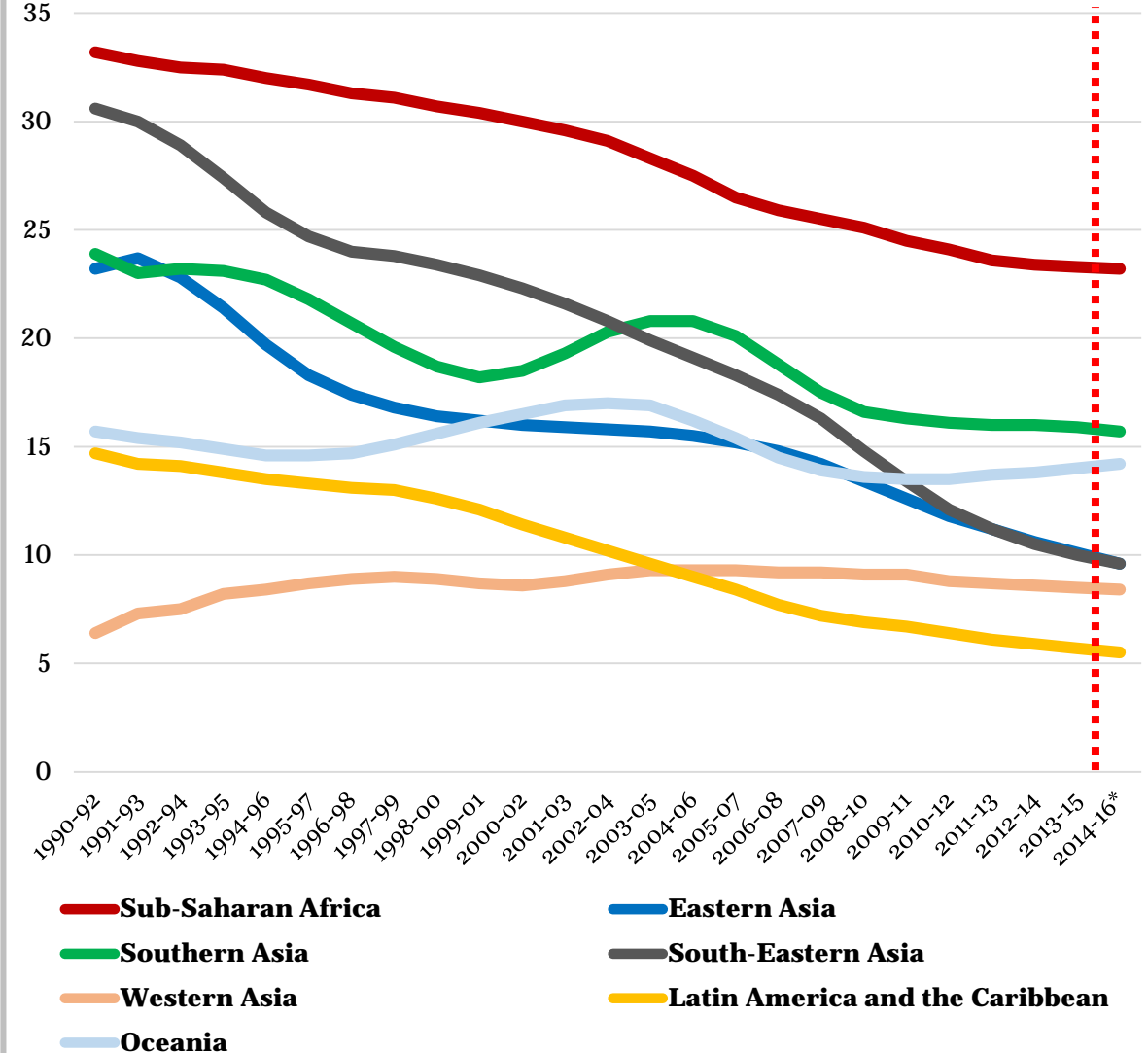


Hunger Reduction By Regions since 1990-92 to 2014-16

Number of People Undernourished (millions) by Developing Region (1990-92 to 2014-16)



Prevalence of Undernourishment (%) by Developing Region (1990-92 to 2014-16)



Source: Lele and Goswami; based on SOFI 2015; Note: *Data for 2014-16 refer to provisional estimates.

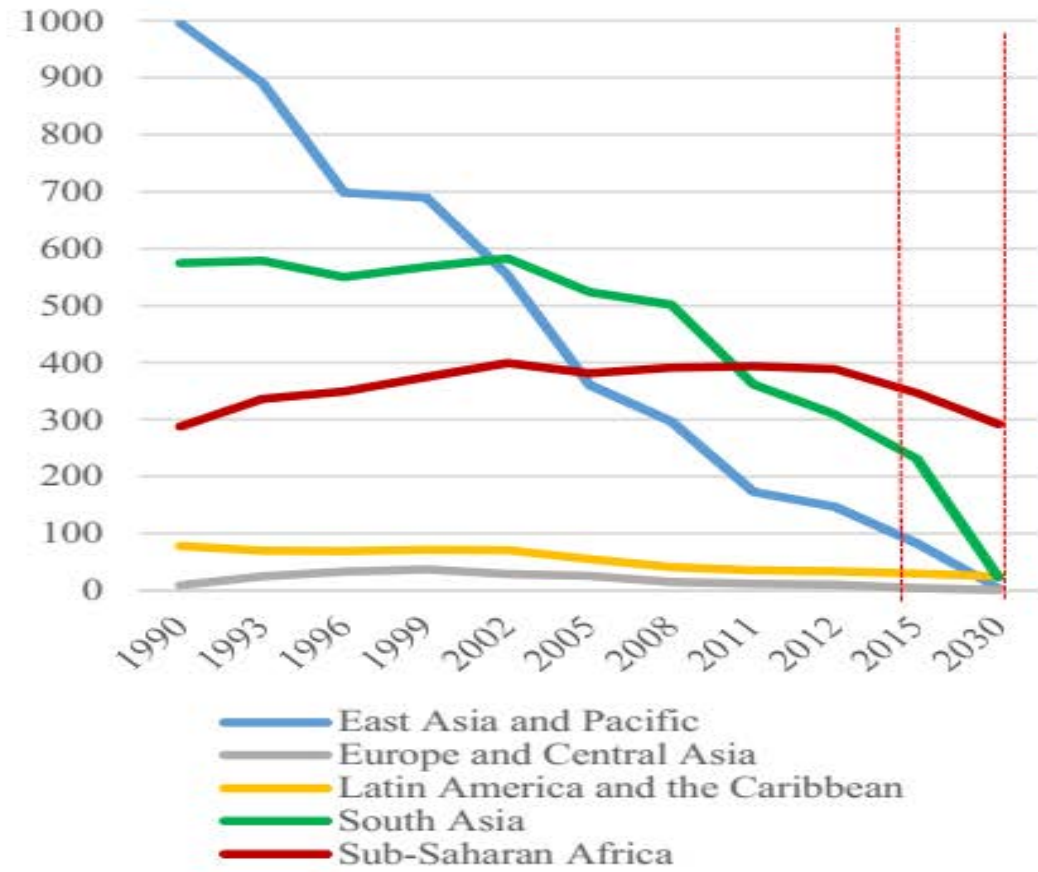


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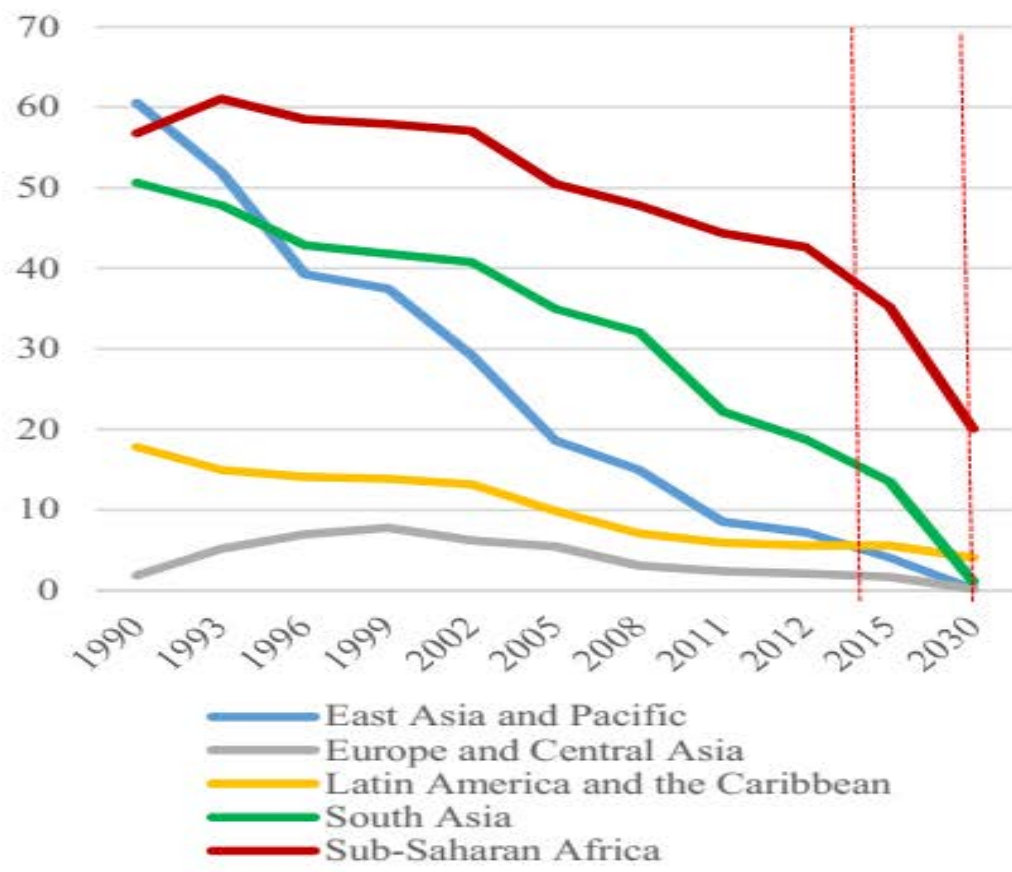


Poverty in Developing Regions has Declined Rapidly: Performance and Projections by Region, 1990–2030

Panel A: Number of Poor (Millions) by Region and Projections (using 2011 PPP and \$1.9/day) (1990-2030)

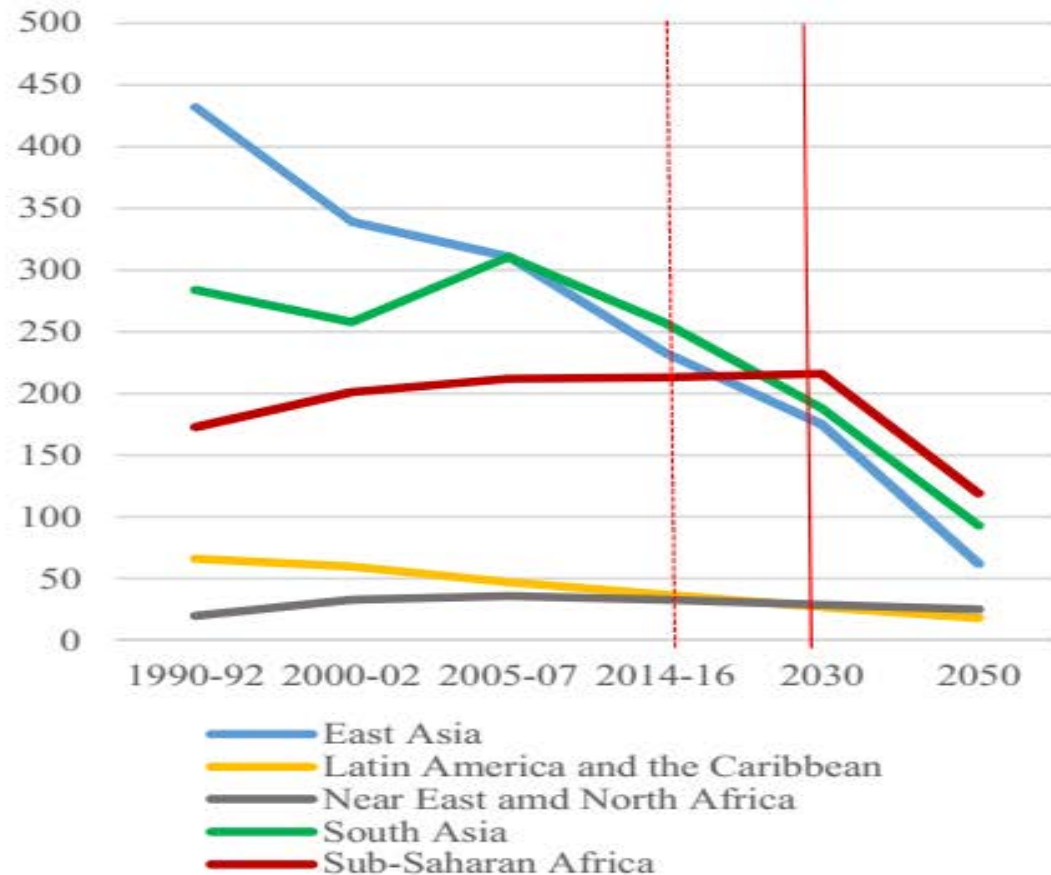


Panel B: Percentage of Poor by Region and Projections (using 2011 PPP and \$1.9/day) (1990-2030)

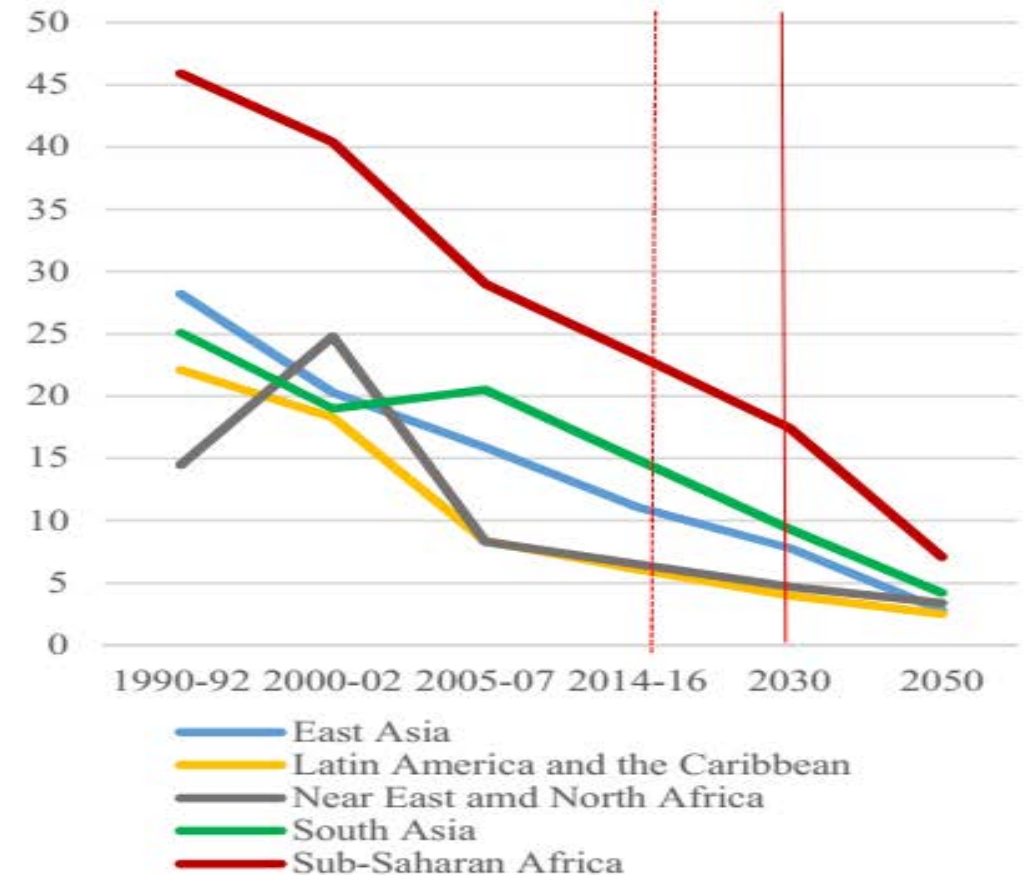


FAO Reported Estimates of Hunger and Projections Show Slower Decline in Hunger than in Poverty: Performance and Projections by Region, 1990–2050

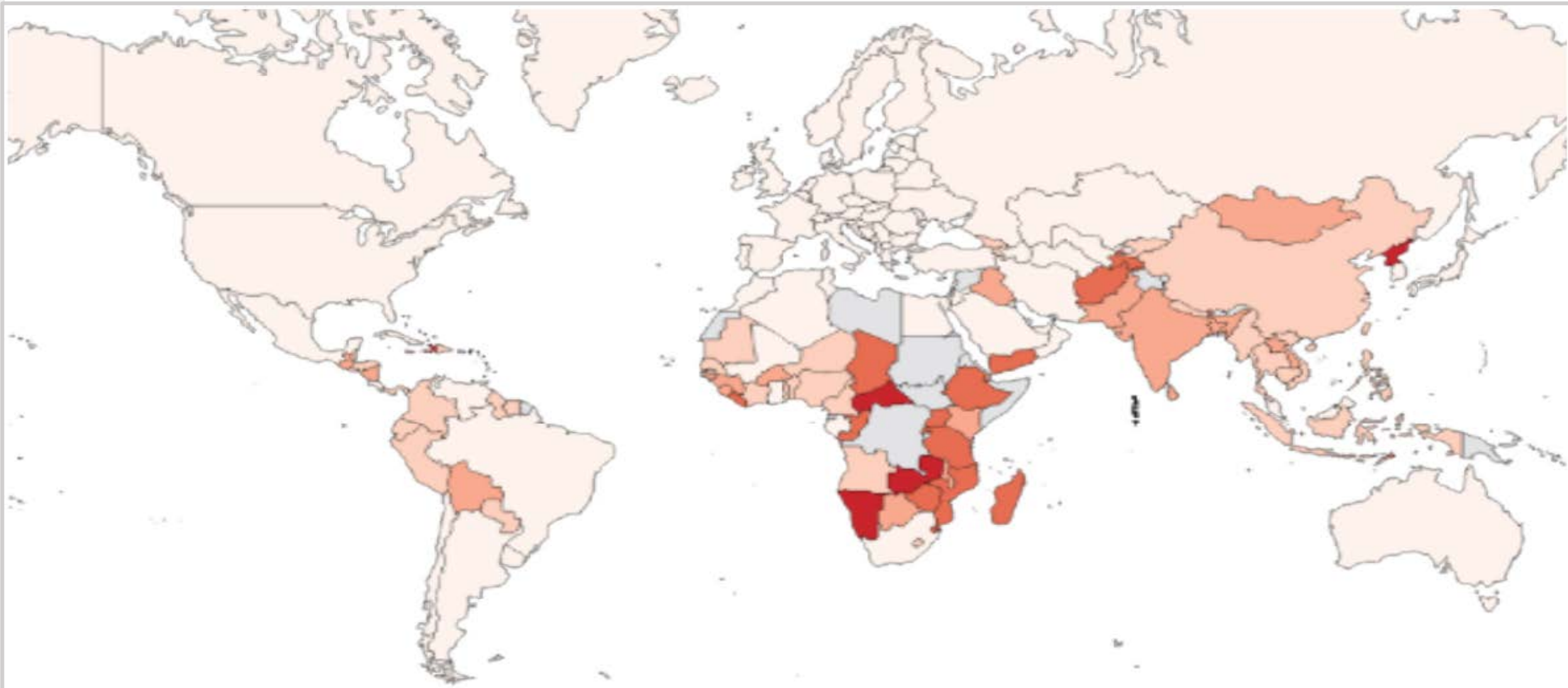
Panel A: Number of People Undernourished (Millions) by Developing Region and Projections to 2030/2050



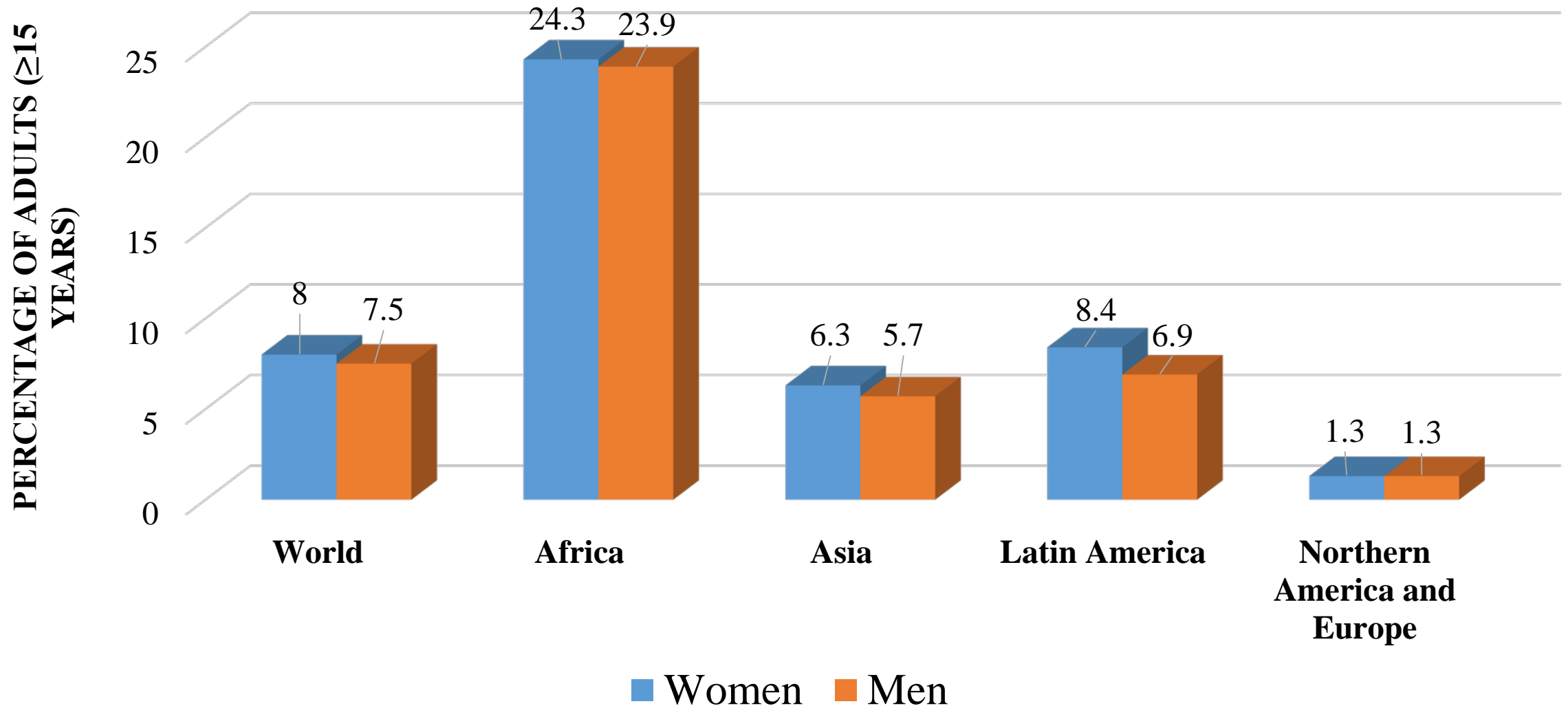
Panel B: Prevalence of Undernourishment (%) by Developing Region and Projections to 2030/2050



Percentage of Undernourished Population (2014-16)—FAO's PoU

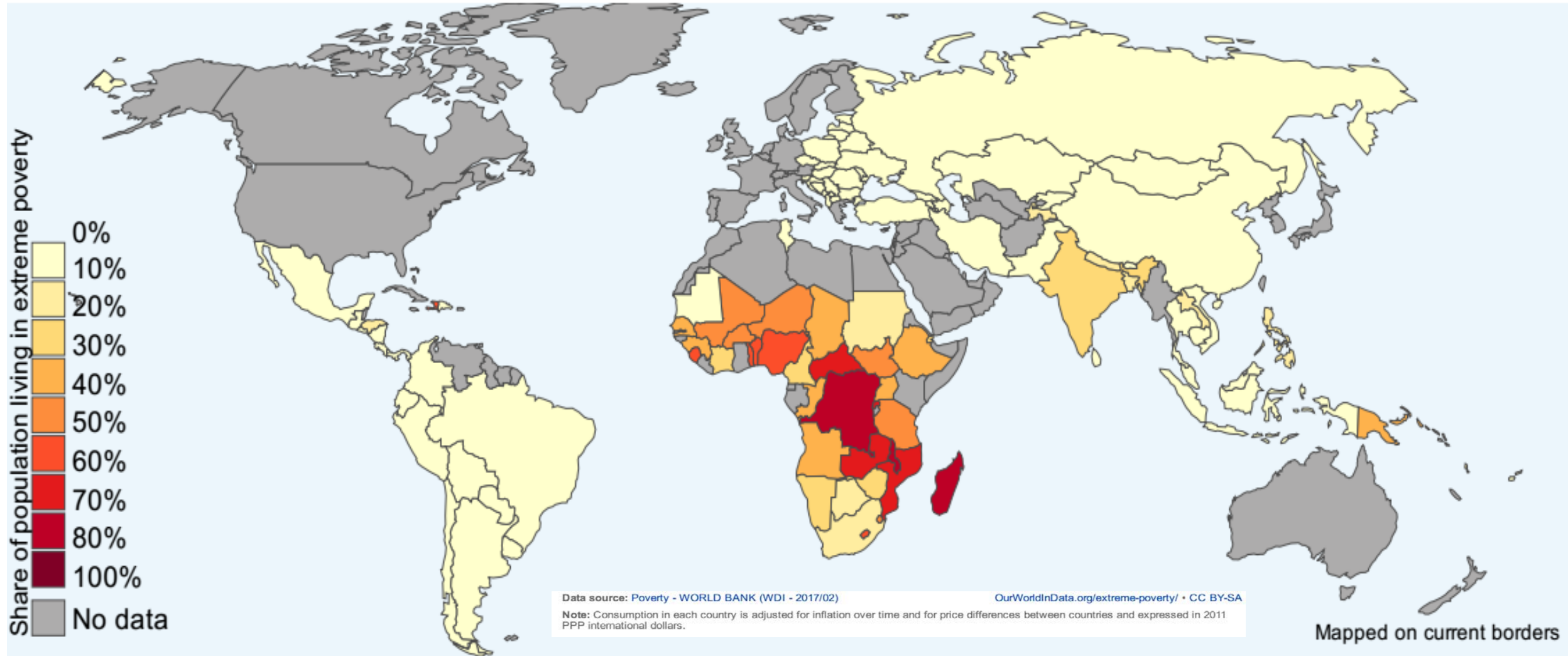


Women More Food insecure than men in every region
Prevalence of severe food insecurity among men and women aged 15 years and older (2015–17 three-year averages)



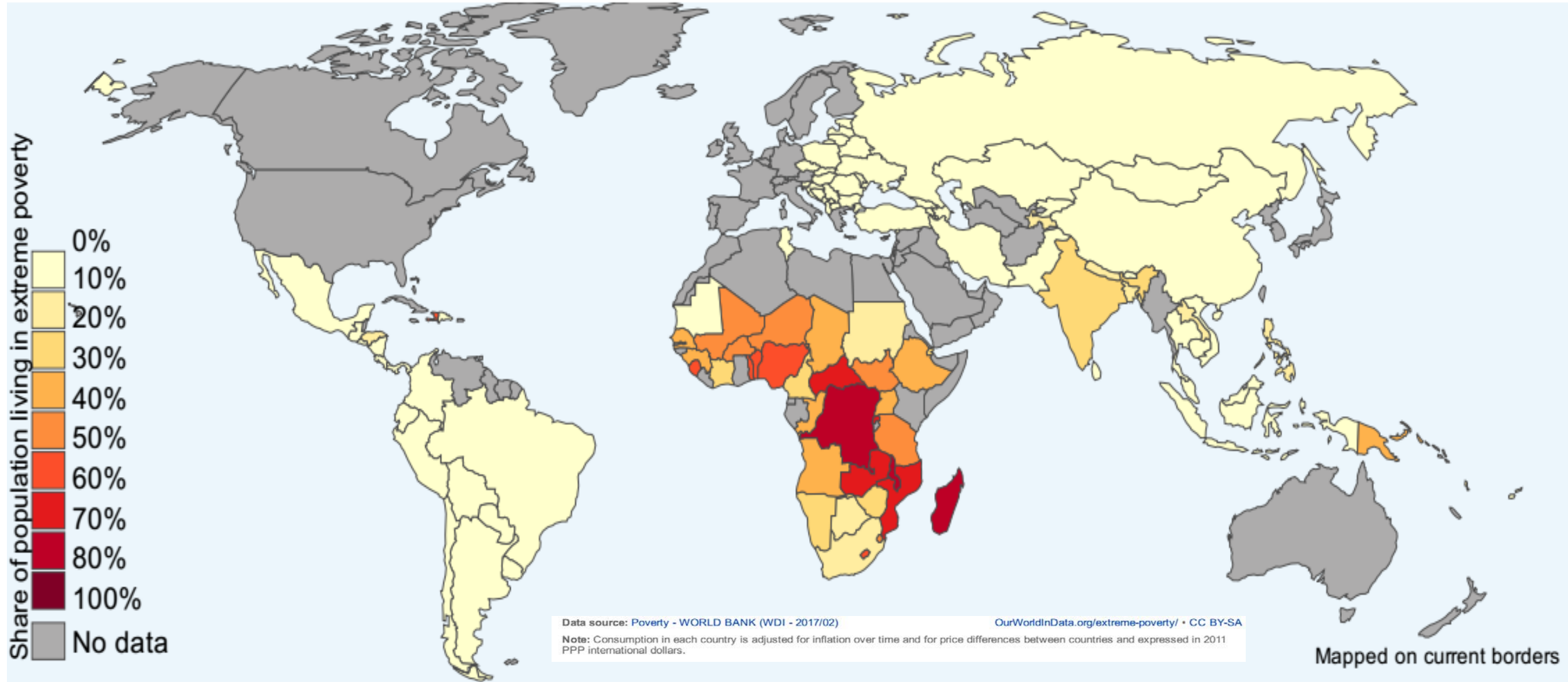
Share of Population Living in Multidimensional Poverty

Proportion of people who are poor according to the Multidimensional Poverty Index (MPI). The MPI weights ten indicators of deprivation in the context of education, health and living standards. Individuals are considered poor if deprived in at least one third of the weighted indicators. Since some observations for 2014 are not available the map displays the closest available data (2005 to 2014).



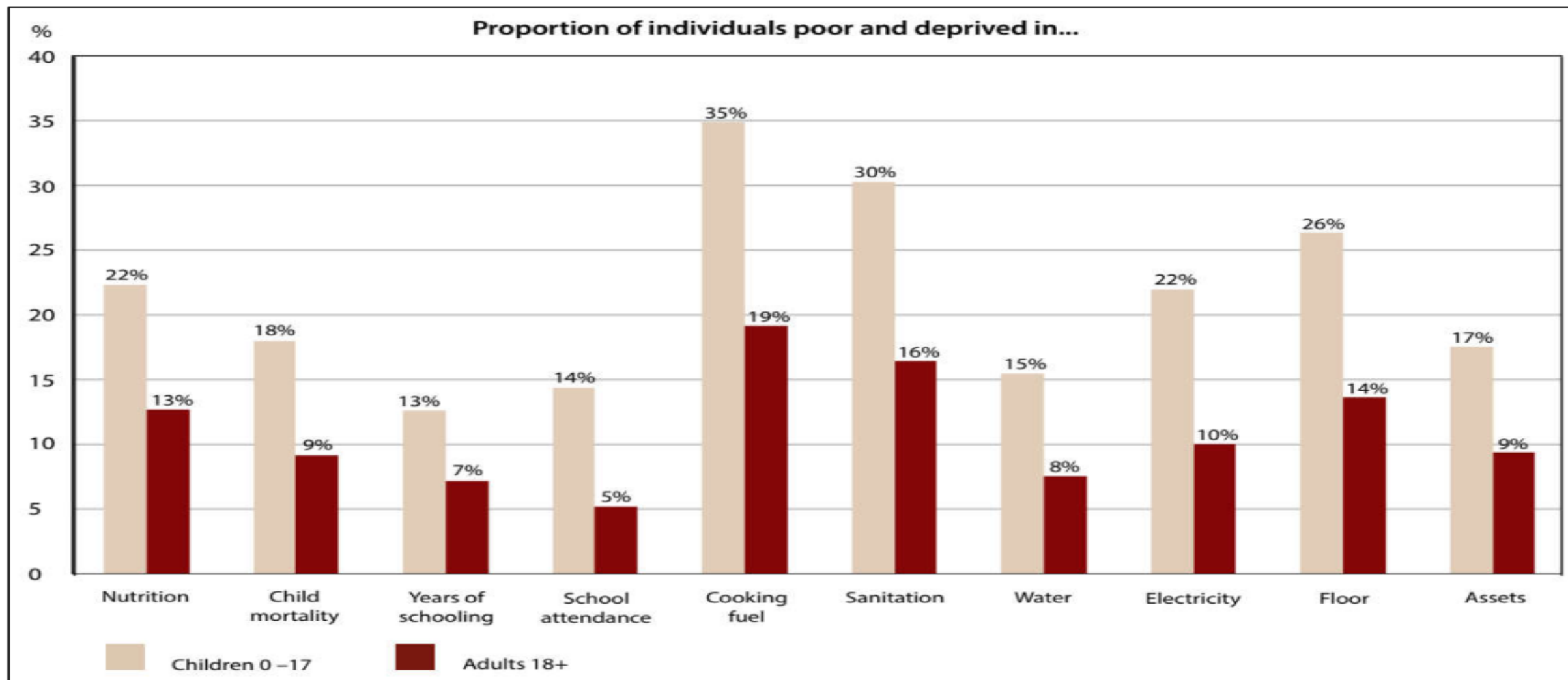
Share of the Population Living in Extreme Poverty

Extreme poverty is defined as living with per capita household consumption below 1.90 international dollars per day (in 2011 PPP prices). International dollars are adjusted for inflation and for price differences across countries. Since some observations for 2014 are not available the map displays the closest available data (2008 to 2014)



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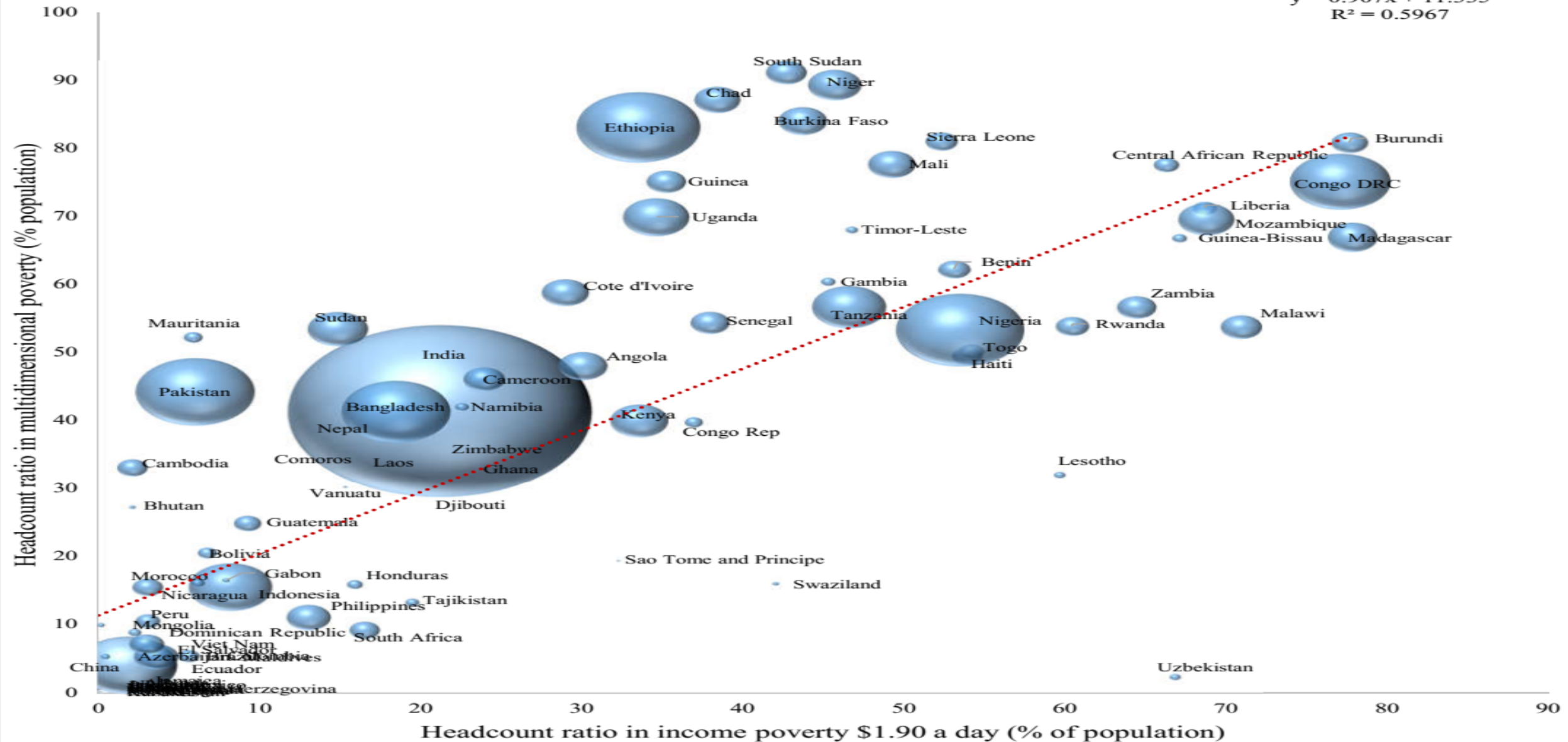
Child and Adult Deprivations in Ten MPI Indicators



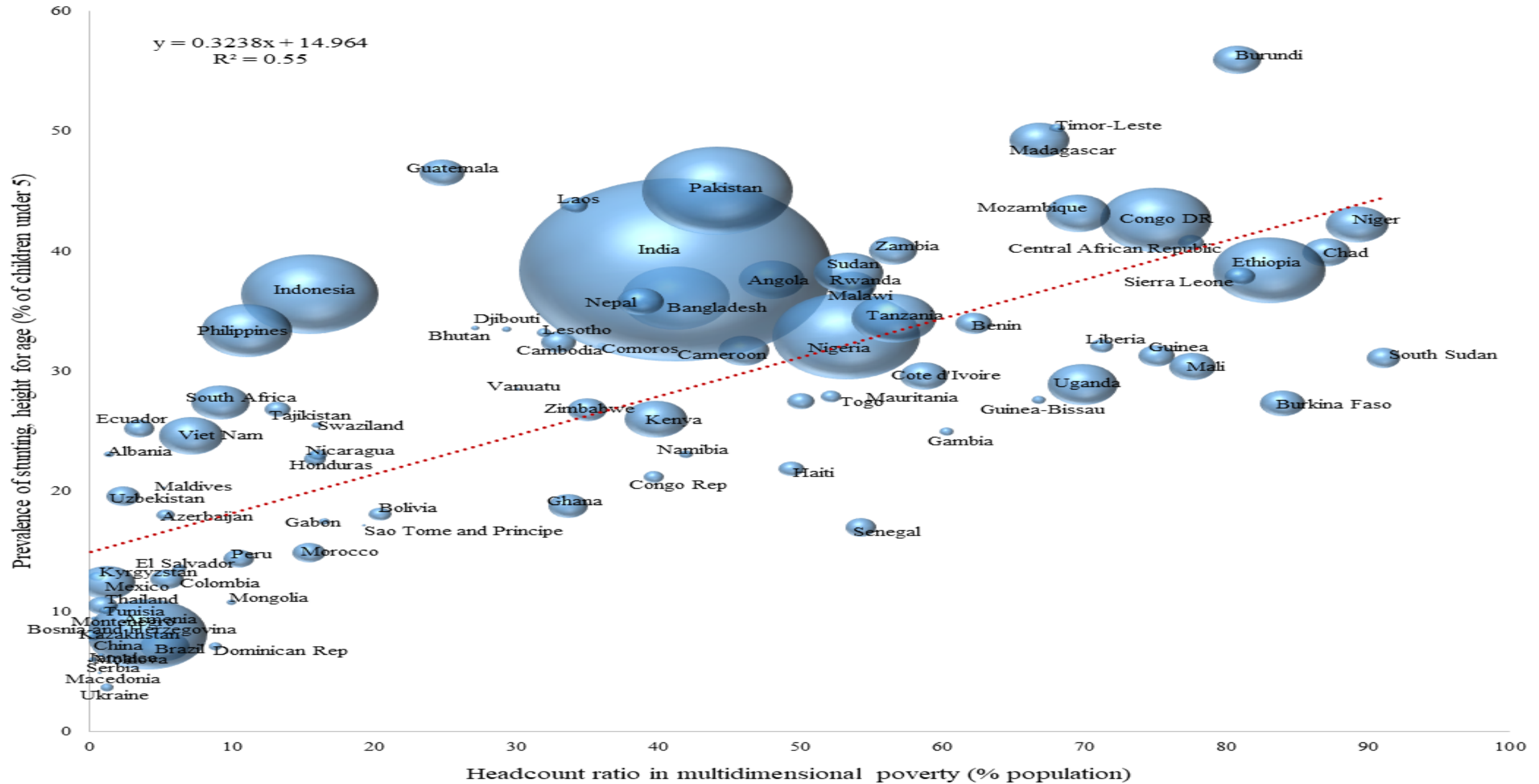
Income Poverty vs Multidimensional Poverty (% of population) (87 countries)

$$y = 0.907x + 11.335$$

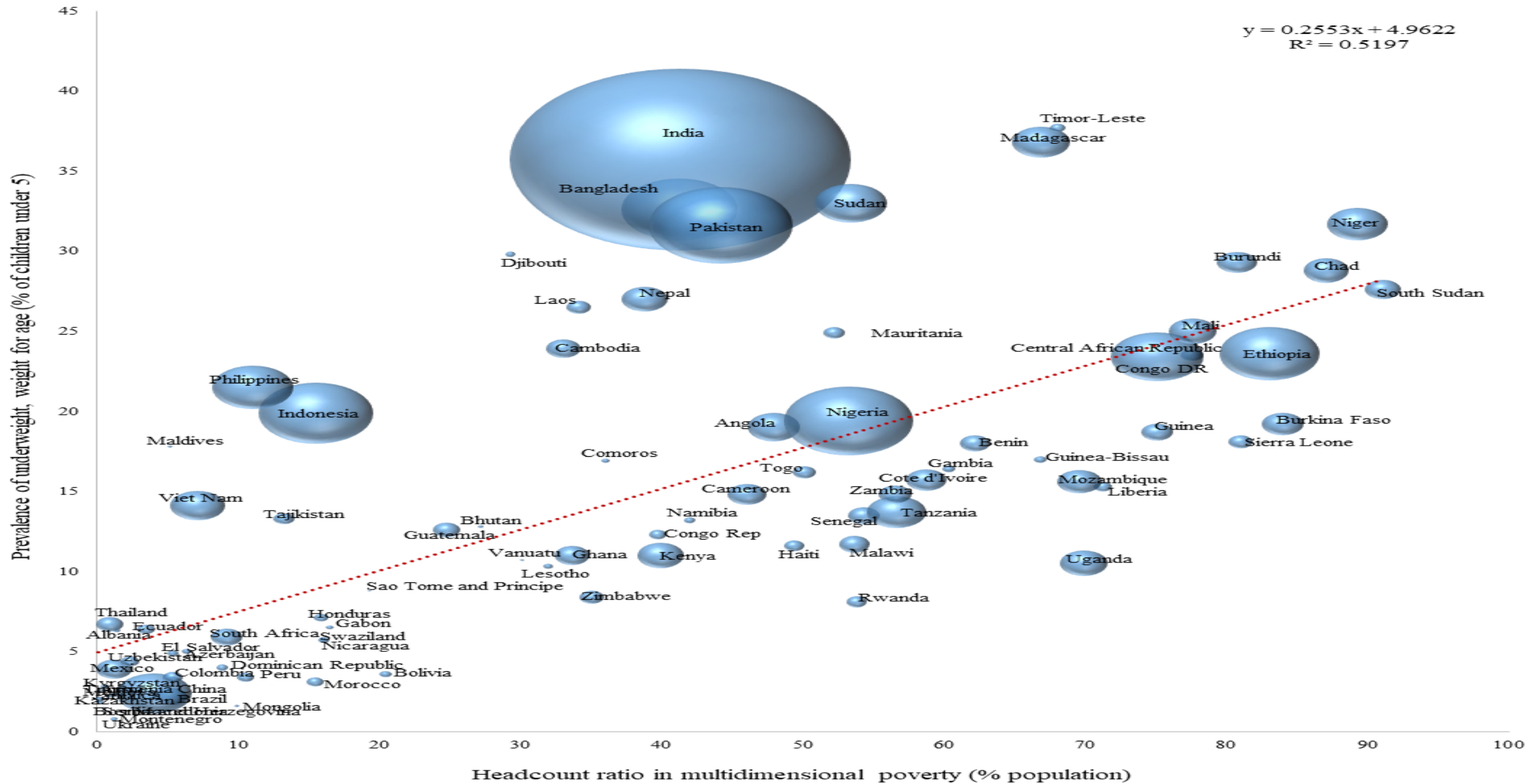
$$R^2 = 0.5967$$



Multidimensional Poverty vs Prevalence of Stunting (86 countries)



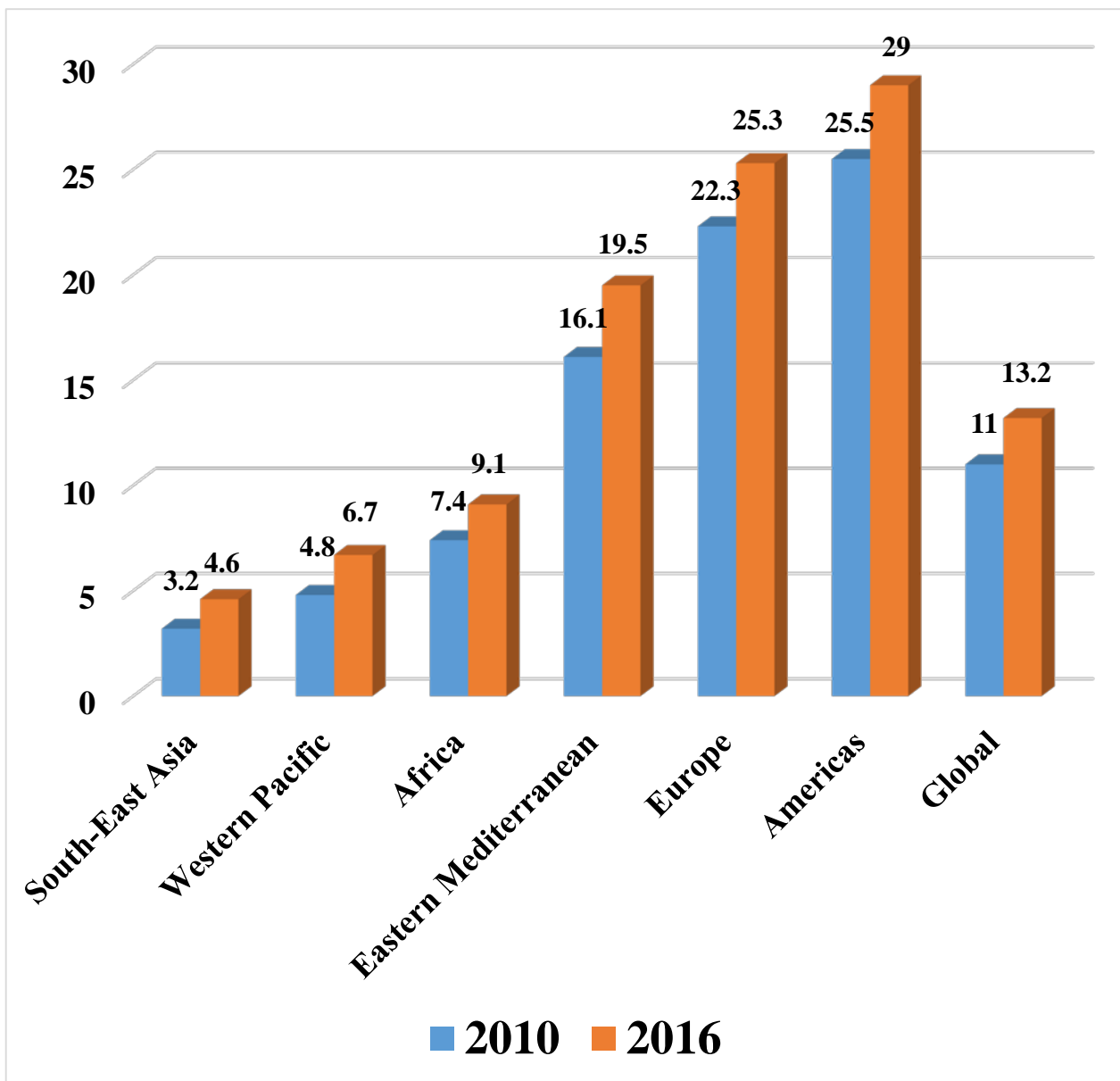
Multidimensional Poverty vs Prevalence of Underweight (86 countries)



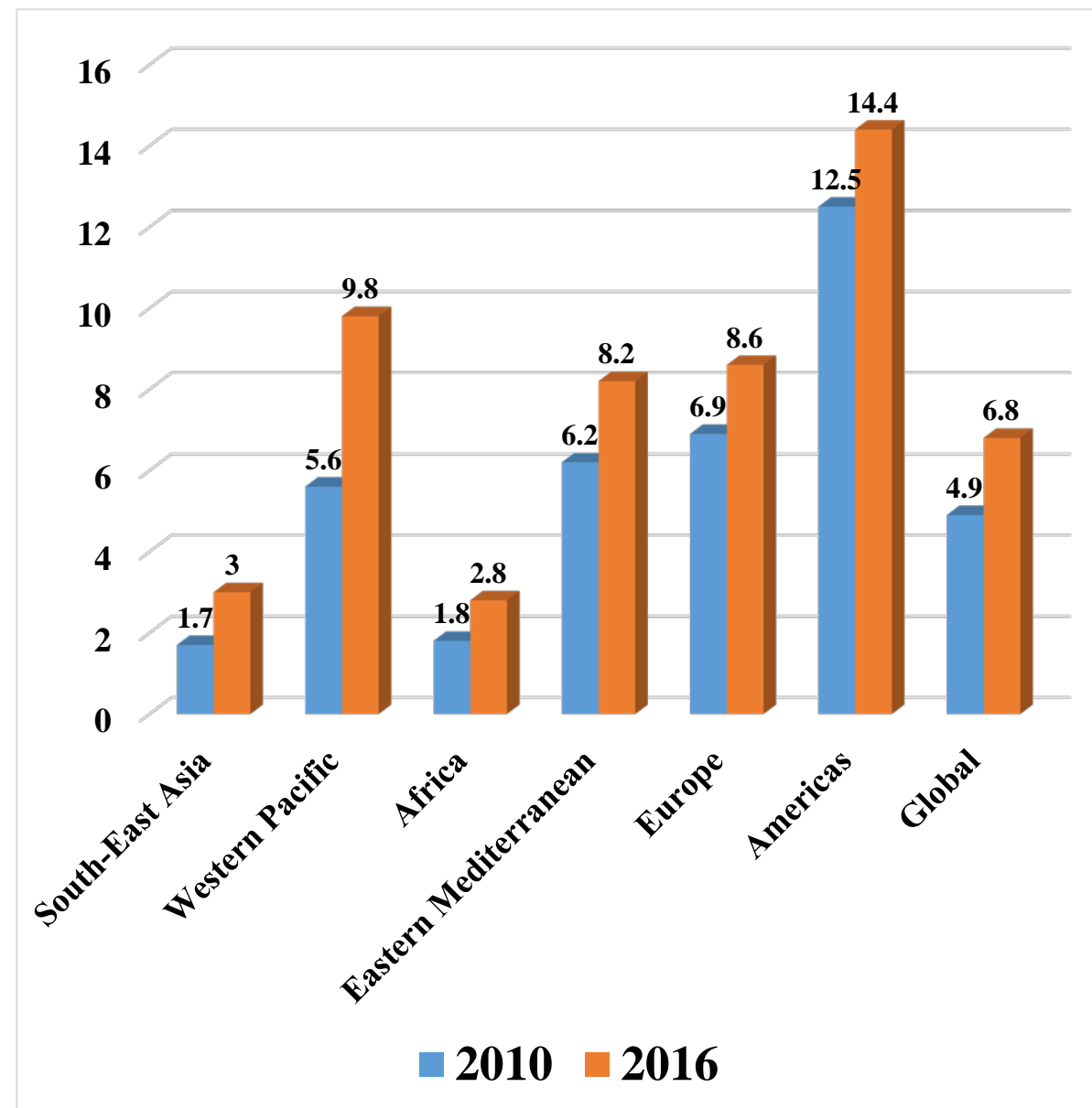
We Need A Dynamic View of Food Security Because of Nutrition Transition

- ❑ Popkin's "nutrition transition": Changing diet, activity, body composition and disease, in both the developing and developed world, the past half century.
- ❑ Factors underlying these trends at all levels include food prices, urbanization, global trade, and technological change, changing life styles.
- ❑ Dietary behaviors and changes in LMICs, include excessive snacking, weekend eating, increased consumption of edible oils, and the global sweetening of the world's diet, particularly its acceleration in LMICs.
- ❑ Some outcomes include: (1) increased waist circumferences at the same BMI level; (2) obesity burden in the developing world shifting to the poor and to rural.

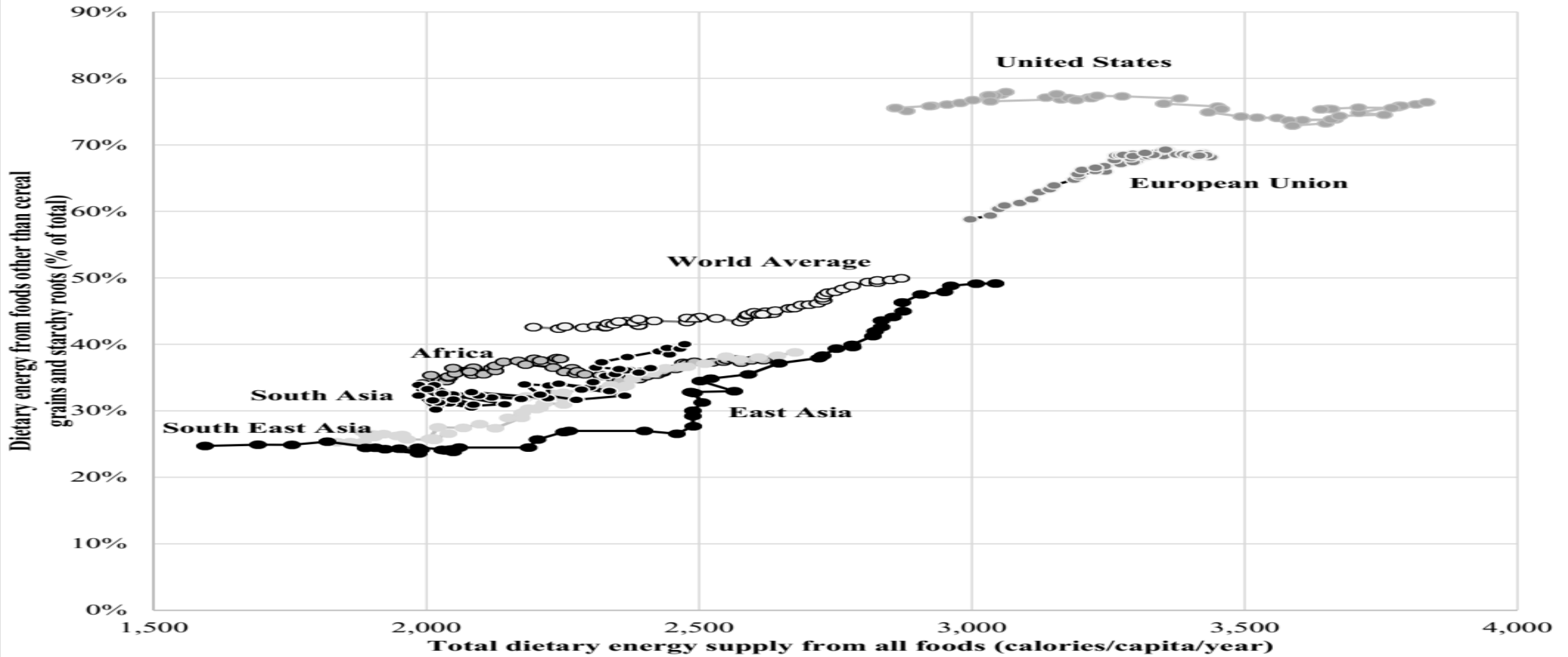
Obesity Prevalence Among Adults (18+ years), BMI \geq 30, WHO regions (%) (2010-2016)



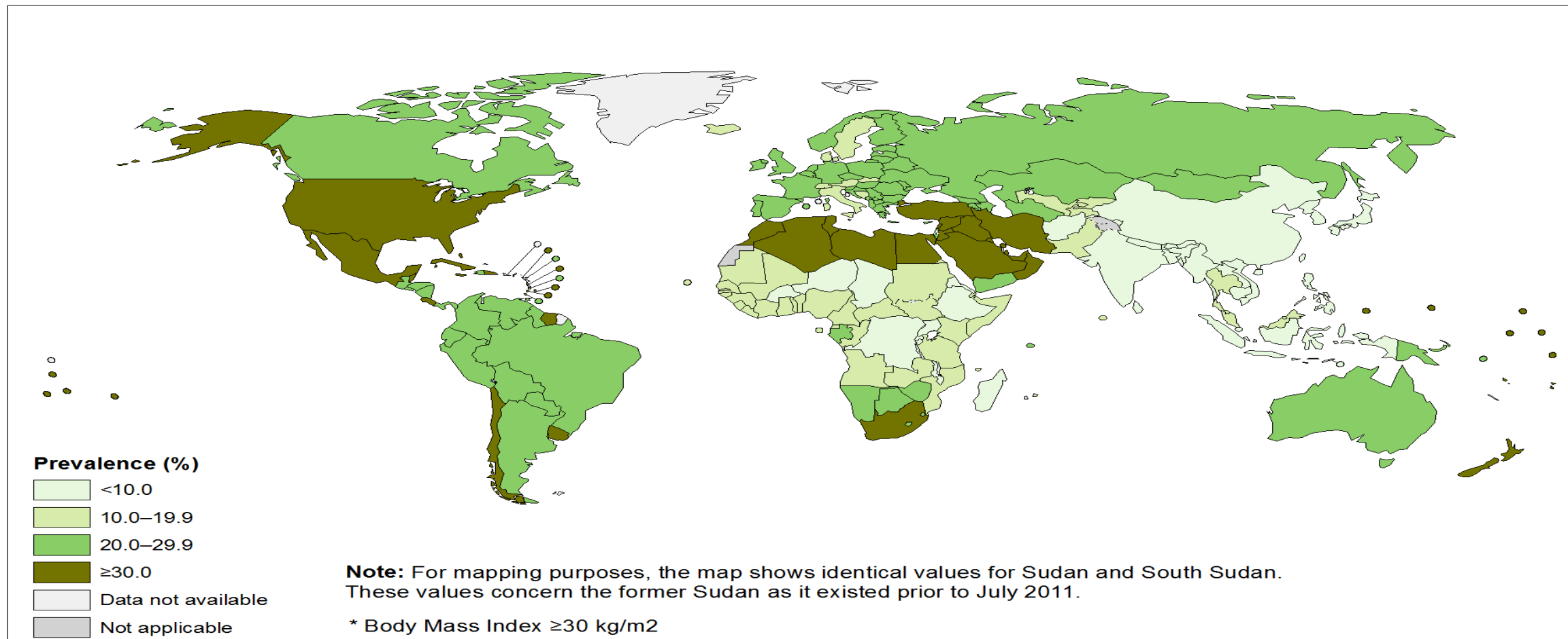
Obesity Prevalence Among children and adolescents (aged 5-19 years), BMI $>$ +2 standard deviation, crude



Percentage of Energy from Non-staple Foods and Total Dietary Energy per Capita by Region (1961–2011)



Prevalence of obesity*, ages 18+, 2016 (age standardized estimate) Female



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Information Evidence and Research (IER)
World Health Organization

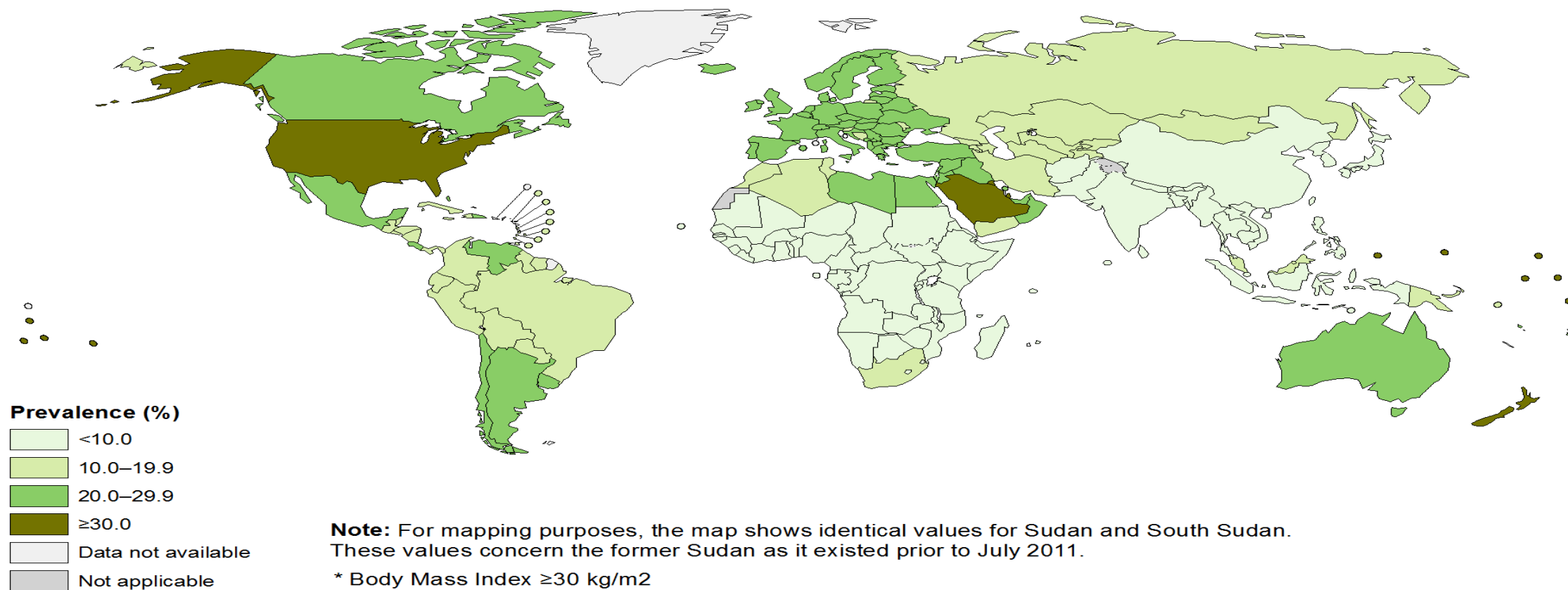


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Prevalence of obesity*, ages 18+, 2016 (age standardized estimate) Male



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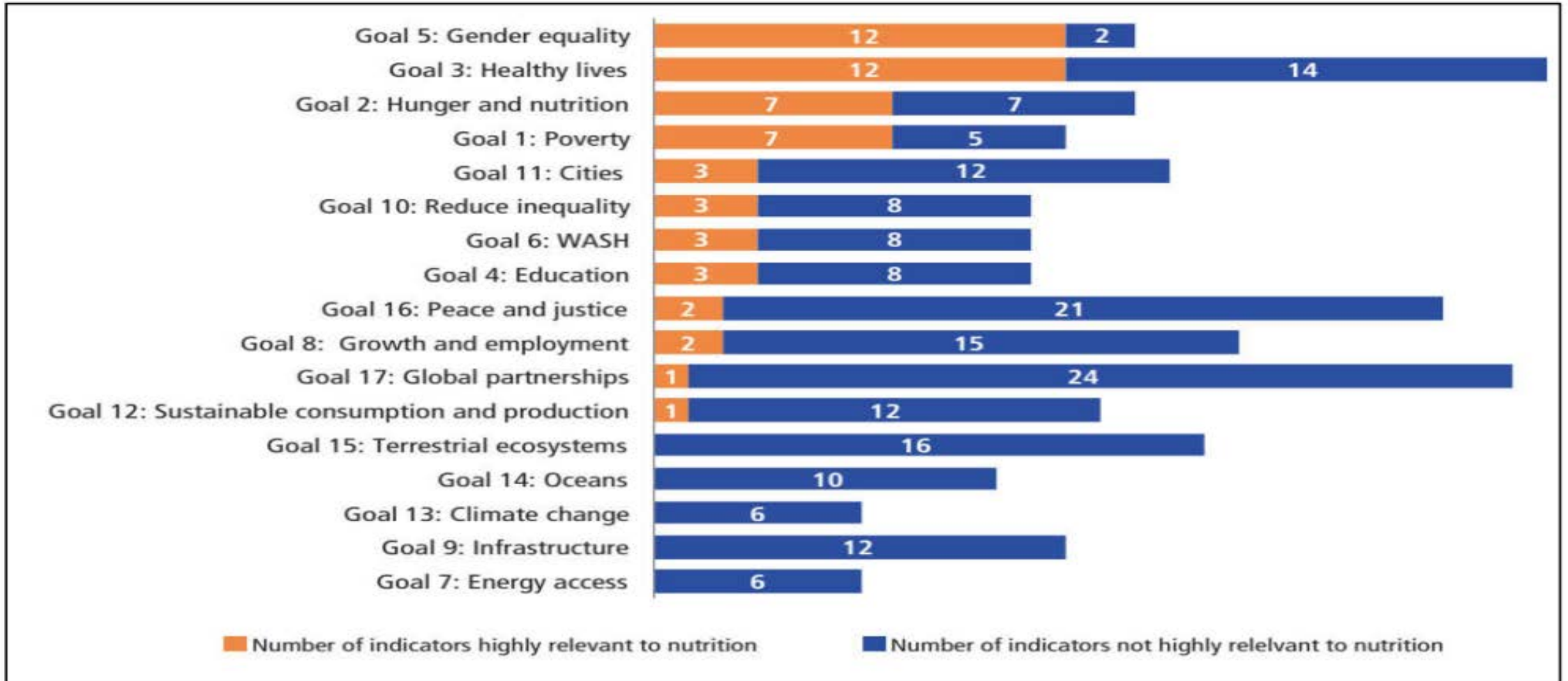


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New Indicators and Analysis of Obesity Needed

- ☐ Measure waist circumference not just BMI level?.
- ☐ Measure obesity burden Among Poor and in Rural Areas.
- ☐ Measure excessive snacking, weekend eating, increased global consumption of palm oil, Increased sweetening of the world's diet, particularly its acceleration in LMICs.
- ☐ Study Consumption Impacts of shifts in food prices, urbanization, global trade, value chains, foreign director investment and technological change.

Number of Indicators in Each SDG That Are Highly Relevant for Nutrition



Case of Mexico and Government Response

- ❑ Mexico has one of the highest prevalence rates for diabetes, overweight, and obesity in the world
- ❑ Reducing the consumption of sugar sweetened beverages has been an important target for obesity and diabetes prevention efforts
- ❑ Mexico implemented an excise tax of 1 peso/L on sugar sweetened beverages from 1 January 2014
- ❑ Purchases of taxed beverages decreased by an average of 6% (-12 mL/capita/day), and decreased at an increasing rate up to a 12% decline by December 2014. Reductions were higher among the households of low socioeconomic status, averaging a 9% decline during 2014, and up to a 17% decrease by December 2014 compared with pretax trends.



THANK YOU



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Source: <https://ec.europa.eu/jrc/en/news/dynamics-food-and-nutritional-security-innovations>