Meeting the U.N.’s Millennium Development Goals for nutrition: Prospects, Challenges and the Role of UNICEF

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unite for children

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Key issues in this talk

- How MDGs and nutrition relate
- Why reducing undernutrition is essential to poverty reduction
- Understanding undernutrition
- What we (can) do to improve the situation

- How UNICEF works in addressing undernutrition
- Are we making an impact?
- Challenges and future direction
- Q & A

UNICEF

- Active in 190 countries – programmes in ~150
- ~ 11,000 staff - 88 % in the field
- 8 Regional Offices
- Research centre in Florence, a supply operation in Copenhagen and offices in Geneva, Tokyo and Brussels
- UNICEF headquarters in New York
- 2010 budget $3.5 billion – NYFD $3.8 billion
- Staff with focus on nutrition - ~370 and growing
- Governed by a board, driven by medium term strategic plan – following MDG framework

UNICEF strategic areas

- Young child survival and development
  - Health, nutrition, early childhood development, and water sanitation, hygiene
- Basic education and gender equality
- HIV/AIDS and children
- Child protection
- Policy analysis, advocacy and partnerships for children’s rights
- Cross cutting: emergencies, equity and MDGs

Nutrition and the MDGs

Goal	Nutrition Effect
Goal 1: Poverty and hunger	Malnutrition erodes human capital; irreversible and intergenerational effects on cognitive and physical development → income loss due to inadequate nutrition - 2-3% of GDP
Goal 2: Universal primary education	Malnutrition affects cognitive function → school enrollment, performance, dropout
Goal 3: Gender equality	Addressing malnutrition empowers women more than men
Goal 4: Child mortality	Malnutrition underlies >one third of all child deaths
Goal 5: Maternal health	Maternal health and mortality compromised by malnutrition → 20% mortality due to anemia
Goal 6: HIV/AIDs, Malaria…	Malnutrition may increase risk of HIV, hastens onset of AIDs,

MDG 1: Eradicate extreme poverty and hunger

- Target 1a: Reduce by half the proportion of people living on less than a dollar a day
- Target 1b: Achieve full and productive employment and decent work for all, including women and young people
- Target 1c: Reduce by half the proportion of people who suffer from hunger
  - 1.8 Prevalence of underweight children under-five years of age
  - 1.9 Proportion of population below minimum level of dietary energy consumption

MDG 1: Eradicate extreme poverty and hunger - terminology

- Hunger – a feeling of discomfort or weakness caused by lack of food, coupled with the desire to eat

- Undernutrition – insufficient food intake and repeated infectious diseases leading to underweight for one's age, too short for one's age (stunted), dangerously thin for one's height (wasted) and deficient in vitamins and minerals (micronutrient malnutrition)

- Malnutrition – broad term commonly used as alternative to undernutrition but technically also refers to overnutrition

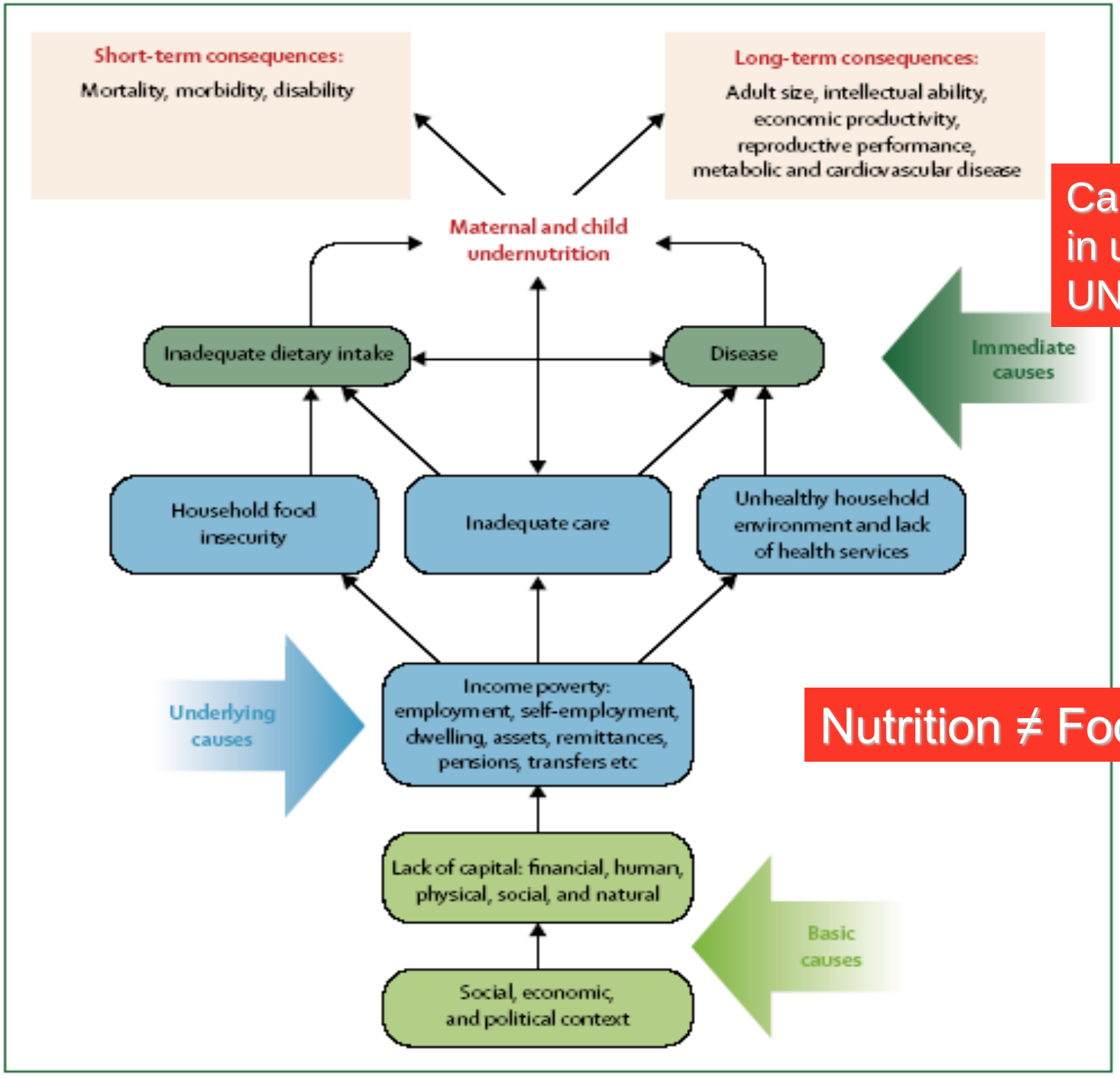
Reduce by half the proportion of people who suffer from hunger

Prevalence of underweight children under-five

- Weight for height – wasting, acute undernutrition
- Height for age – stunting, chronic undernutrition
- Weight for age – underweight → includes both forms and therefore not sensitive enough
- UNICEF focuses on acute and chronic undernutrition

Proportion of population below minimum level of dietary energy consumption

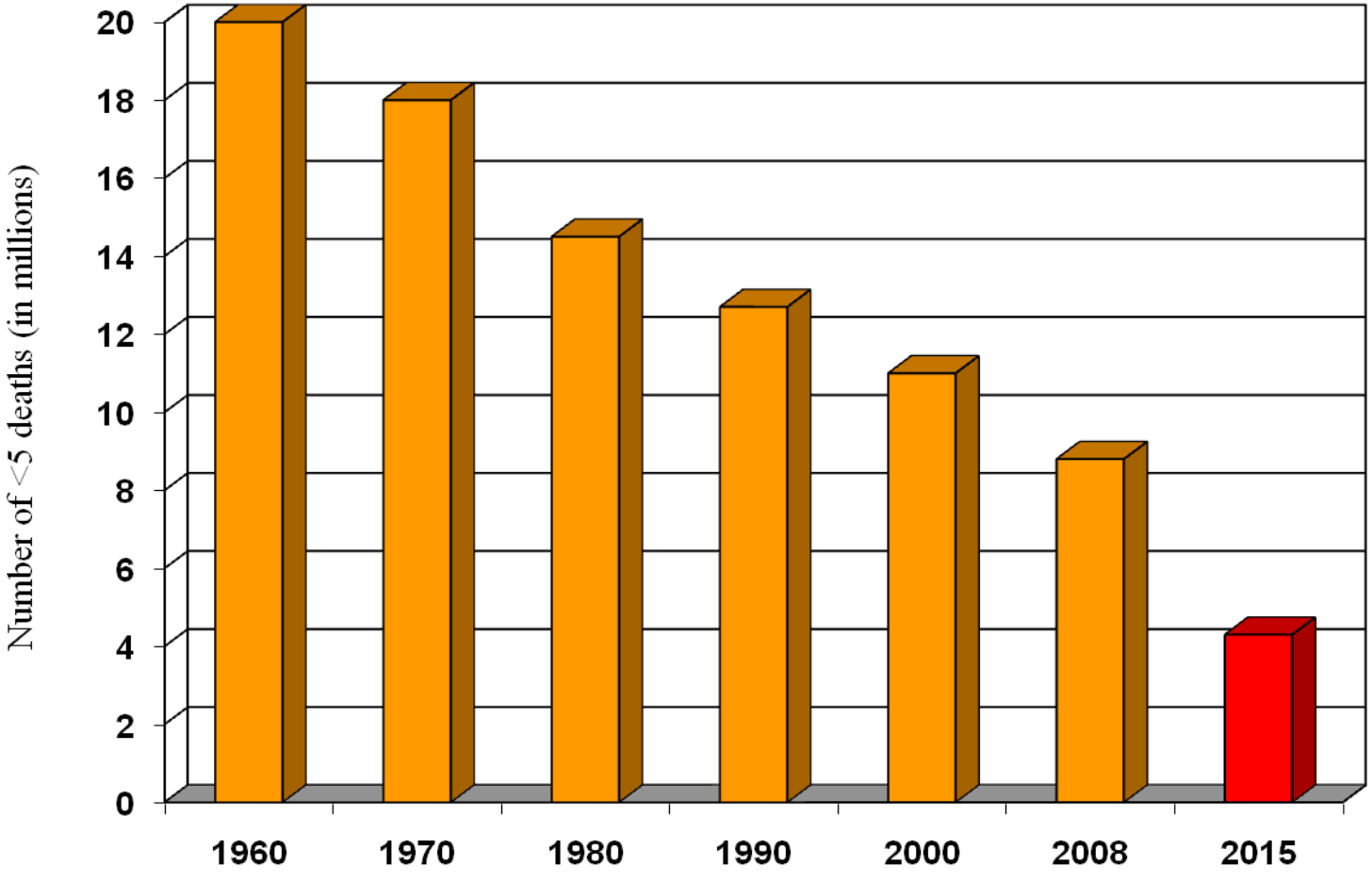
- Food production – availability rather than intake



Causal pathways in undernutrition, UNICEF 1991

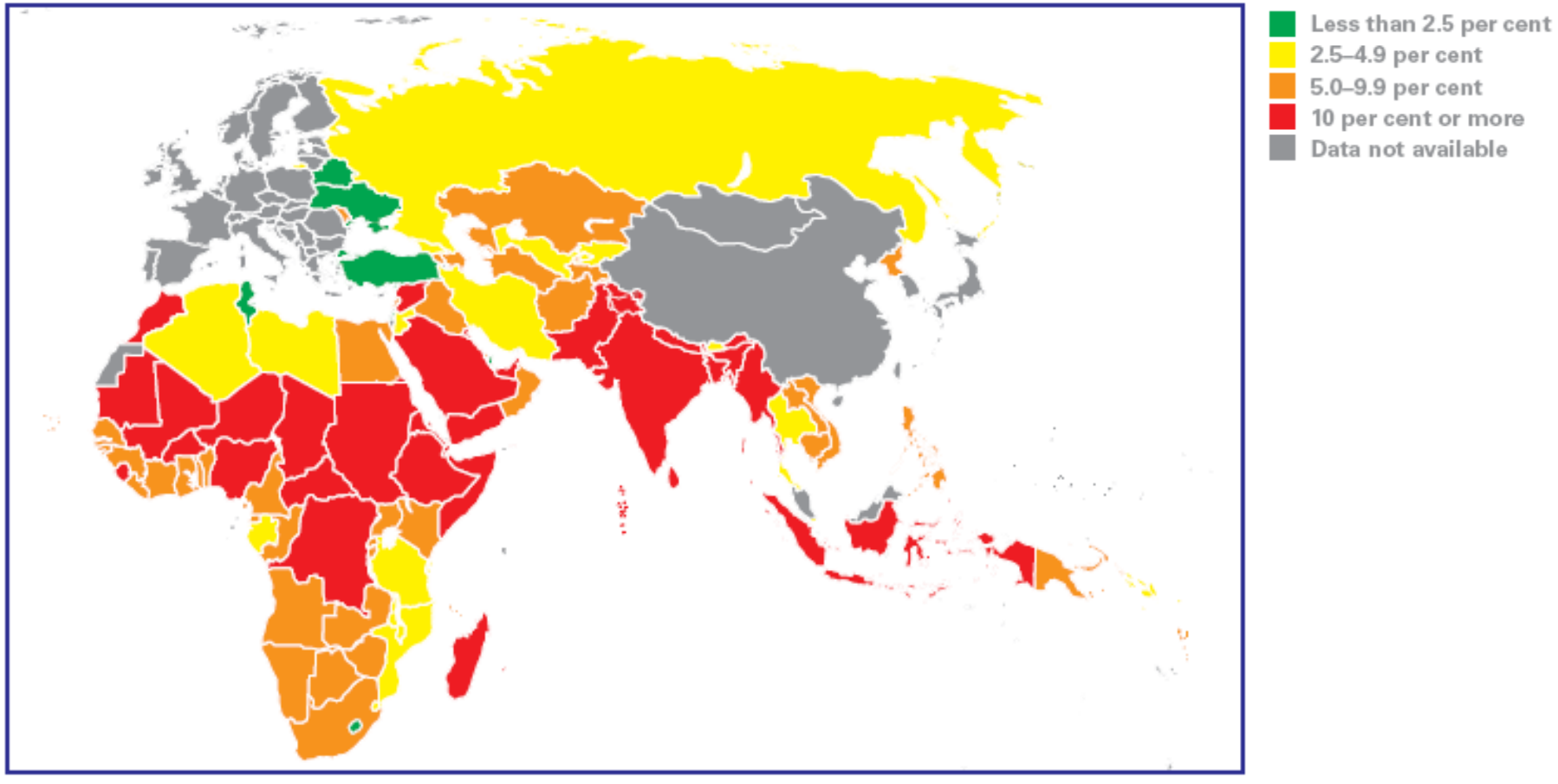
Nutrition ≠ Food security

Under 5 Mortality has fallen below 9 million



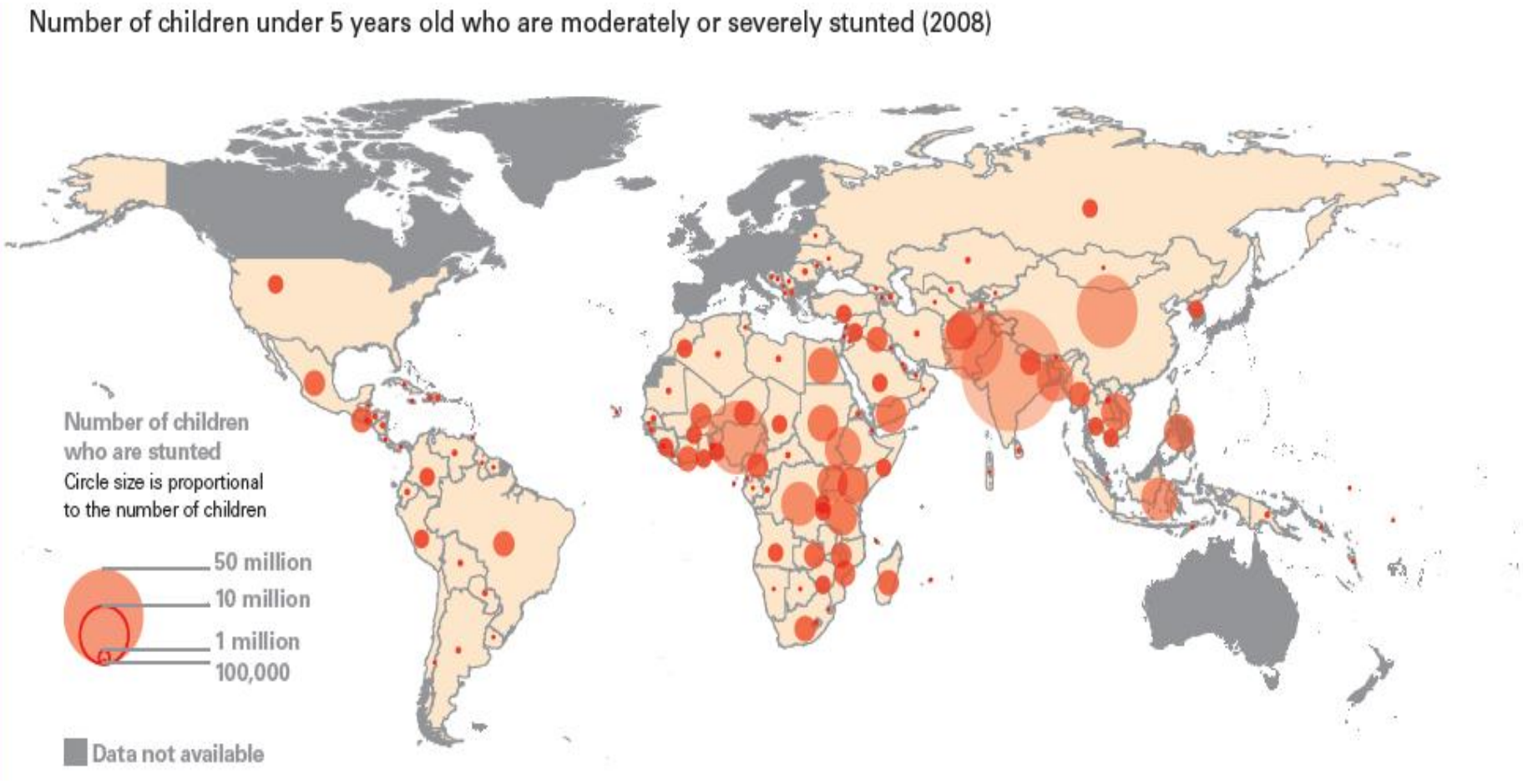
Wasting prevalence is at emergency levels in many African and Asian countries

Percentage of children under 5 years old who are moderately or severely wasted



Source: MICS, DHS and other national surveys, 2003–2008.

Stunting affects approximately 183 million under-fives in the developing world; about one in three



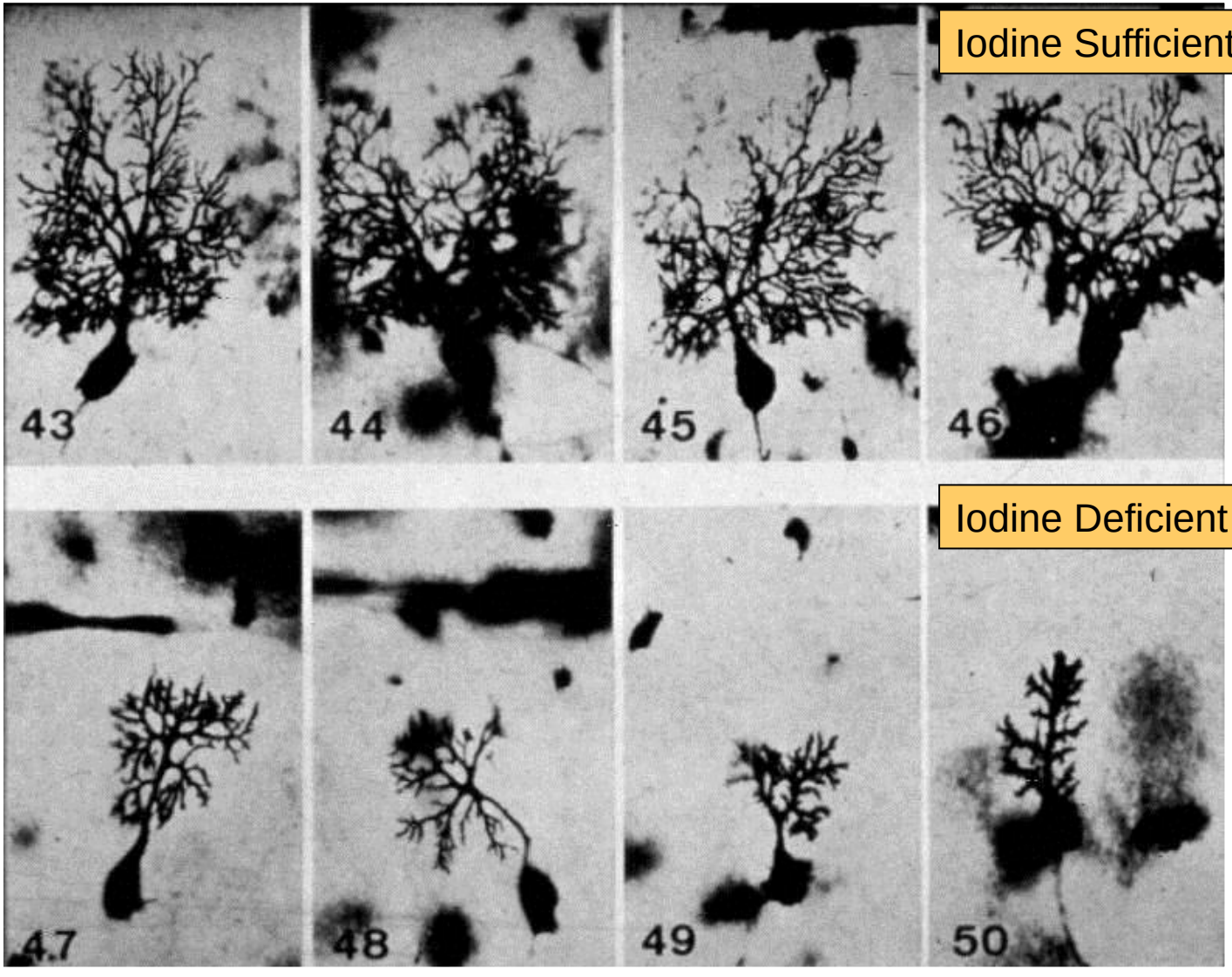
Notes for all maps in this publication: The maps in this publication are stylized and not to scale. They do not reflect a position by UNICEF on the legal status of any country or territory or the delimitation of any frontiers. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. For detailed notes on the map data, see page 42.

Sources for both maps on this page: MICS, DHS and other national surveys, 2003–2008.

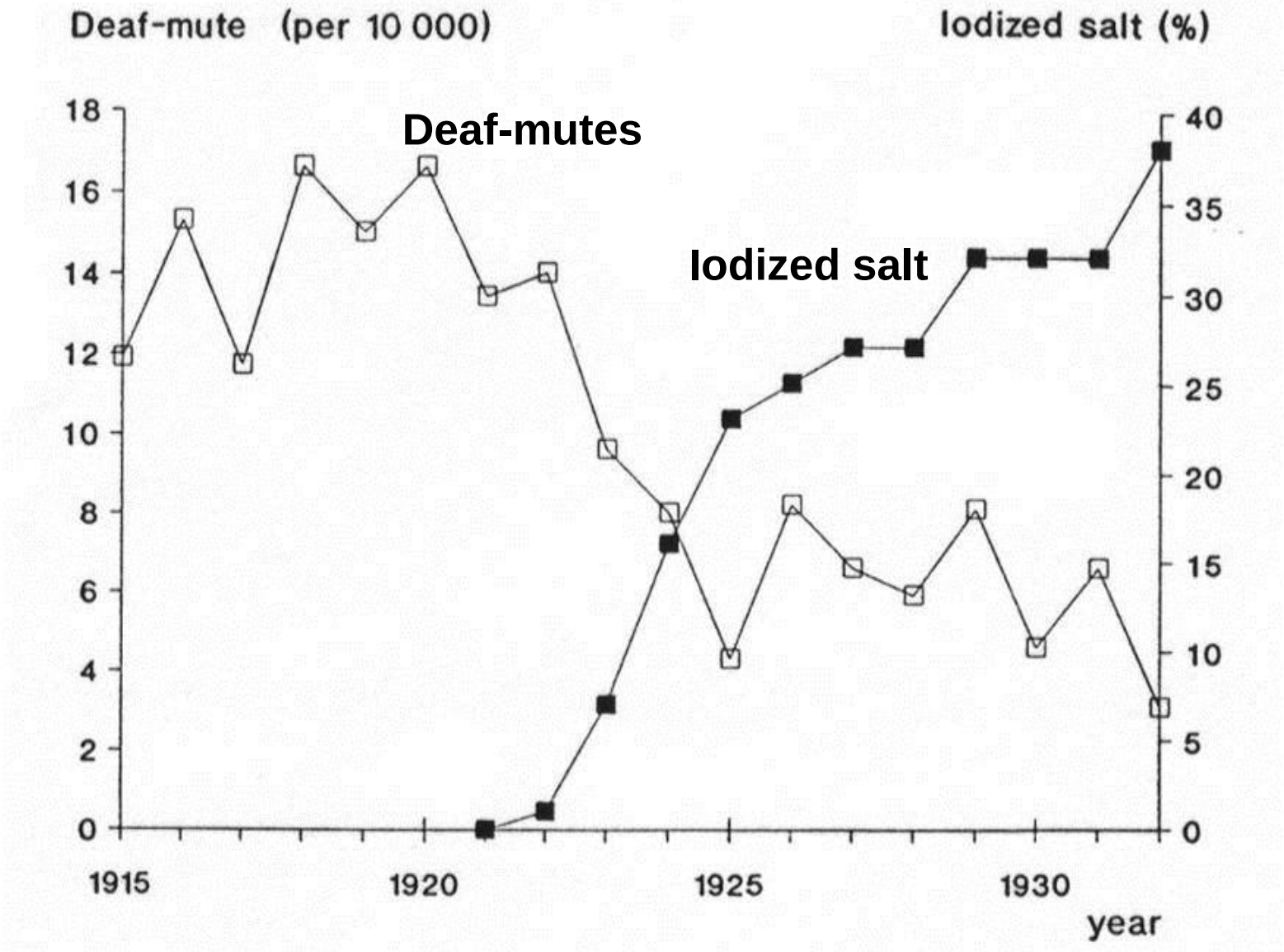
Micronutrient deficiencies

- Inter-related with stunting and wasting
- > 1 billion anemic, > 190 million children are vit A deficient, ~ 2 billion iodine deficient → annually 42 million newborns sub-optimal brain development
- Important for survival and development
  - Vitamin A (6-59m) supplementation ~24% mortality risk reduction
  - Therapeutic zinc (<5 years): more rapid recovery diarrhea, 5% mortality risk reduction
  - Maternal micronutrients (iron, folate, vit A…): birth outcomes, maternal status, child growth & development
  - Iron – loss in productivity: 5% blue collar workers; 17% heavy manual laborers; iodine **– 10-15 % IQ**

The network of connections is less dense!



Source: From Legrand, 1967.



Switzerland: Deaf-mutes in special schools 1915- 1932

Source: Hans Burgi, ICCIDDMember and Past President, Fluorine-Iodine Commission of the Swiss Academy of the Medical Sciences

Impact of undernutrition

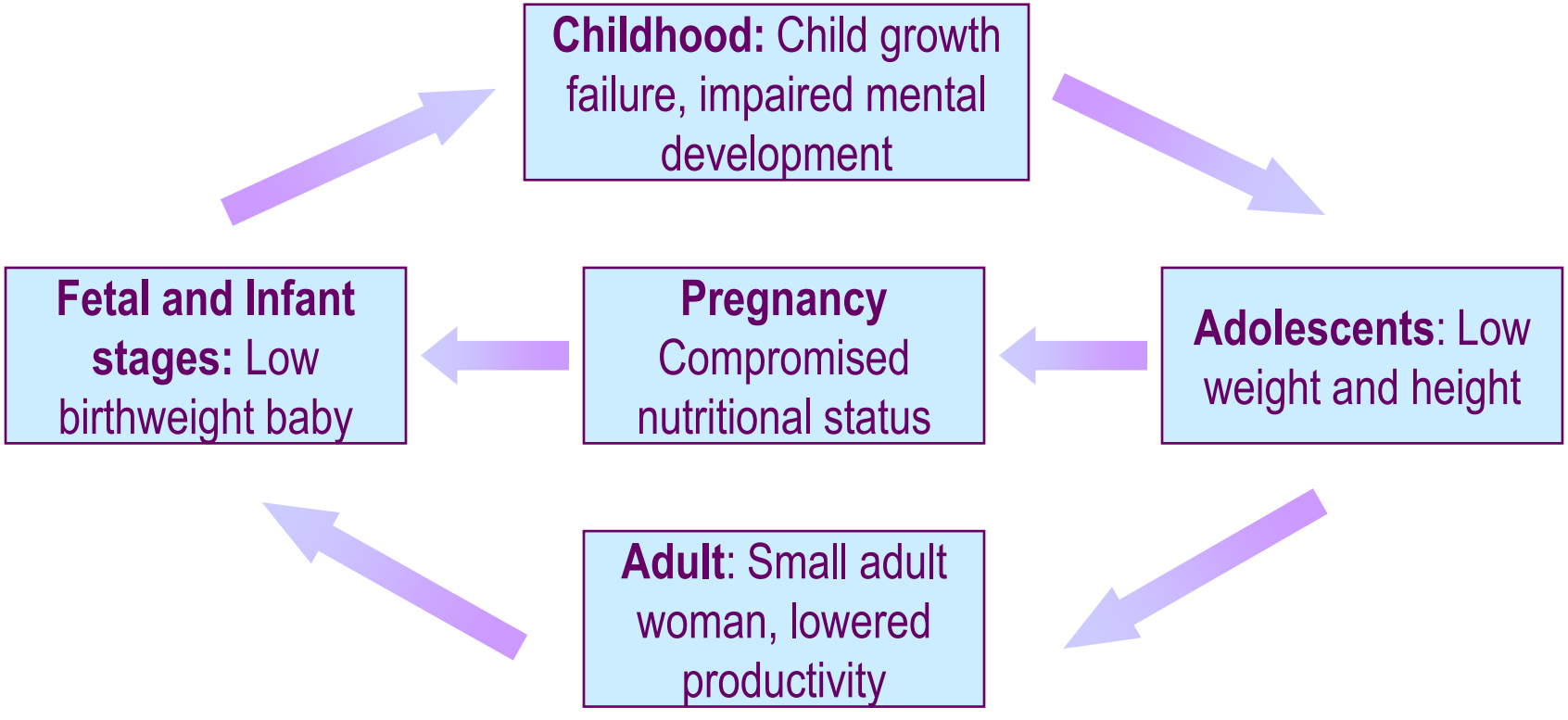
- Damage done in the early period of life is irreversible

- Increased risk of dying from infectious diseases (1.4 to 1.6 times)
- Stunting is associated with reduced school performance equivalent to 2-3 years of schooling
- Stunting associated with reduced income earning capacity (22% average; up to 45% has been reported!)
- Increased risk of non-communicable diseases in adult life
- Stunted girl is more likely to give birth to undernourished baby
- Reduced GDP by 2-3%

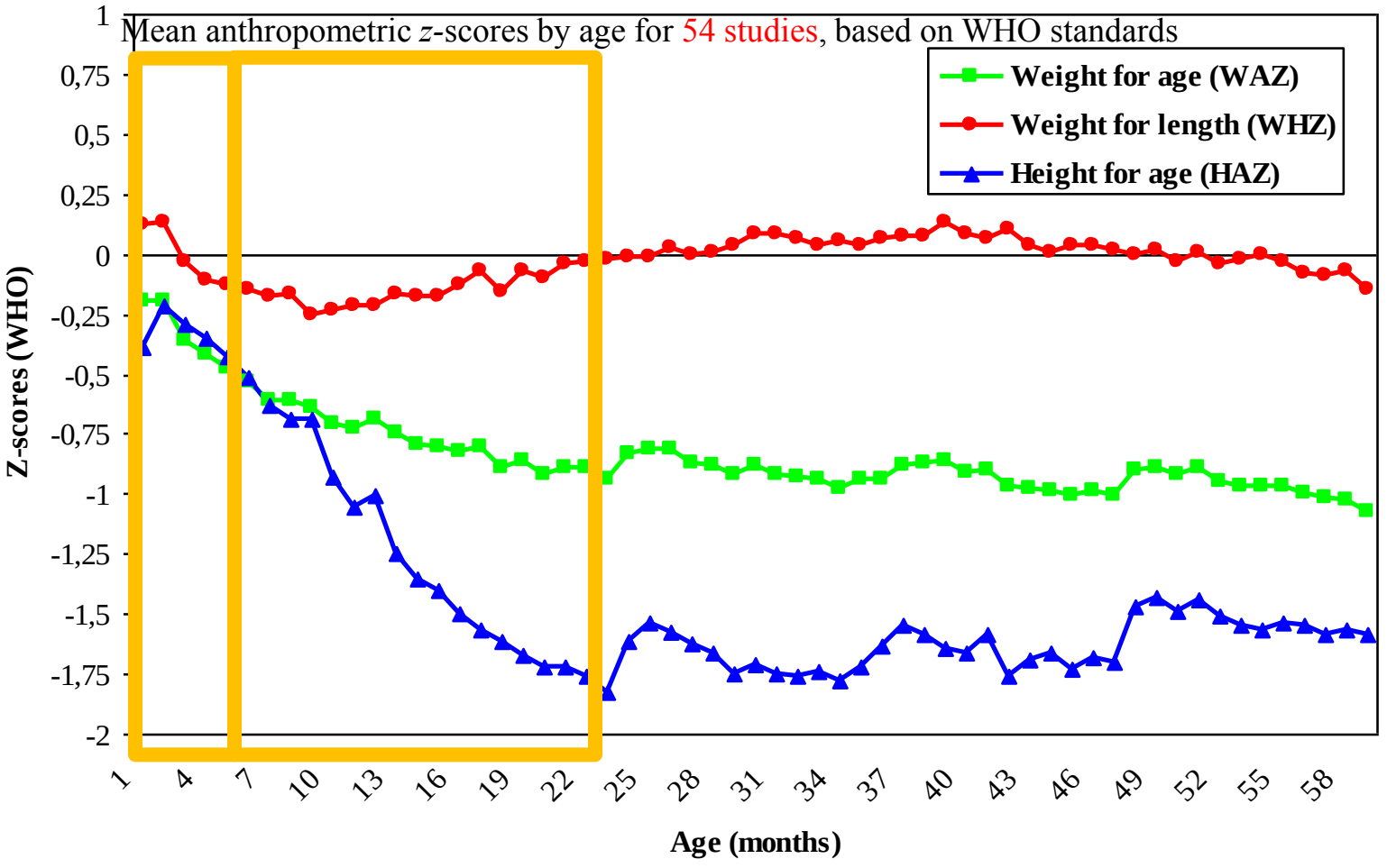
- About 20 million children suffer from severe acute malnutrition which greatly increased risk of death

Inter-generational Cycle of Undernutrition

The cycle of poor nutrition perpetuates itself across generations - supported by scientific evidence



Window of Opportunity & 1,000 days



The essence of stunting & underweight reduction, and also important for preventing acute malnutrition!

Scaling Up Nutrition Implications for UNICEF

unite for children

what we do & how

UNICEF approach nutrition action

- Scaling up evidence-based cost-effective interventions to prevent and treat undernutrition with priority to the window of opportunity: pre-pregnancy to child < 2 years
- Stunting is complex requiring an integrated, multi-sectoral approach, both nutrition sensitive and specific interventions:
  - Improved dietary quality (improved feeding and breastfeeding practices, improved micronutrient intakes)
  - Link with food security and social protection
  - Clean drinking water, hygiene and environmental sanitation
  - Health services (preventive and curative)
  - Women's empowerment
  - Women's and girls education

Nutrition interventions in the life cycle needed to reduce stunting and wasting

Pregnancy	Iron & folic acid supplements Multi micronutrient supplementation Iodized salt Food supplements
Birth	Initiation of breastfeeding within 1 hr (Colostrum)
0-6 months	Exclusive breastfeeding Implementation Code on marketing infant formula
6-24 months	Introduction of complementary feeding Continued Breastfeeding up to 1 yr Multi micronutrient supplementation Vitamin A supplementation (& de-worming) Zinc supplementation Treatment of severe malnutrition Treatment of moderate malnutrition Social safety net programmes
24-60 months	Vitamin A supplementation (& de-worming) Treatment of severe malnutrition Treatment of moderate malnutrition Social safety net programmes

Developing country data based on SOWC 2012; * based on estimation

Role UNICEF

Upstream

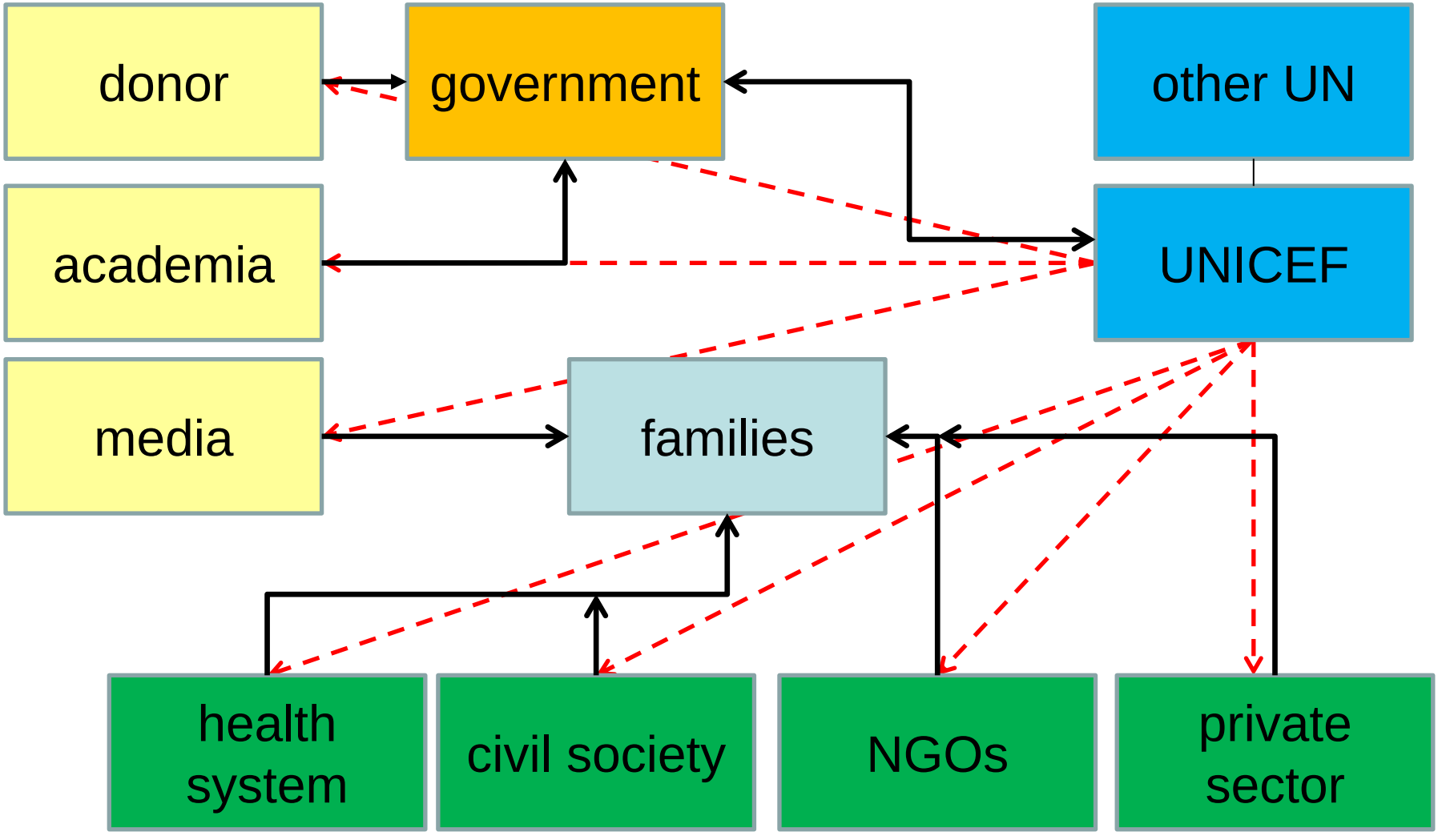
- advocacy and policy – global and national

Downstream

- programme implementation - through partners
- convening and coordinating
- capacity building

Monitoring situation of children and women, measuring and documenting results

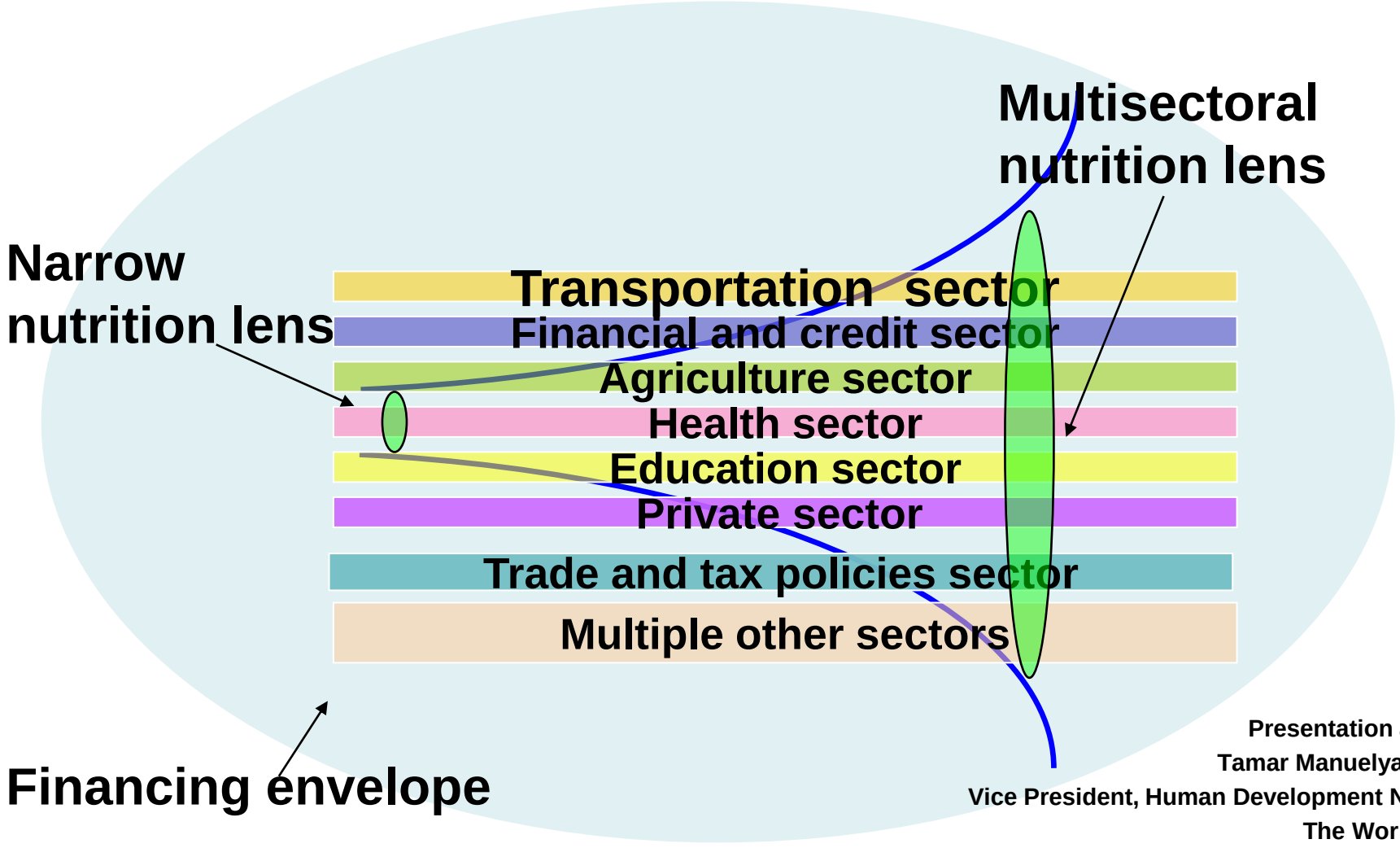
How we work – country context



Operational factors

- National policy, ownership and stakeholder consensus
- Required resources: $, skills, staff – build capacity
- Demand/acceptability among target population eg iron folic acid, fortified foods
- Programmatic clarity, co-existence with other interventions
- Can it be sustained?
- UNICEF role: link policy with programme implementation with coordination and partnerships

“Nutrition-sensitive programming” -- moving from a narrow “nutrition lens” to a wider “development lens”



Presentation at CIDA
Tamar Manuelyan Atinc
Vice President, Human Development Network
The World Bank

December 2010

We know what to do – undernutrition
The REACH intervention areas (WFP, WHO, FAO, UNICEF)

Improve breastfeeding and complementary feeding

- Exclusive breastfeeding
- Complementary feeding

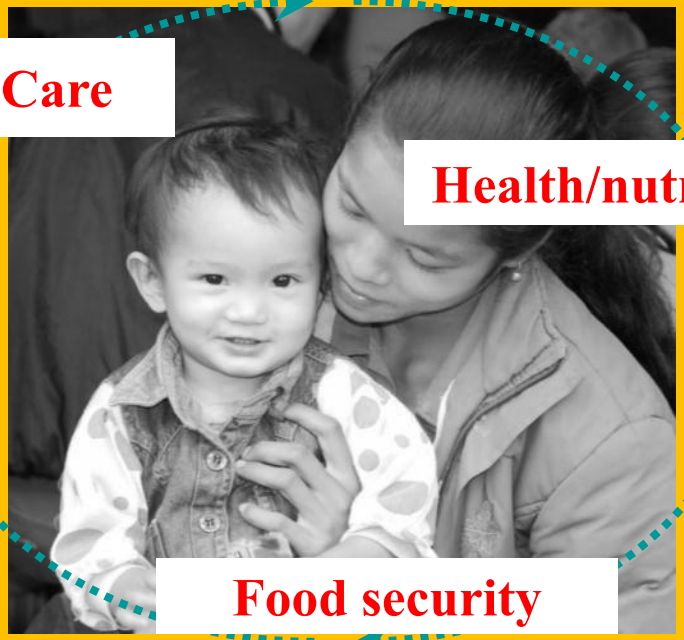
Improve hygiene and parasite control

- Hand washing with soap
- Bed nets and intermittent preventive treatment
- Deworming
- Household water treatment

Care

Health/nutrition

Food security



Increase micronutrient intake

- Micronutrient supplementation and fortification

Increase treatment of severe acute malnutrition

- Therapeutic feeding

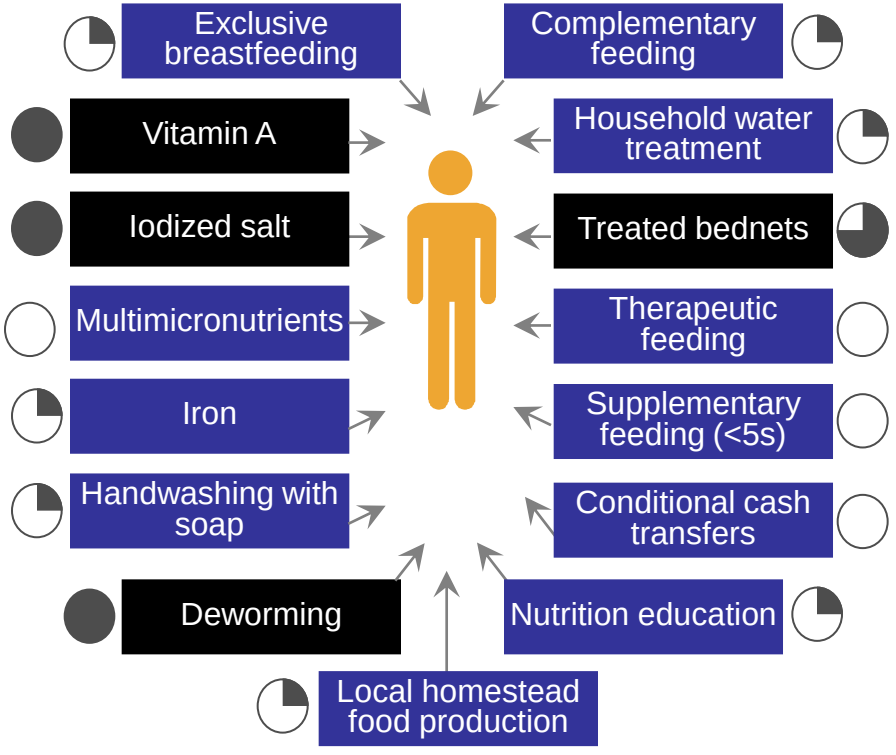
Improve availability and diversity of food and support livelihoods

- Local homestead food production
- Transfers and safety nets
- Strengthening local purchase from smallholder farmers
- Supplementary feeding

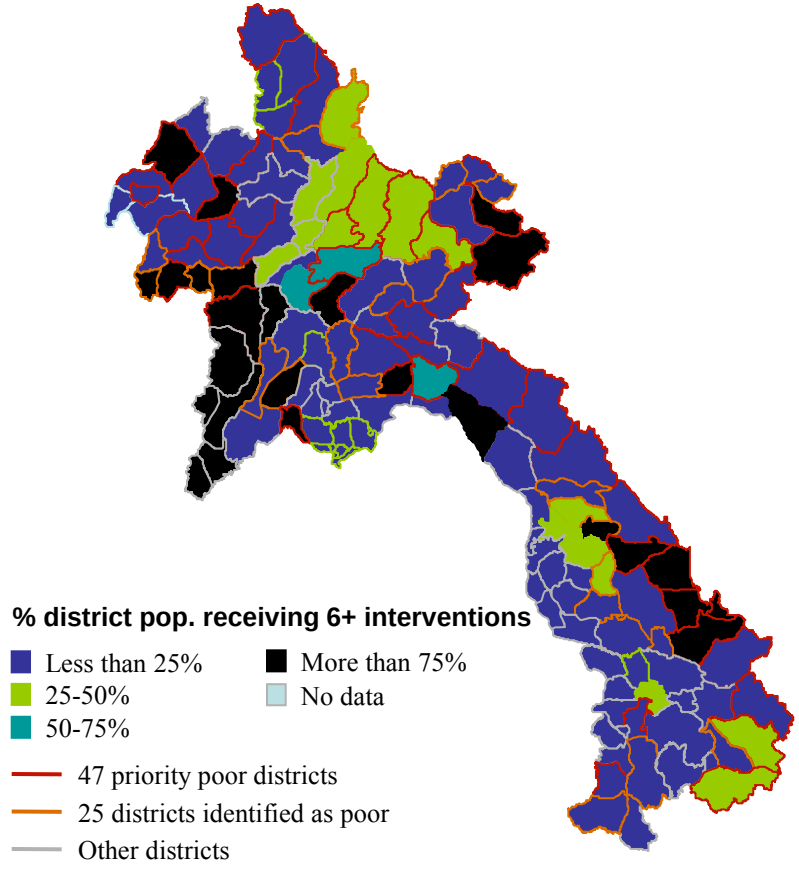
Interventions are proven and known to be effective.
The challenge is to scale them up

REACH: Scale assessment identifies existing levels of coverage by intervention and geography

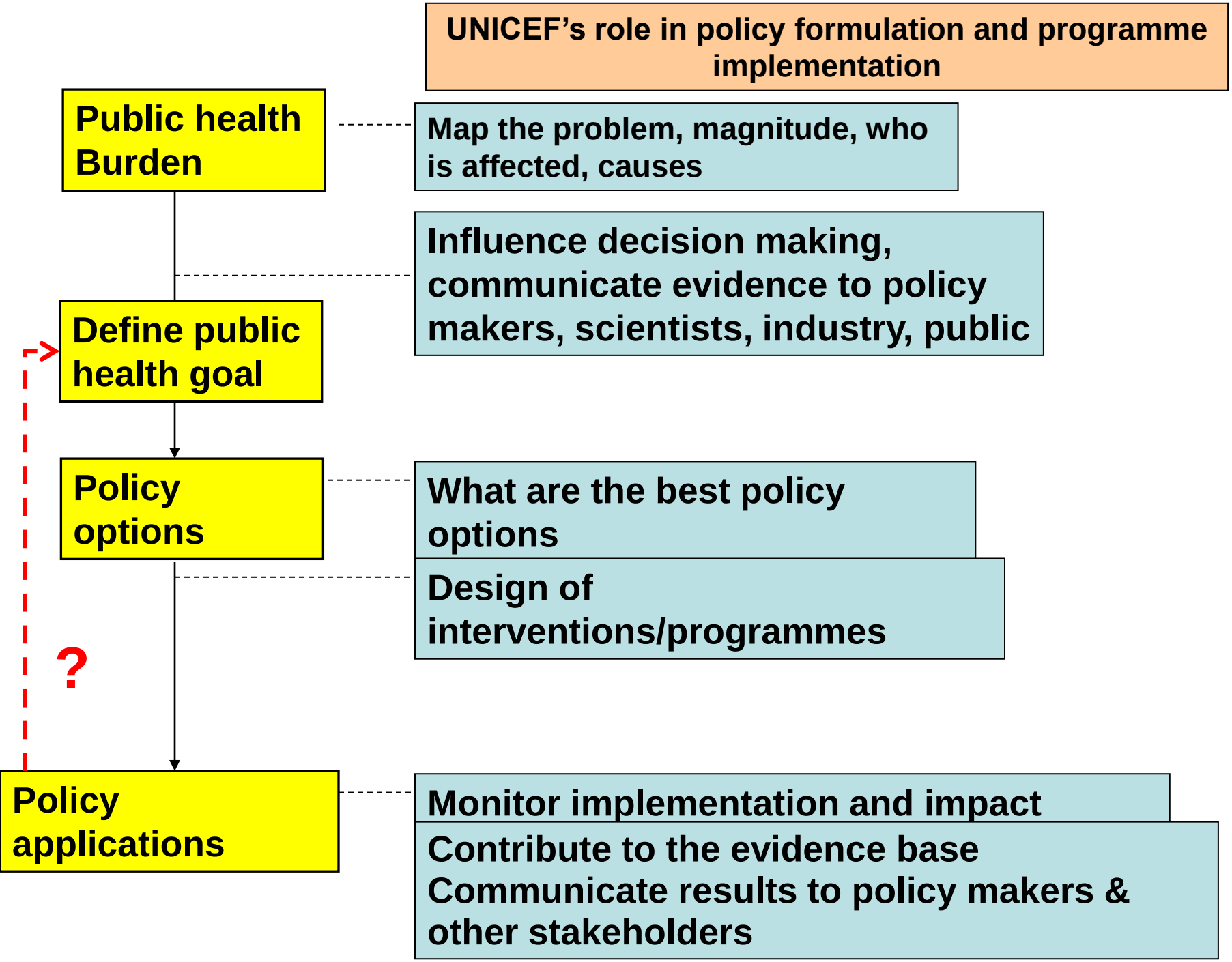
A typical child in Lao PDR receives only ~4 of the interventions it needs



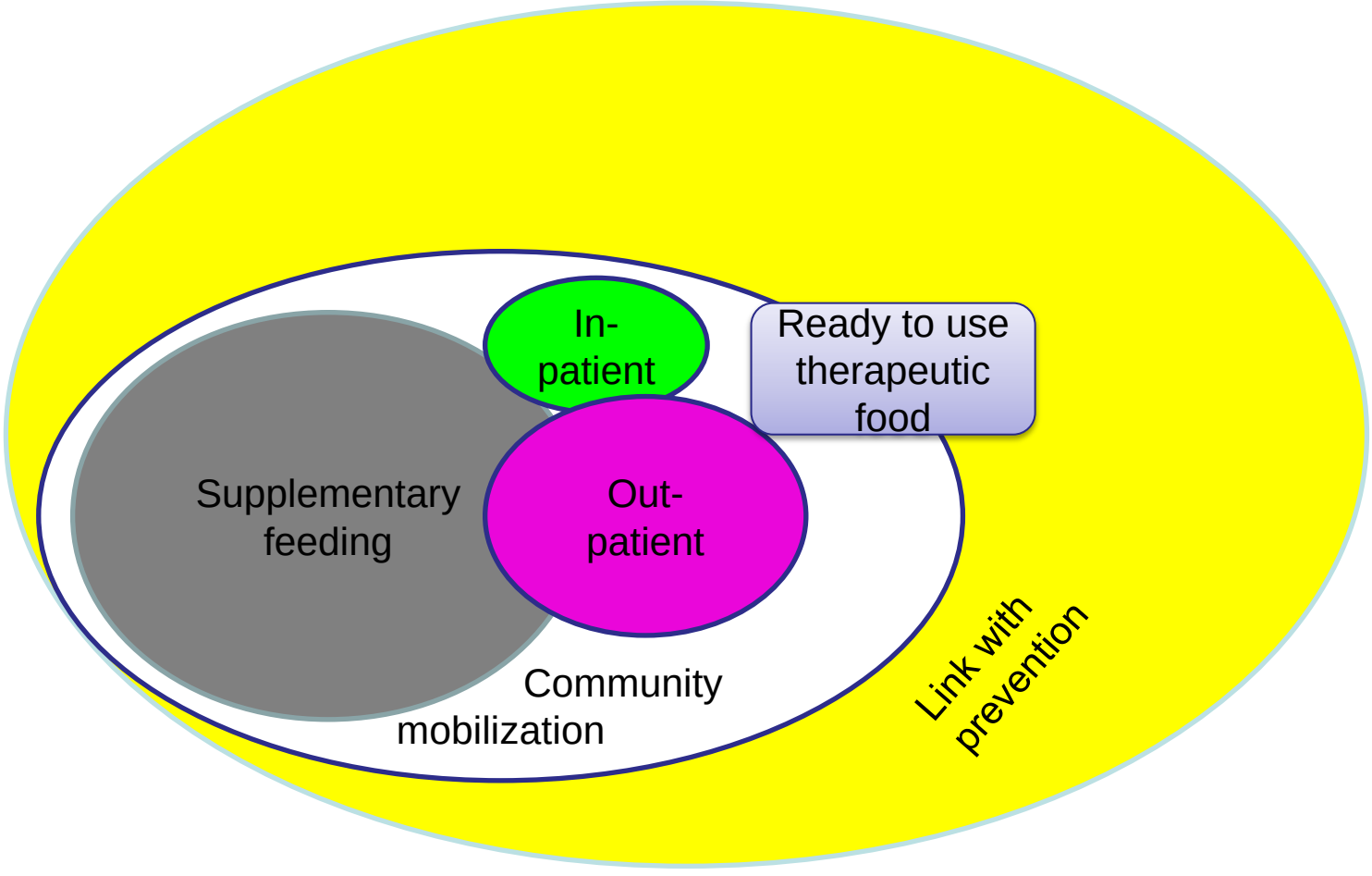
~80% of districts cover less than 25% of population with package of 6+ interventions



Note: Map produced by the NSC, July 2003. Coverage map reflects districts proposed for early implementation of MNCH core package as having full coverage
Source: Poverty statistics reports, provincial committees/authorities


UNICEF's role in policy formulation and programme implementation
Public health Burden
Map the problem, magnitude, who is affected, causes
Influence decision making, communicate evidence to policy makers, scientists, industry, public
Define public health goal
Policy options
What are the best policy options
Design of interventions/programmes
?
Policy applications
Monitor implementation and impact
Contribute to the evidence base
Communicate results to policy makers & other stakeholders

Community based nutrition model



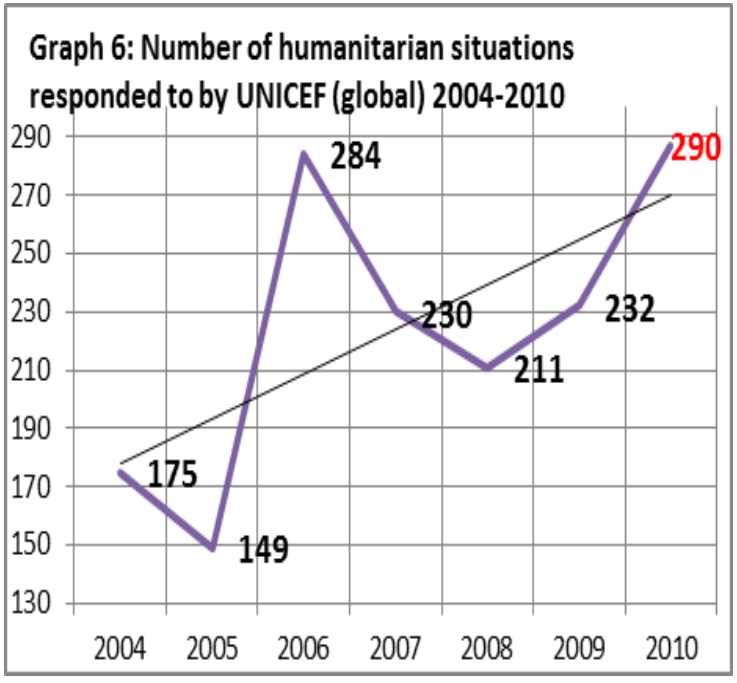
Community based nutrition

- Early detection of SAM and management
- IYCF Counselling & support to reach the most vulnerable
- Integrated interventions with water, education, health
- Social enabling factors – e.g. community conversation

Humanitarian Situations

- Increase frequency and complexity of humanitarian crisis
- UNICEF responded to a total of 290 humanitarian situations in 98 countries in 2010
- UNICEF aims to provide effective, predictable and programmatic and operational support to humanitarian action
- Building resilience and reducing risks are cornerstones of UNICEF programs

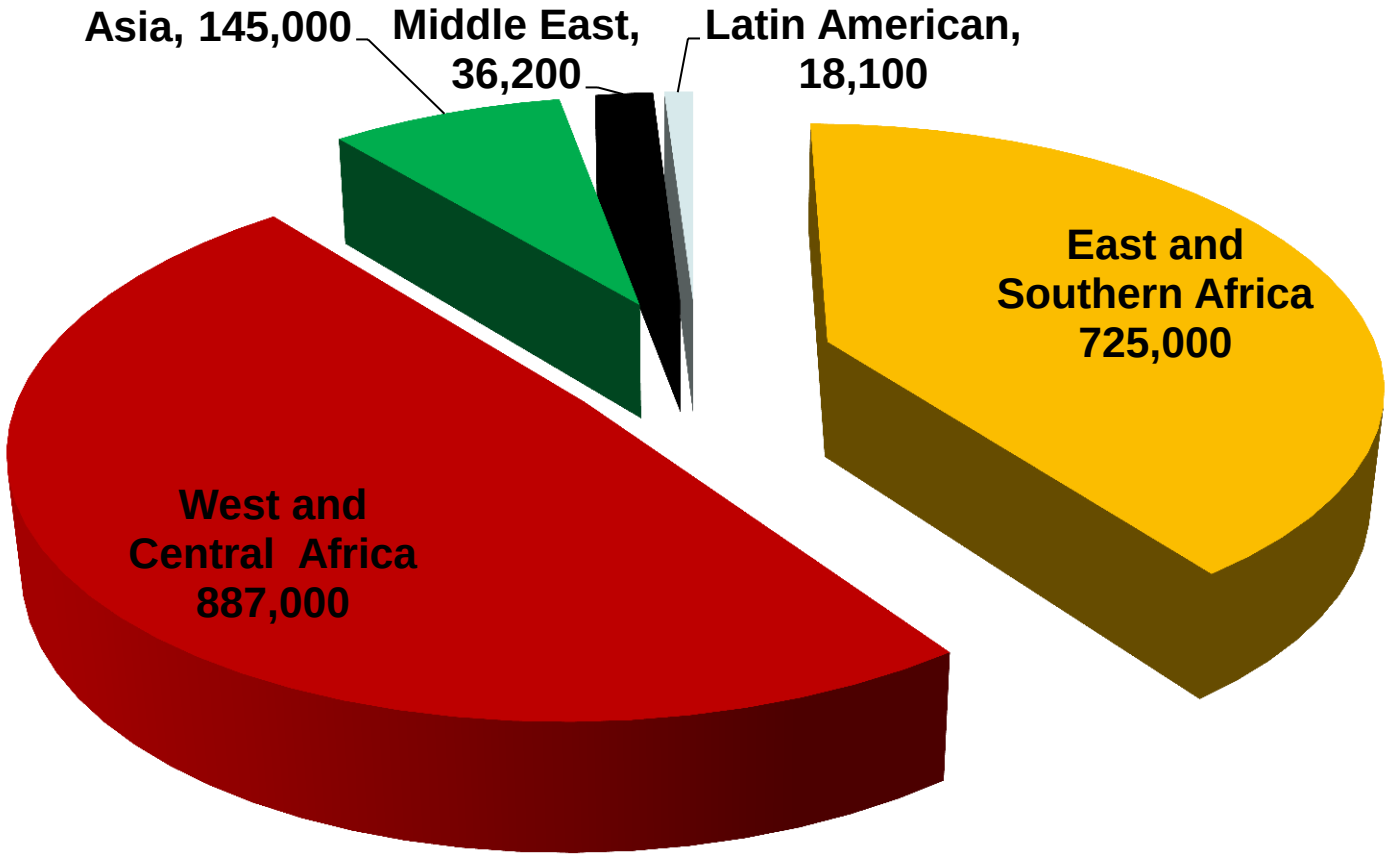
- Humanitarian situations often exacerbate further the nutritional status of young children and women
- Timely scale-up of life saving interventions such as treatment of SAM is key during humanitarian crisis



Management of SAM

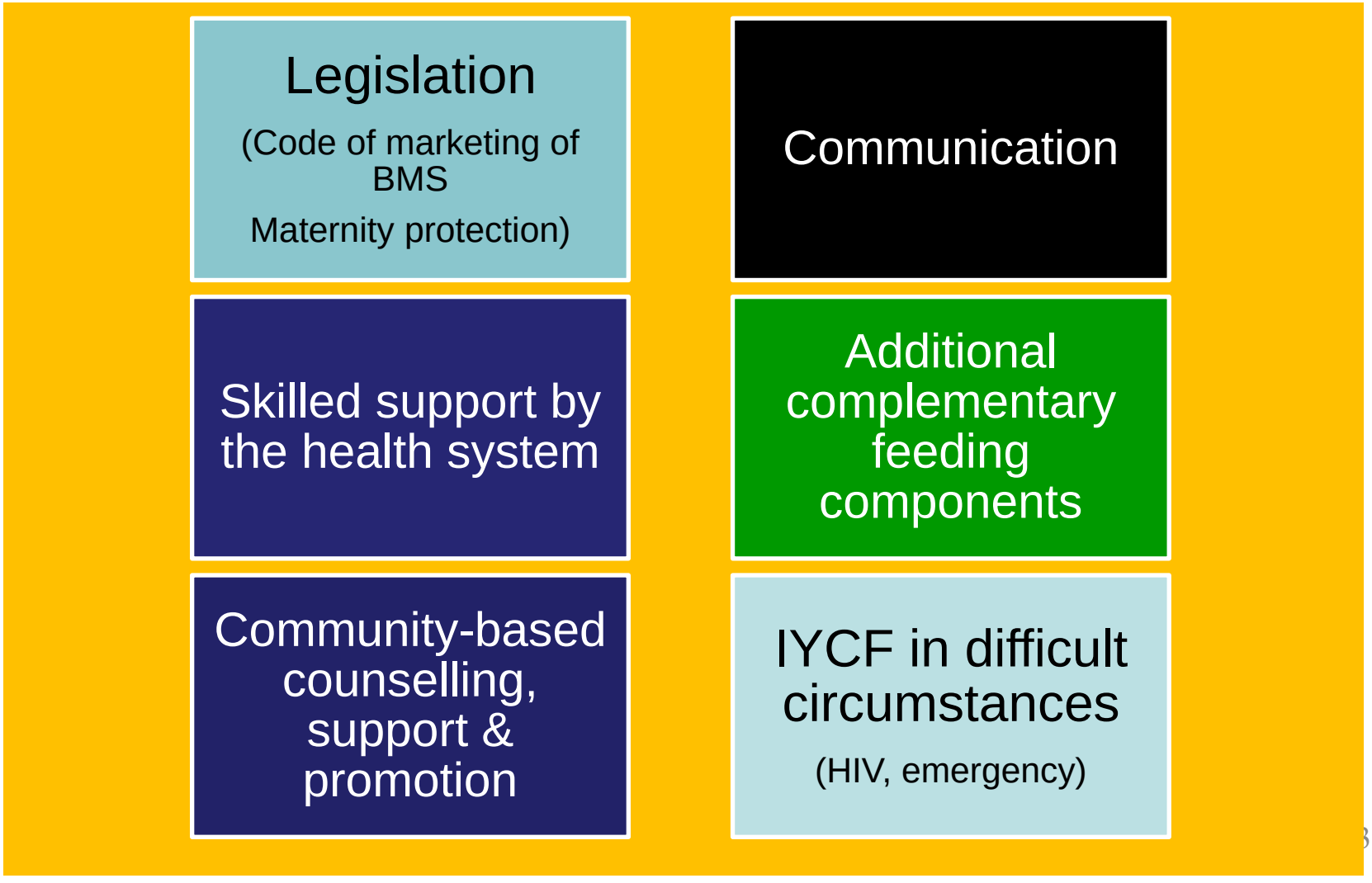
- Center based (late detection) → home based (early detection in community)
- From high energy milk to F75/F100 and ready to use therapeutic food (RUTF)

Treatment of Severe Acute Malnutrition (# treatments in 2011 - 1.8M)



Total caseload ~20 million

Key Components of a National IYCF Strategy



Additional complementary feeding components

Improving the quality of CF through optimal use of locally available foods

Improving the **availability of high quality local foods** through **increasing agricultural production** (e.g. homestead production, animal husbandry, etc)

Provision of supplements for complementary feeding (MNPs, LNS, fortified complementary foods) in food-insecure populations, and

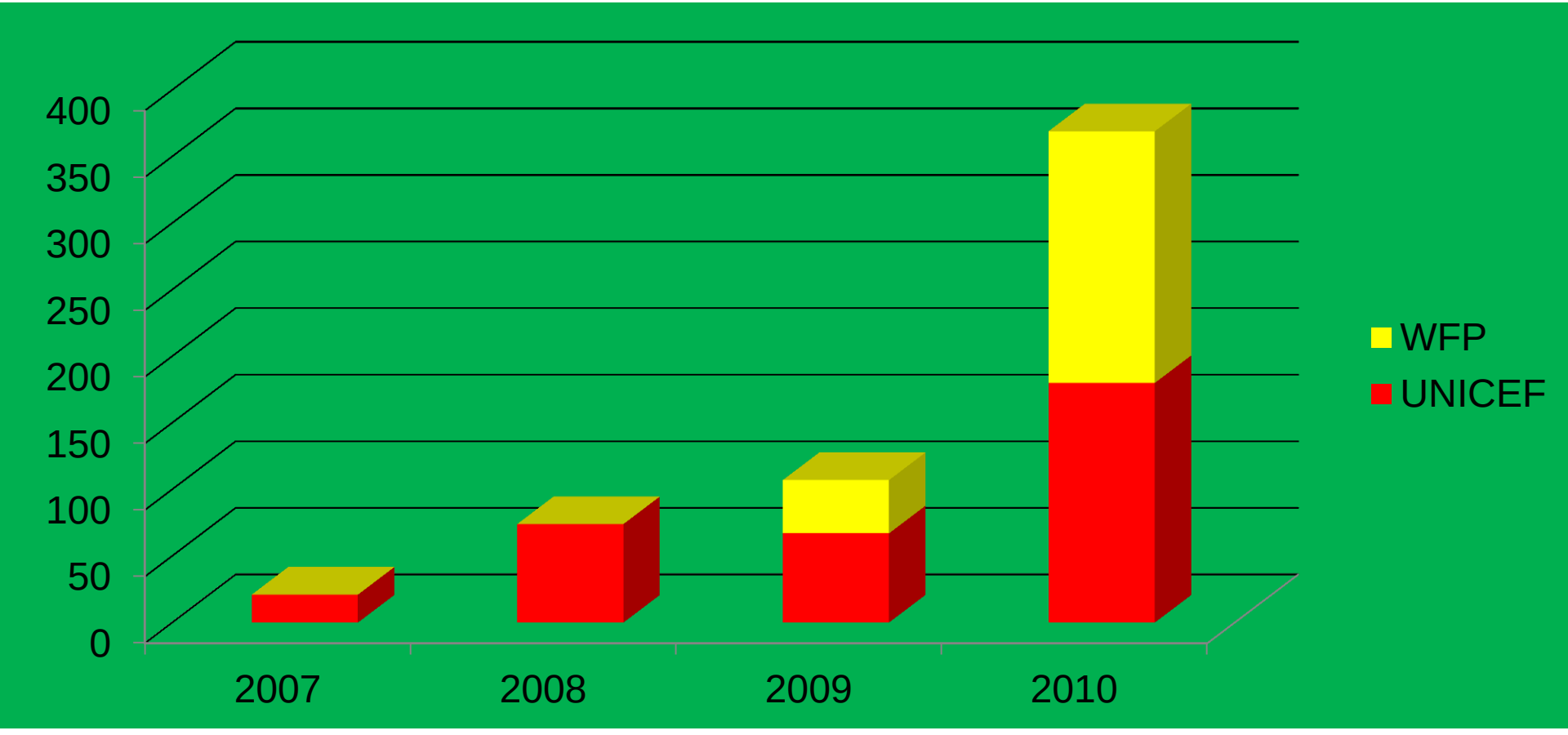
social & commercial marketing of nutrition supplements and foods for complementary feeding in general population, including stimulating local production

Social protection schemes with nutrition component - complementary feeding. (e.g. in kind complementary foods, vouchers, cash transfers for the vulnerable families with children 6-24 months)

Home fortification

- Improve the quality of food consumed by children 6-24 months by adding a vitamin powder (MNP) or lipid based spread – developed in 1990's
- Countries with scaling up MNP programs: >22 countries – 3 with national programmes
- Good impact on anemia and delivered as part of infant and young child feeding programmes

Global procurement micronutrient powders (2007-2010)



x million sachets

Sources: WFP and UNICEF supply division
Note: does not include NGO procurement and direct procurement from supplier

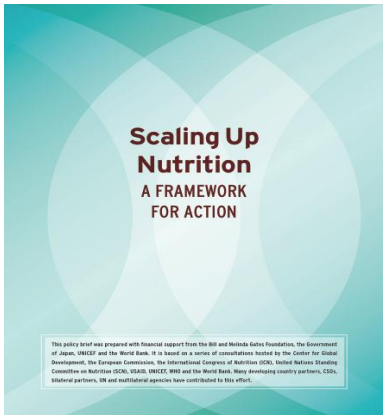
results?

Key developments

- High level commitment, more interest, more funding – SUN – global, national
- Increased attention for chronic undernutrition
- Integrated approach – e.g. REACH
- Improved approaches
  - Community based management acute malnutrition & development of ready to use therapeutic food
  - Home fortification
  - Delivery and communication science
  - Private sector role expanded
- New partnerships, better complementarity

Changed perspectives on Nutrition

- Changed perspectives due to science, economic data, food crisis, emergencies, Scaling Up Nutrition (SUN)
  - Formation of Secretary General's high level task on force food security and nutrition
  - Changed nutrition policies (eg EU, Ireland, US)
  - Increased investment (eg EU, CIDA, DFID, US…)
  - Proposed change in global nutrition architecture (building on SUN, improving level of engagement among key stakeholders)
  - High expectations to achieve results, and demonstrate a reduction in stunting
  - Early Risers…



SUN Early risers	REACH	High stunting levels (>44%)
Bangladesh	Bangladesh	Afghanistan
Burkina Faso	Ethiopia	Timur Leste
The Gambia	Ghana	Burundi
Ghana	Lao PDR	Yemen
Guatemala	Mali	Ethiopia
Lao PDR	Mauritania	Madagascar
Malawi	Mozambique	Nepal
Mali	Nepal	Guatemala
Mauritania	Rwanda	India
Mozambique	Sierra Leone	Lao PDR
Namibia	Tanzania	Malawi
Nepal	Uganda	Niger
Niger		Zambia
Peru		
Senegal		
Tanzania		
Uganda		
Zambia		
Zimbabwe		

Stunting rates from SOWC 2012

Nutrition interventions and their coverage rates

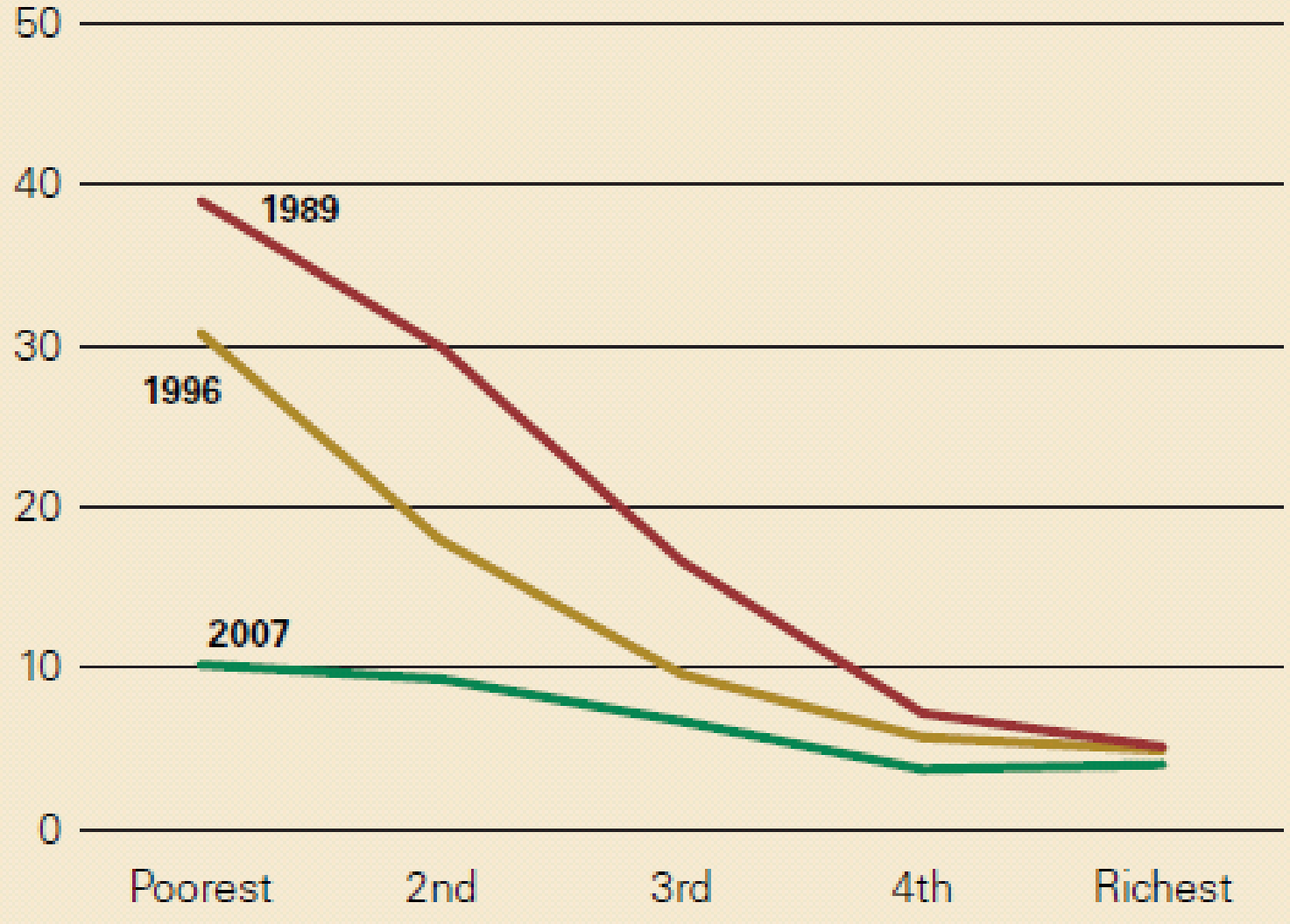
Pregnancy	Iron & folic acid supplements Multi micronutrient supplementation Iodized salt Food supplements	- - 71% -
Birth	Initiation of breastfeeding within 1 hr (Colostrum)	43%
0-6 months	Exclusive breastfeeding Implementation Code on marketing infant formula	37% 100 countries
6-24 months	Introduction of complementary feeding Continued Breastfeeding up to 1 yr Multi micronutrient supplementation Vitamin A supplementation (& de-worming) Zinc supplementation Treatment of severe malnutrition Treatment of moderate malnutrition Social safety net programmes	60% 75% 20 countries 66% - <10%* - -
24-60 months	Vitamin A supplementation (& de-worming) Treatment of severe malnutrition Treatment of moderate malnutrition Social safety net programmes	66% <10%* - -

Developing country data based on SOWC 2012; * based on estimation

Can it be done?
Stunting reduction at scale:
presence of community based systems

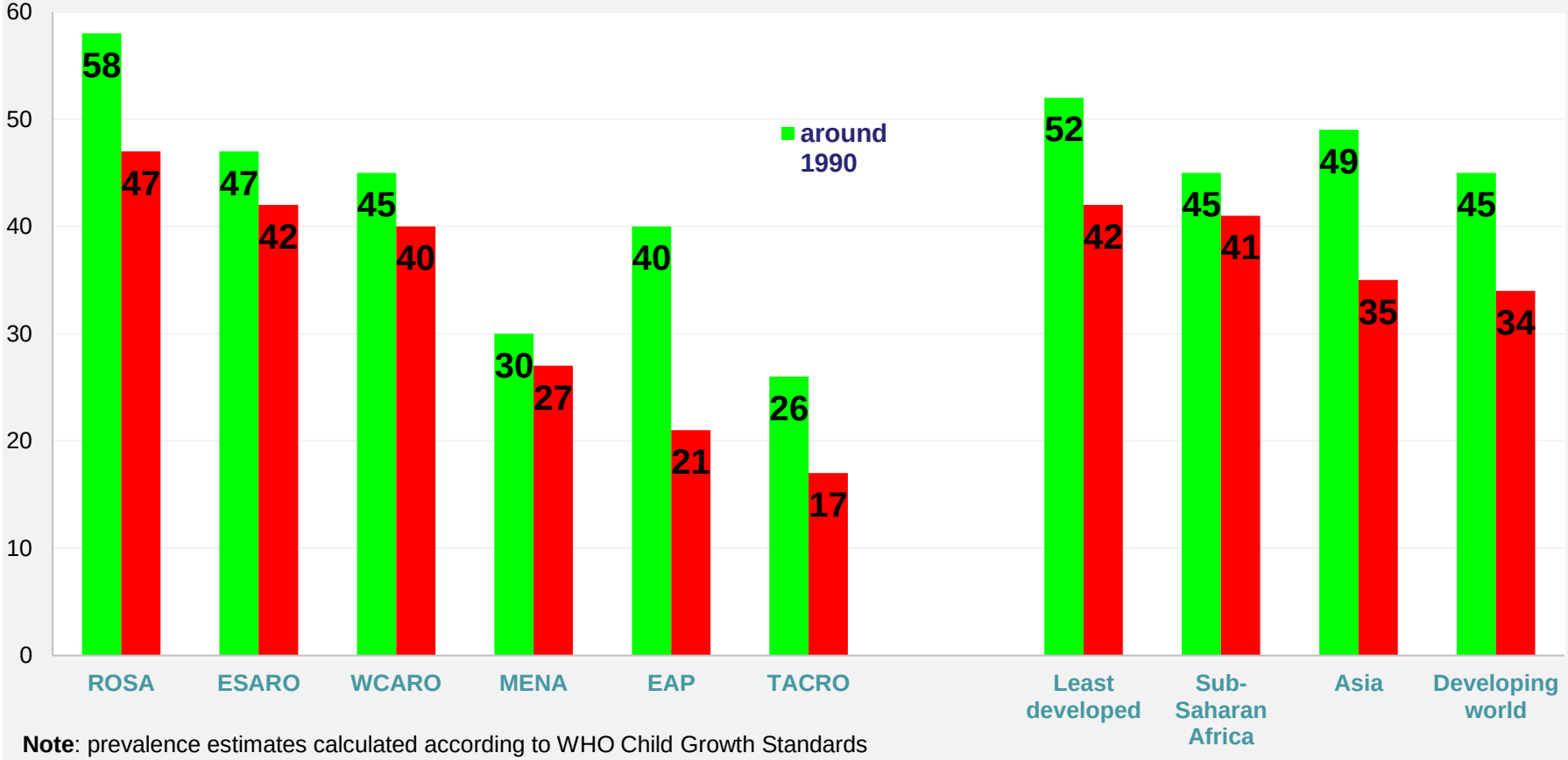
- Nepal: between 2006 and 2011 stunting decreased from 49% to 41% (Nepal DHS)
- Rwanda: between 2005 and 2010 stunting reduced from 51% to 44% (DHS).
- Ethiopia: between 2005 and 2010 stunting reduced from 52.2% to 44.4% (DHS)
- Peru: 54% to 37% from 2000 to 2004 (subnational among 75000 children).
- Brazil

Prevalence of stunting among children under age 5, by income quintile, Brazil, 1989, 1996 and 2007 (%)



Source: Monteiro and others 2010.

Trends in stunting prevalence among under-five children 1990 to 2010



Note: prevalence estimates calculated according to WHO Child Growth Standards
Source: DHS, MICS and national nutrition surveys, 1990 - 2010, and additional analysis by

challenges

directions

Challenges, directions

- Moving from vertical intervention approach to integrated programme packages
- Establishing linkage with food security/agriculture and social protection is foreign to nutrition staff
- Advocate for nutrition being an outcome of other sector programmes (ECD, Agriculture, social protection)
- Community based models are the center piece for stunting reduction – needs R&D and partnerships
- How to make behavior change communication more effective, measurable
- Finding best delivery platform to reach those most affected weighing pros and cons – not always the health system

Challenges, directions

- Capacity needs:
  - Programme engineering - analysis of bottlenecks
  - How to work multi sectorally
- Maternal nutrition
- Package of interventions is changing & with more innovations - how do they relate, how to assure safety, effectiveness, efficiency and operational realities
- Better evaluation of how well policy applications work and feed back to guide policy development
- More attention for better coordination

thank you!