

# The Human Side of Development : ADB's Strategies on Population, Health and Nutrition

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# Key Policies/Publications

- Population Policy (1994)
- Support for Human Development (1998)
- Health Sector Reform: Asia & Pacific('99)
- Policy for the Health Sector (1999)
- Nutrition and Development Series (2001)
- Policy for the Education Sector (2002)
- Nutrition Policy (expected: 2003)

# Millenium Development Goals by 2015

- 1) Eliminate most of infant, <5 child, and maternal deaths.
- 2) Reproductive health for all
- 3) Universal primary school enrolment and completion
- 4) Reduce severe hunger and poverty by half

**Improving Maternal and Child Nutrition is essential for LIFE and LEARNING**

**and will attract investment when linked to the MDGs**

# Population and Reproductive Health Policy (1994)

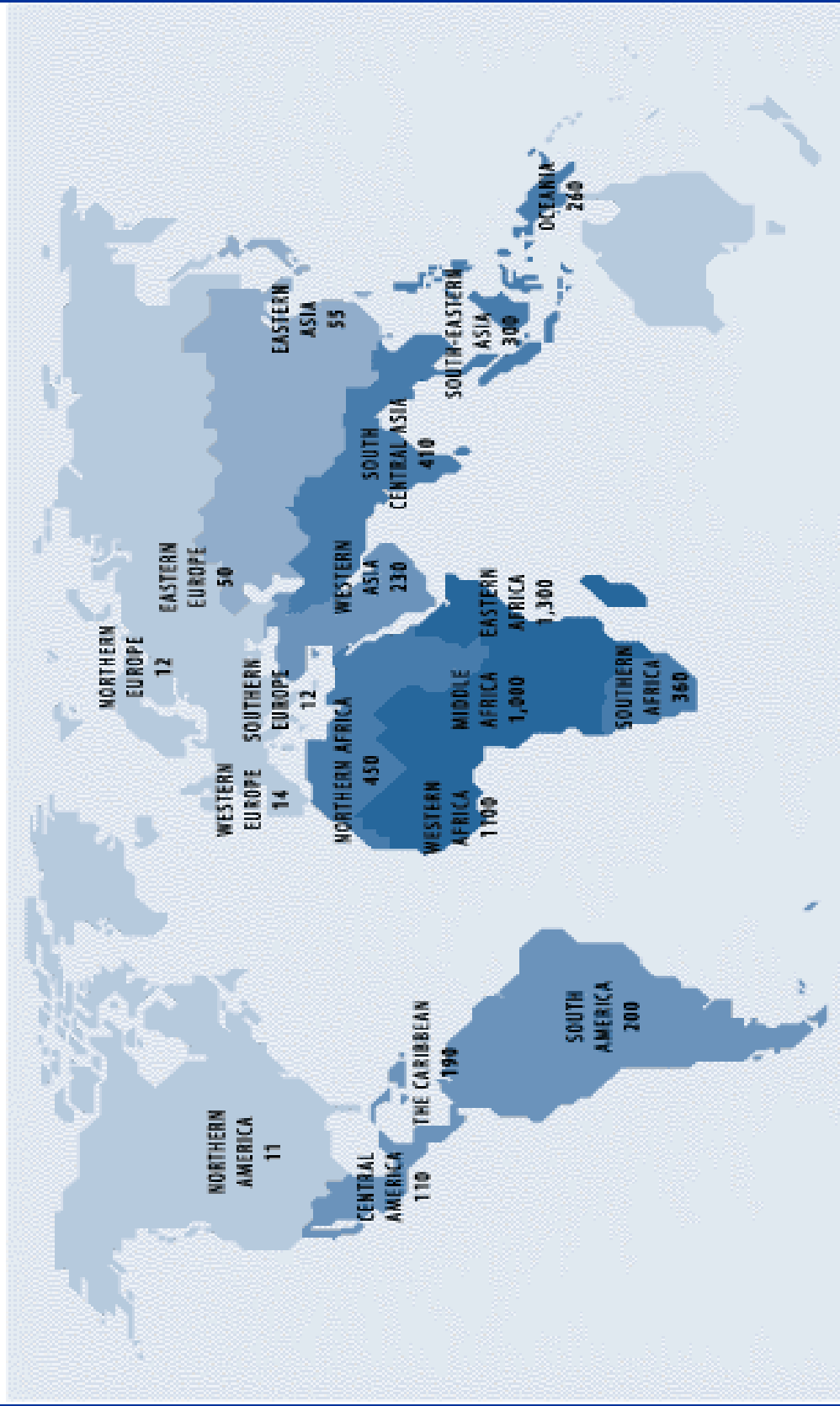
## < A Woman-centered Strategy >

- NO: Family Planning Quotas/supply-driven
- YES to Protection of Reproductive Rights and Reproductive Choices of Women
- YES to Education of Girls and Women  
(non-formal and distance)
- YES to equitable access to effective reproductive health and family planning
- KEYS: Quality of Care; satisfy unmet need (1/3)

# Policy interlinks three processes

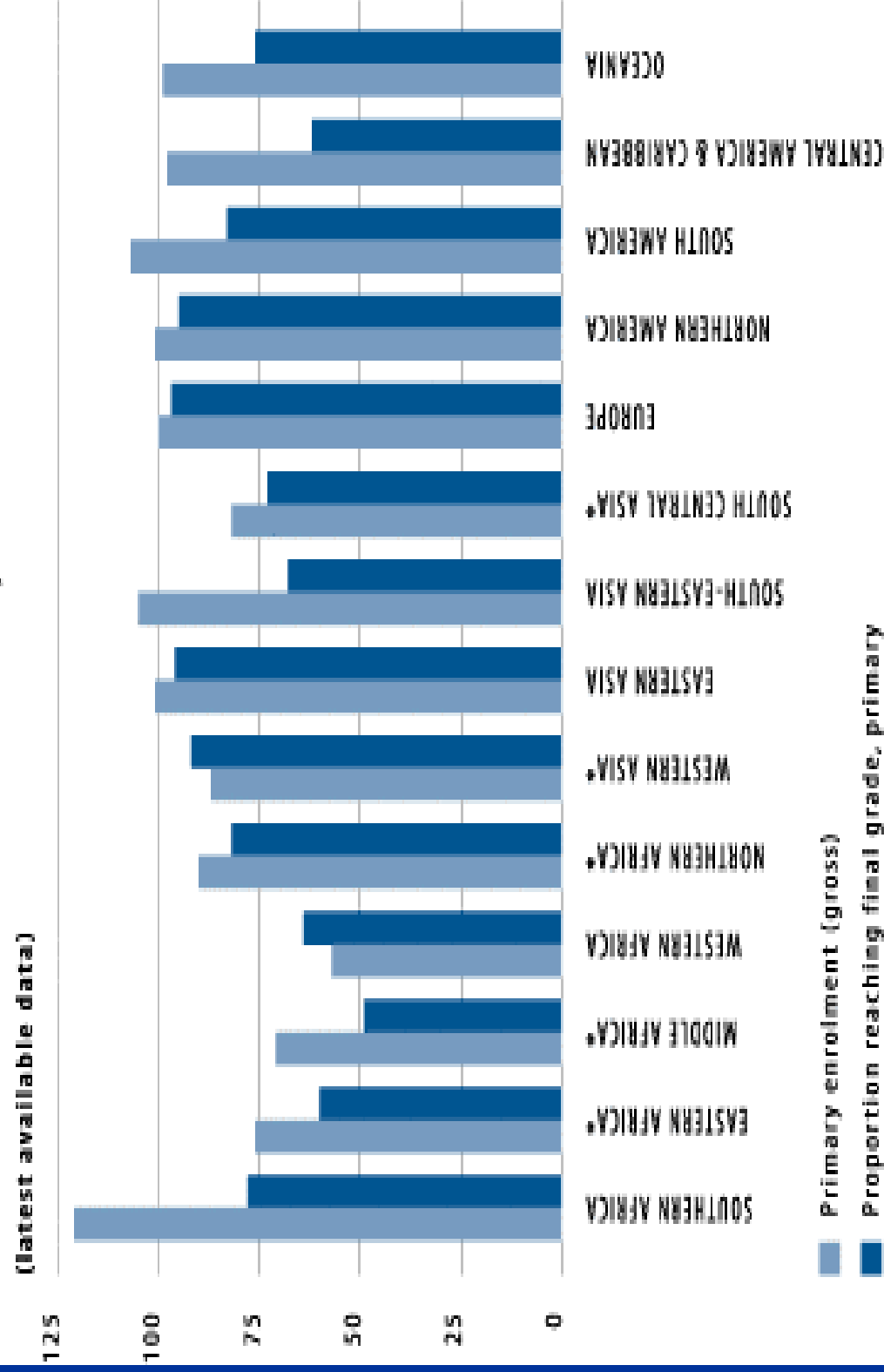
- Enhancement of educational, economic and social status of women will alter concept of ideal family size
- Protection of reproductive health/choices raises prospects of children becoming healthy/productive adults
- Equitable access to RH/FP creates effective demand from educated citizens, shifts service structure to private sector

**FIGURE 1: MATERNAL MORTALITY BY SUBREGION, 1995**  
 (deaths per 100,000 live births)



Source: WHO/UNICEF/UNFPA

**FIGURE 8: PROPORTION OF GIRLS ENTERING AND COMPLETING PRIMARY SCHOOL, BY SUBREGION**  
(latest available data)



\* In these subregions boys' enrolment exceeds girls' by at least 10 per cent.

Source: UNESCO (see Technical Notes).

# Project examples

- PAK: Primary Education (Girls') Sector
- BAN: Secondary Education
- PHI: Nonformal Education
- PHI: Safe Motherhood
- PAK: Women's Health

Girls' / Women's Education Loans and Technical Assistance

Loan No.	Country	Title	Amount Approved (US\$-Million)	Date Approved
<b>1995 -</b>				
1621	LAO	Basic Education (Girls)	20.000	25 Jun 1998

TA No.	Country	Title	Amount Approved (US\$-Million)	Date Approved
<b>Before 1994</b>				
0907	PAK	Primary Education (Girls)	.150	13 Oct 1987
0907	PAK	Primary Education (Girls)	.025	13 Aug 1988
5513	REG	Education for Women in Asia	.500	04 Dec 1992
2157	CAM	Women in Development	.546	20 Sep 1994
<b>1995 -</b>				
2503	CAM	Employment Promotion for Women	.300	22 Dec 1995
9019	AFG	Community-Based Gender Sensitive Basic Education for the Poor	4.000	10 Sep 2002

# Health Policy(1999): Pro-Poor

- Accessible/affordable primary health care
- Improve Project Quality midstream
- Support innovation and new technologies
- Emphasize evidence-based interventions
- Encourage governments to reform and diversify health financing
- Strengthen managerial capacity to improve sector efficiency

# Cross-Cutting Perspectives

- Addressing Health Transition
- Health-nutrition interactions
- Measuring health impacts of various sectors
- Health investment and poverty reduction
- Public-private partnerships w/ civil society
- Intersectoral collaboration: 'all boats rising'
- Regional Public Goods and Governance
- Risk Reduction as a Development Outcome

# Project examples

- BAN: Urban Health
- INO: Integrated Communicable Diseases Control
- PHI: Early Childhood Development
- INO: Health and Nutrition Sector Development
- CAM: Health Sector Support

## Loans on Health, Nutrition, and Population

		No. of Loans	Amount (\$Mn)
<b>Approved Loans</b>			
	(1978-1994)	27	793.640
	(1995-2001)	22	913.032
<b>2002 Pipeline Loan</b>		1	20.000
<b>Programmed Loans</b>			
	(2003-2005)	11	407.000

# Ten Top Global Risks to Health

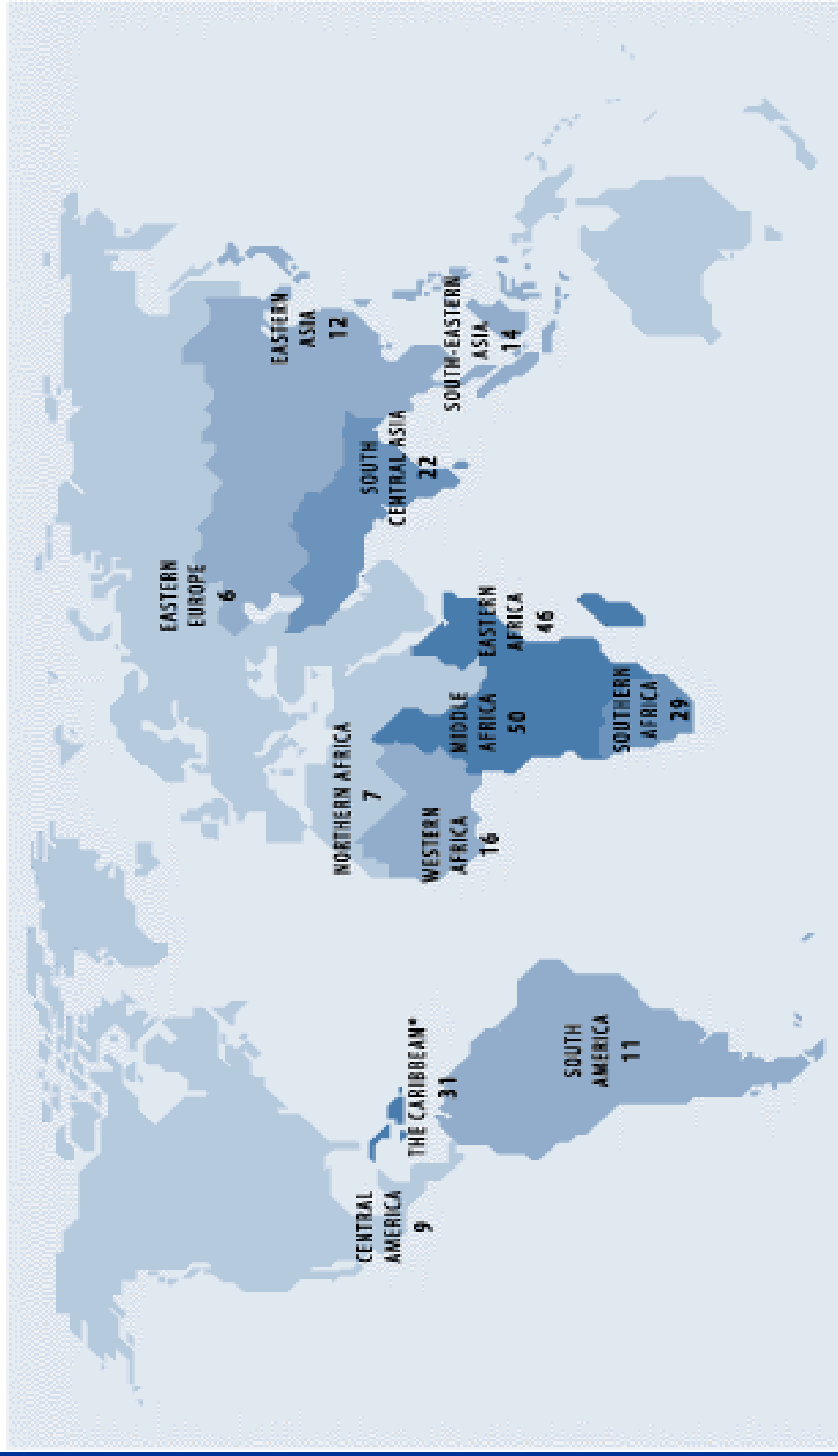
- Underweight
- Unsafe sex
- High Blood Pressure
- Tobacco and Alcohol Consumption
- Unsafe Water, Sanitation and Hygiene
- Iron Deficiency
- Indoor smoke
- High cholesterol
- Obesity

Source: World Health Report (2002)

# MALNUTRITION AND MORTALITY

54 % OF UNDER FIVE DEATHS  
ARE CAUSED BY MODERATE  
AND SEVERE UNDERWEIGHT

**FIGURE 3: PERCENTAGE OF POPULATION UNDERNOURISHED, BY SUBREGION, 1996-1998**

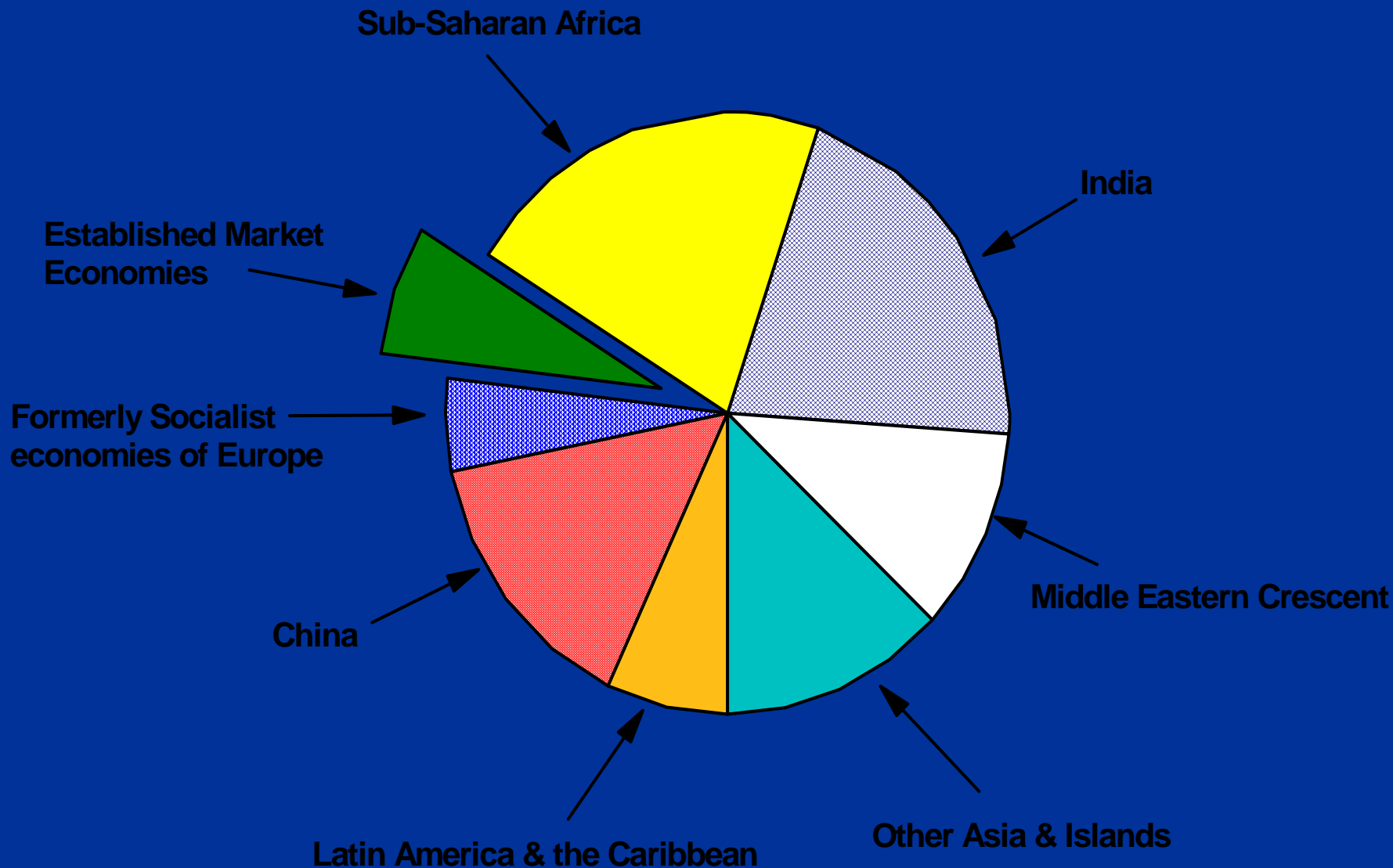


Legend: <10, 11-20, 21-30, >30

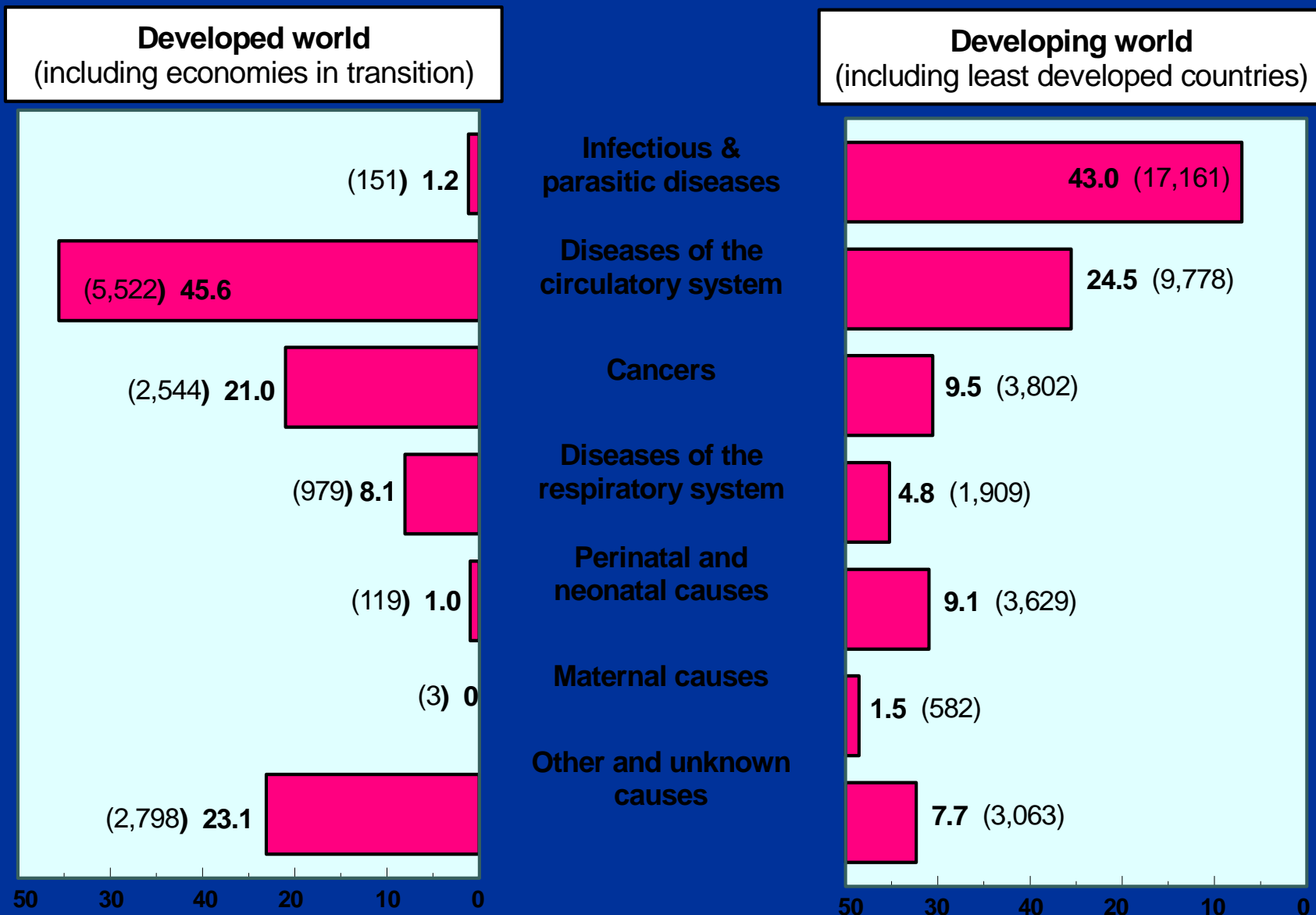
Source: United Nations Population Division

\*Caribbean average is skewed by high malnourishment in Haiti.

# The proportion of lost and disabled years by region in the world in 1990

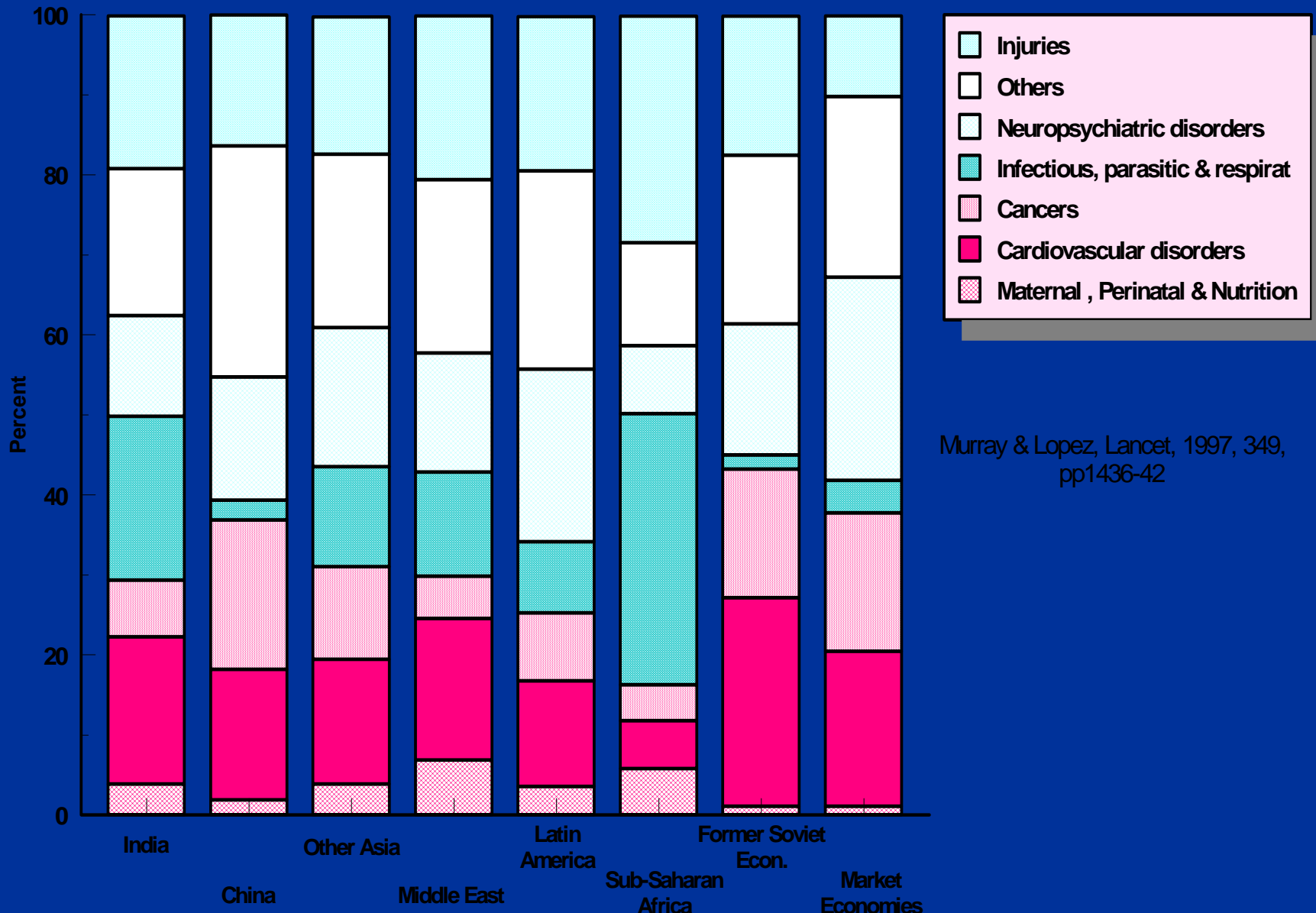


# Causes of death, developed and developing world, 1996 \*



\* Figures in bold are percentages and figures in brackets refer to the number of deaths in thousands

# Projected DALYs in 2020 by health condition and region.



Murray & Lopez, Lancet, 1997, 349, pp1436-42

# **ADB's Current Activities to Eliminate Micronutrient Malnutrition and Improve Educational Achievement**

- **Nutrition and ECD Projects:**
  - **Philippines (ongoing)**
  - **Central and South Asia (planned)**
- **Rice Plant-Breeding to Reduce Anemia and Zinc Deficiency (4-7 countries)**
- **Regional Salt and Flour Fortification in Central Asia and Caucasus (6 countries)**
- **Regional Investment Plan for Fortification of Essential Staples (6 Asian Countries)**

# Nutrition Issues

- Global malnutrition is concentrated in the Region and progress in reducing it is slow
- The human and economic consequences are profound – new evidence of importance of life cycle
- We often know what to do (although gaps remain) but less about how to do it given existing capacity
- Main constraints to accelerating progress are financial and capacity-related (broadly defined)
- Report outlines priorities for direct and indirect action by country typology and discusses cost implications

# Why does malnutrition persist at high levels in the region?

- Lack of appreciation of scale of problem?
- Undervaluation of economic costs of malnutrition?
- Insufficient knowledge of what to do?
- Insufficient knowledge of how to do it?
- Insufficient capacity?
- Insufficient knowledge about how much it will cost?

# INVESTMENT IN NUTRITION

Direct Effects

Indirect Effects

Near-Term  
(Improved  
Intakes)

Long-Term  
(Size, Stature)

(Cognitive  
Ability,  
Schooling)

PRODUCTIVITY

EFFICIENCY

EQUITY

ENHANCED HEALTH, EDUCATION, AND LABOR PRODUCTIVITY

ECONOMIC GROWTH AND NATIONAL DEVELOPMENT

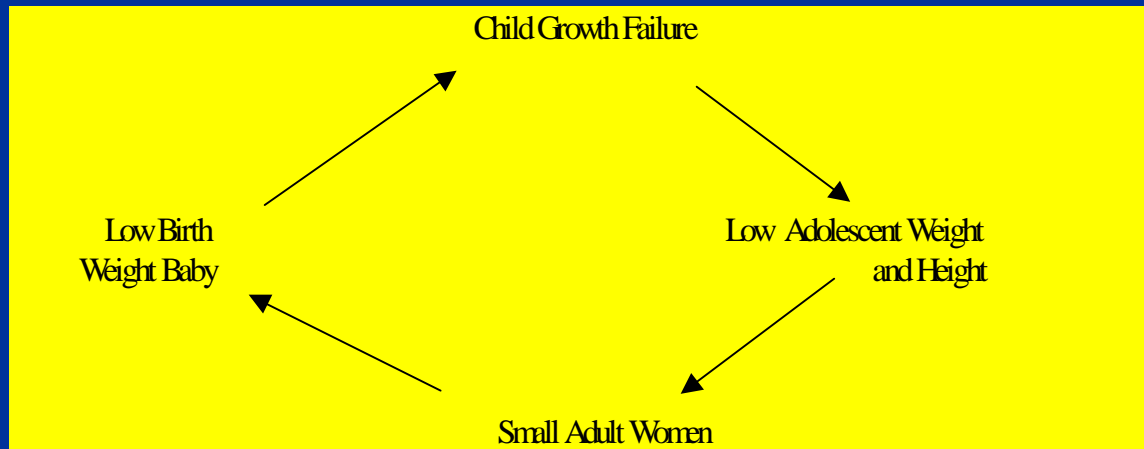
MALNUTRITION  
DEPRESSES ECONOMIC  
GROWTH

Disease Burden

GDP

Wages

## The Inter-Generational Cycle of Malnutrition



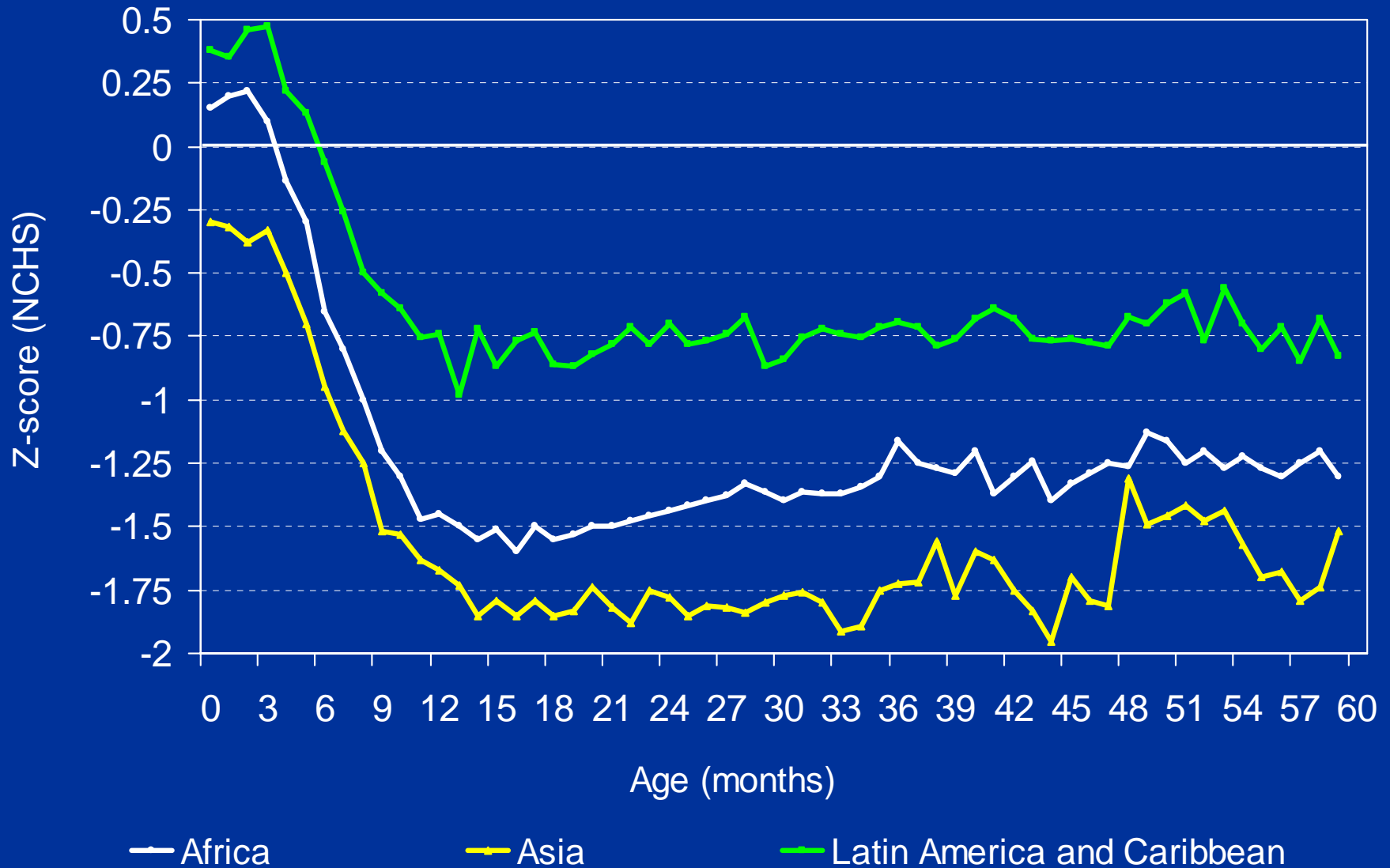
# The Main Problems

- Undernutrition
  - Low birth weight
  - Early childhood growth failure
  - Iron deficiency
  - Iodine deficiency disorders
  - Vitamin A deficiency
- Overweight and obesity
  - risk factors for hypertension, coronary heart disease, diabetes, cancer etc.

# The Life-Cycle Perspective

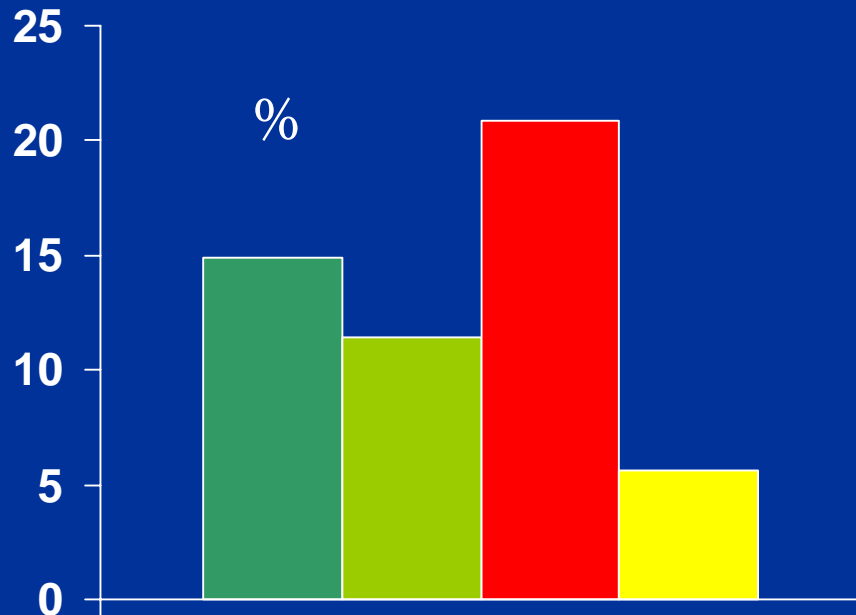
- There is new evidence on importance of:
  - Nutrition of girls → Fetal development  
→ Nutrition of next generation of girls and boys
  - Fetal development → Adult chronic disease  
(a linking of the two burdens)
- This gives us an expanded view of:
  - Productivity impacts of improved nutrition
  - Opportunities for action

# Direct interventions need to have an effect very early in life

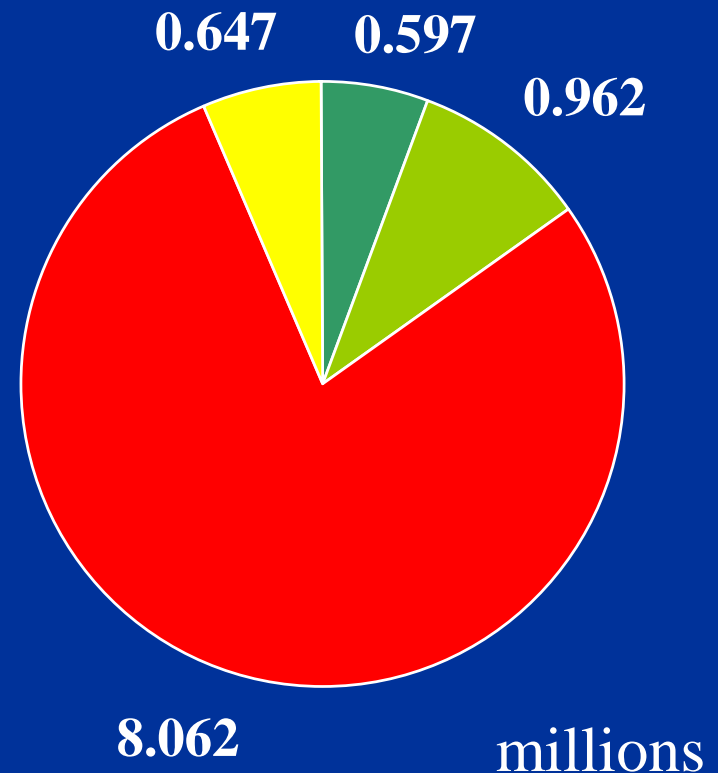


# Most global undernutrition is in Asia

Newborns with low birth weight at term

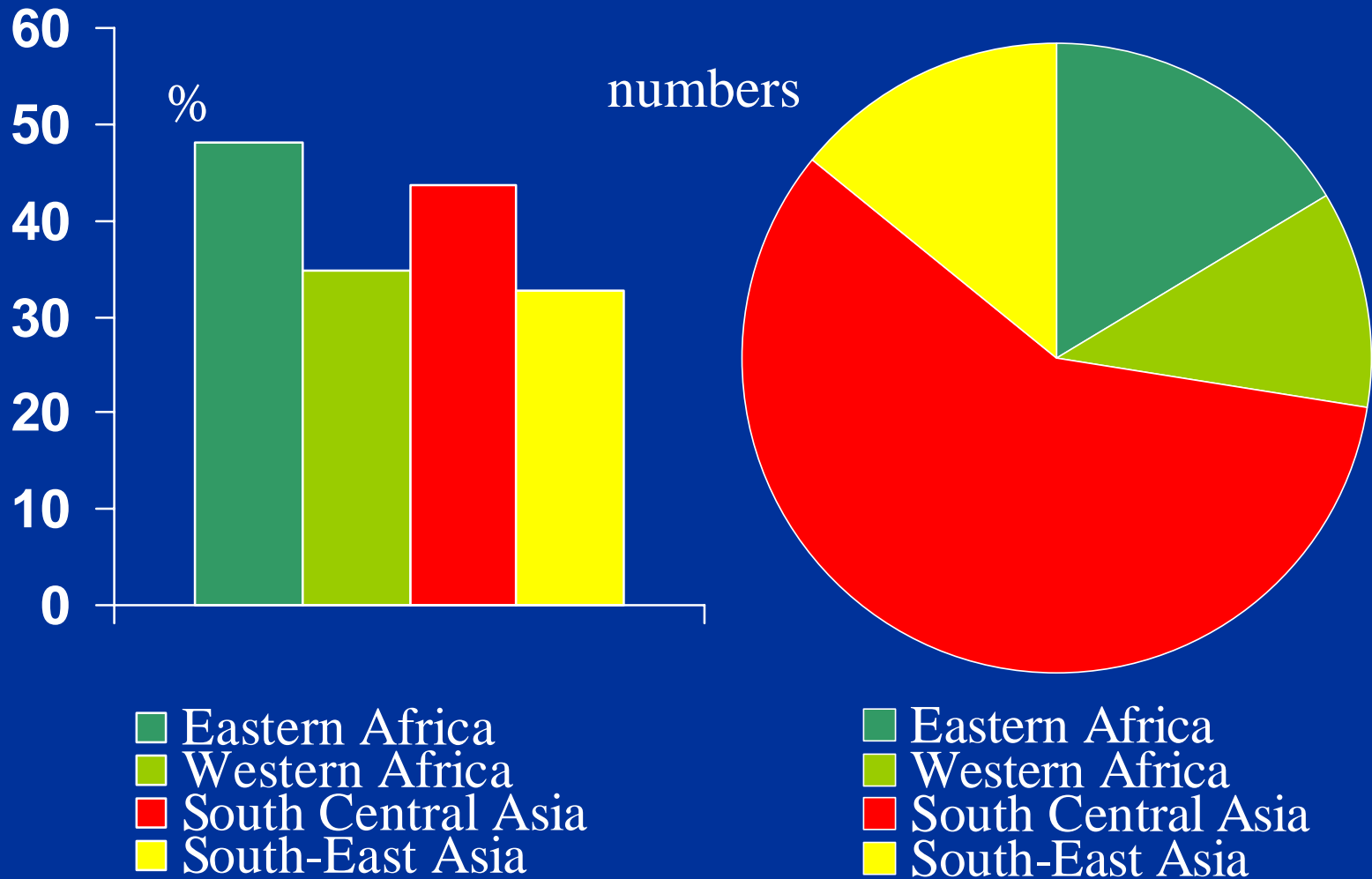


- Western Africa
- Middle Africa
- South Central Asia
- SE Asia



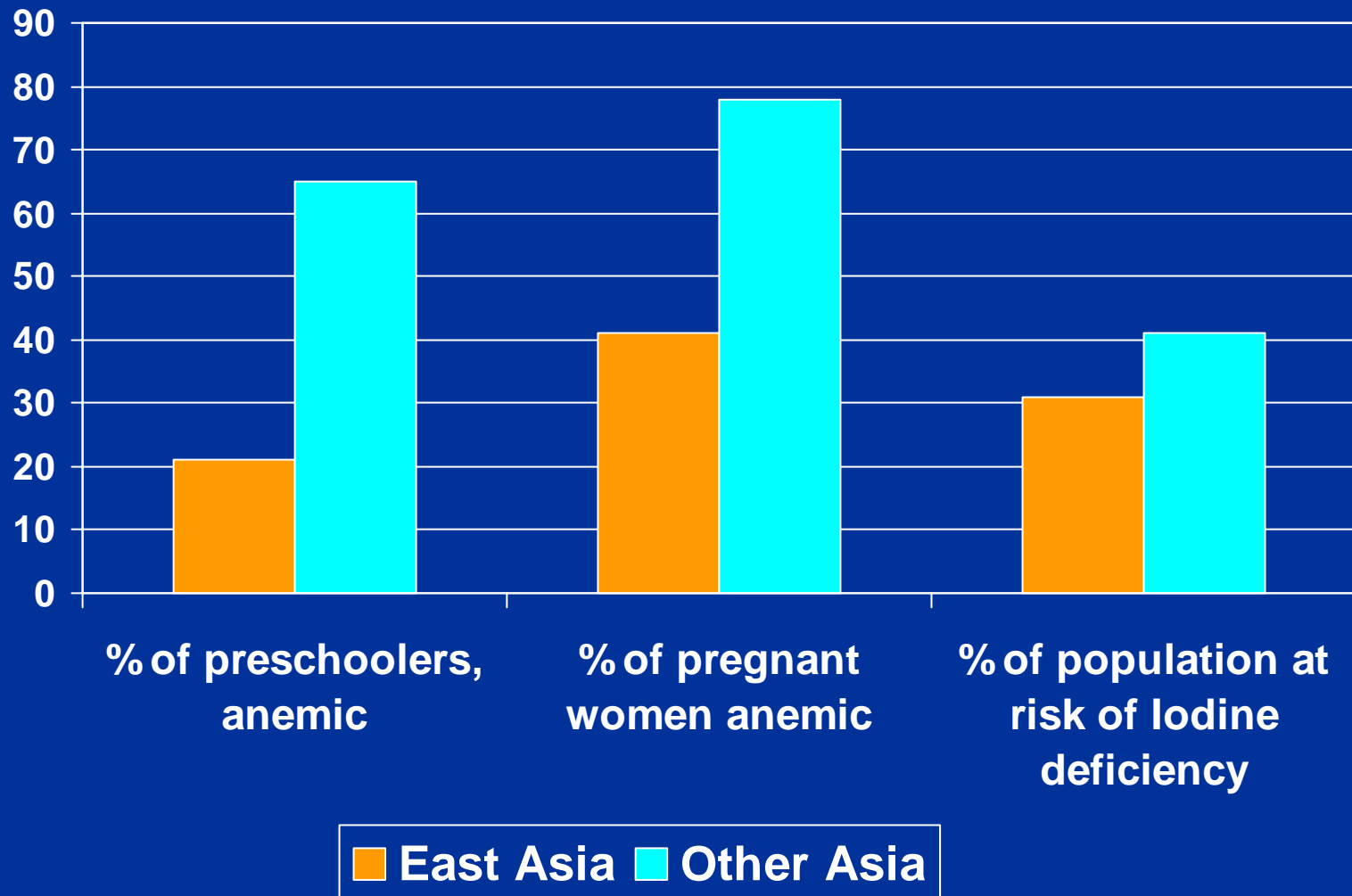
Source: ACC/SCN 2000

# Stunted preschool children

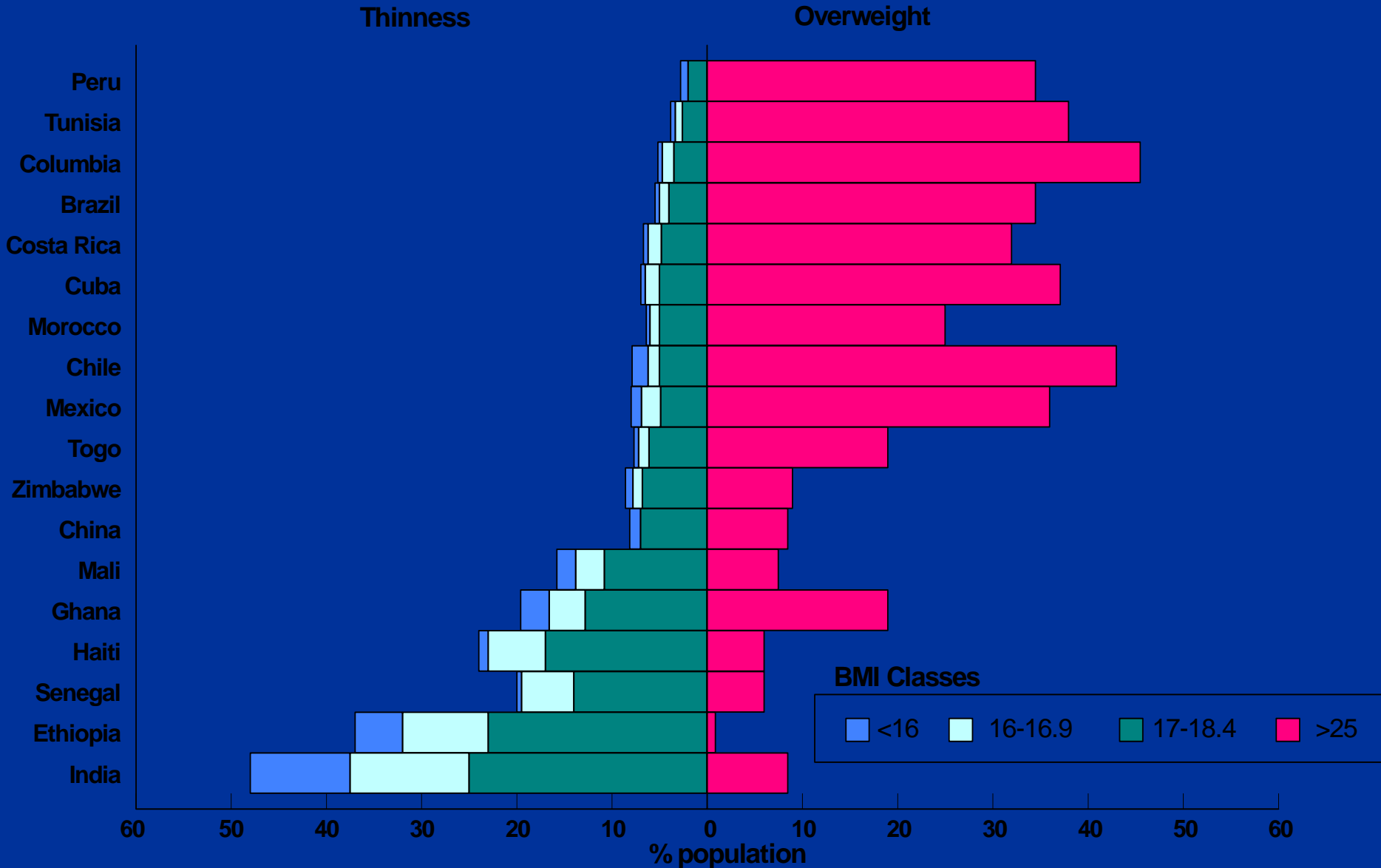


Source: ACC/SCN 2000

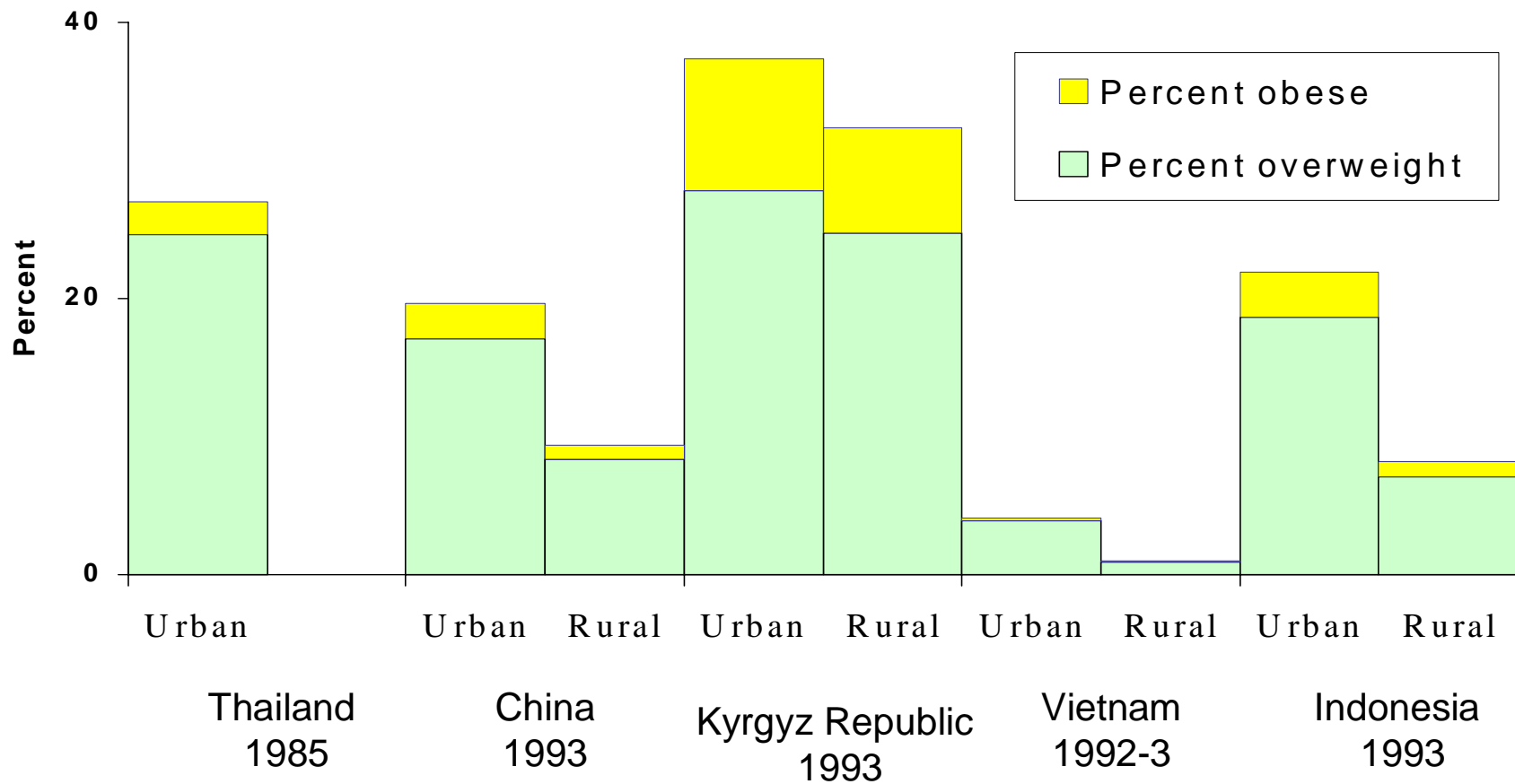
# Micronutrient status is very poor in the region



# BMI distributions in adult populations (male & female).



# Obesity and overweight in Asian countries are significant



Source: Popkin and Doak 1998

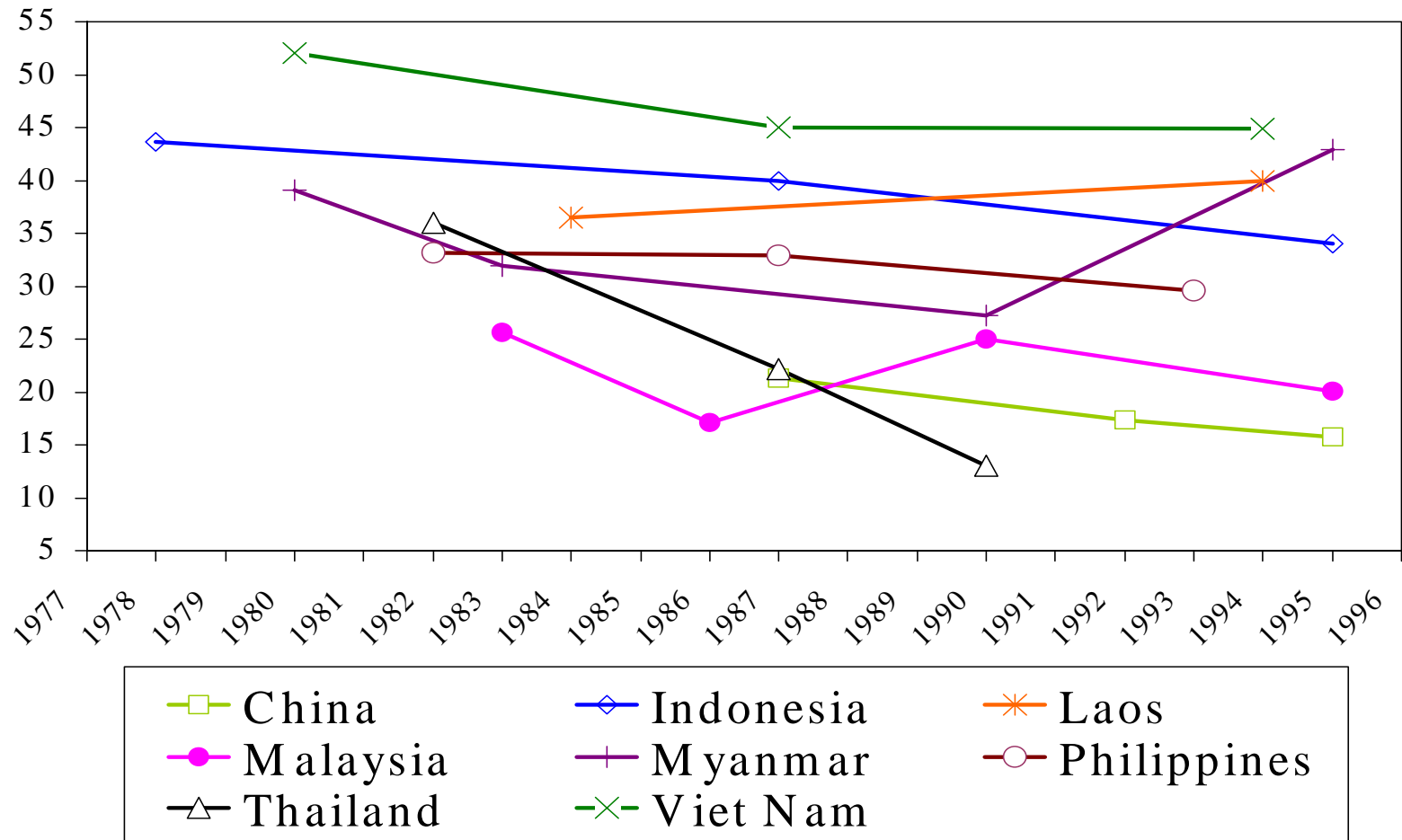
# Underlying Trends Leading to Increased Non-communicable Diseases

- Fetal and infant insults interacting with subsequent shifts toward positive energy balance
- Shifts in the structure of diet
- shifts in physical activity
- obesity trends
- morbidity and mortality shifts



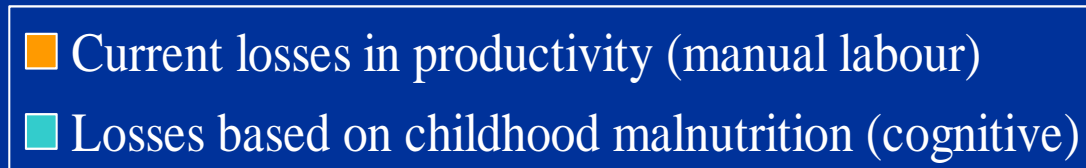
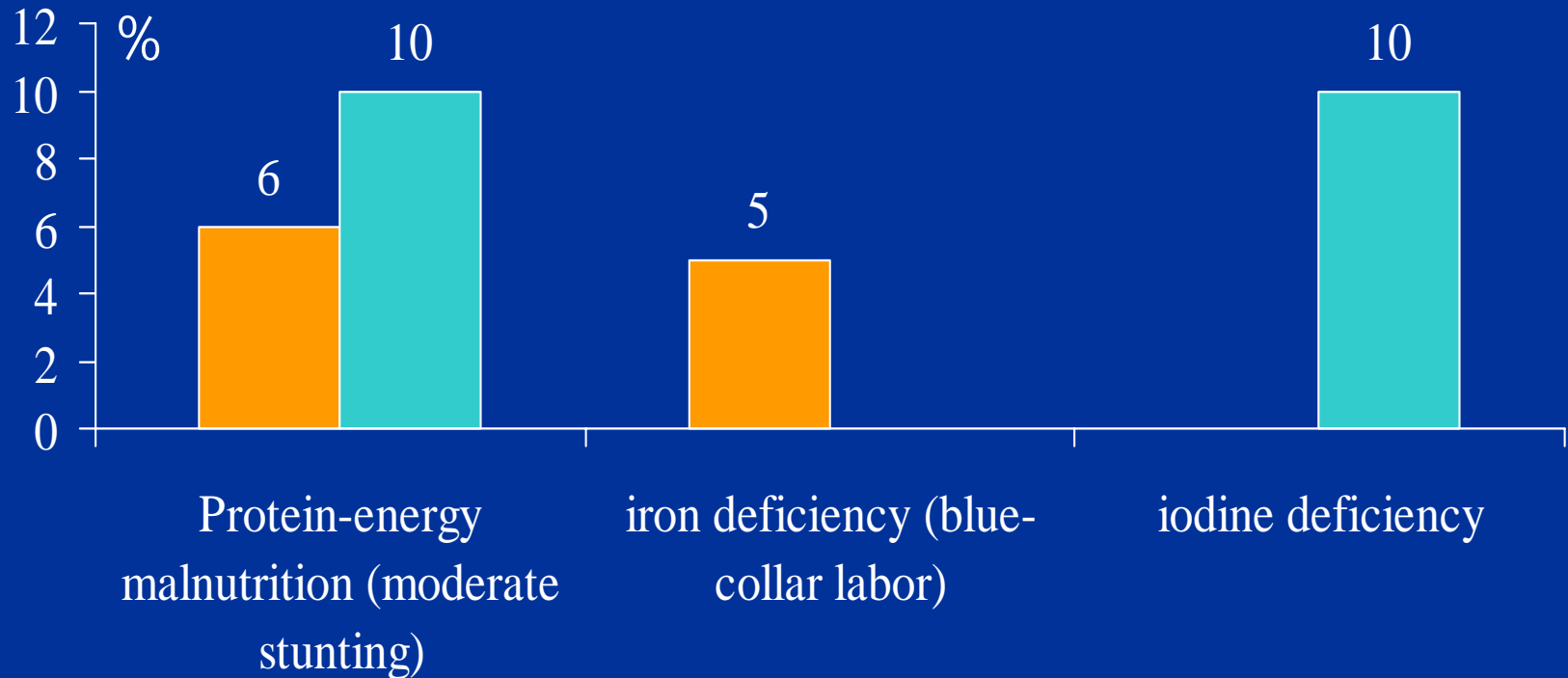
# Improvements in undernutrition rates are too slow and are sometimes nonexistent

(Trends in percent low weight for age)



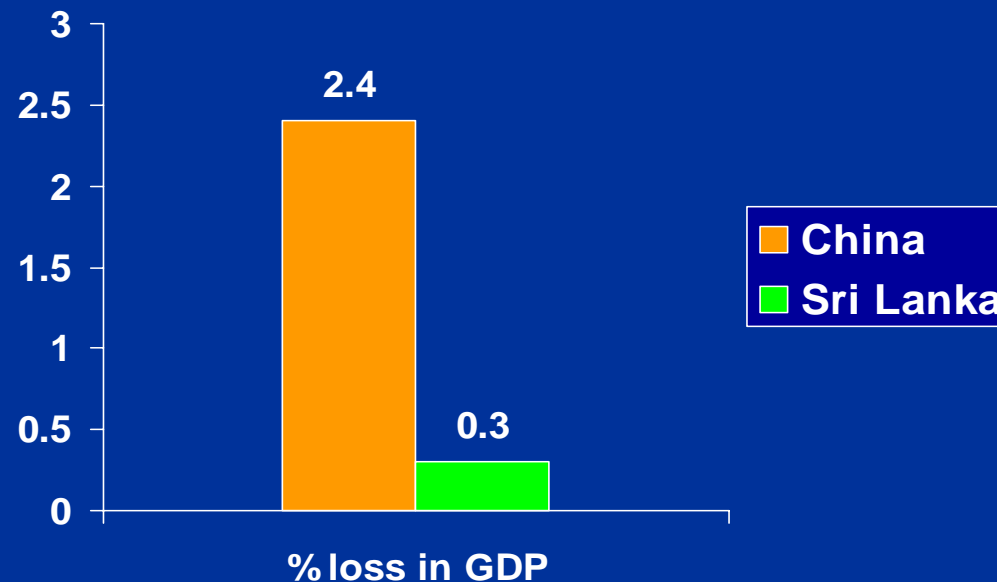
Source: Smith and Haddad 2000

# The economic costs of undernutrition are high: productivity losses



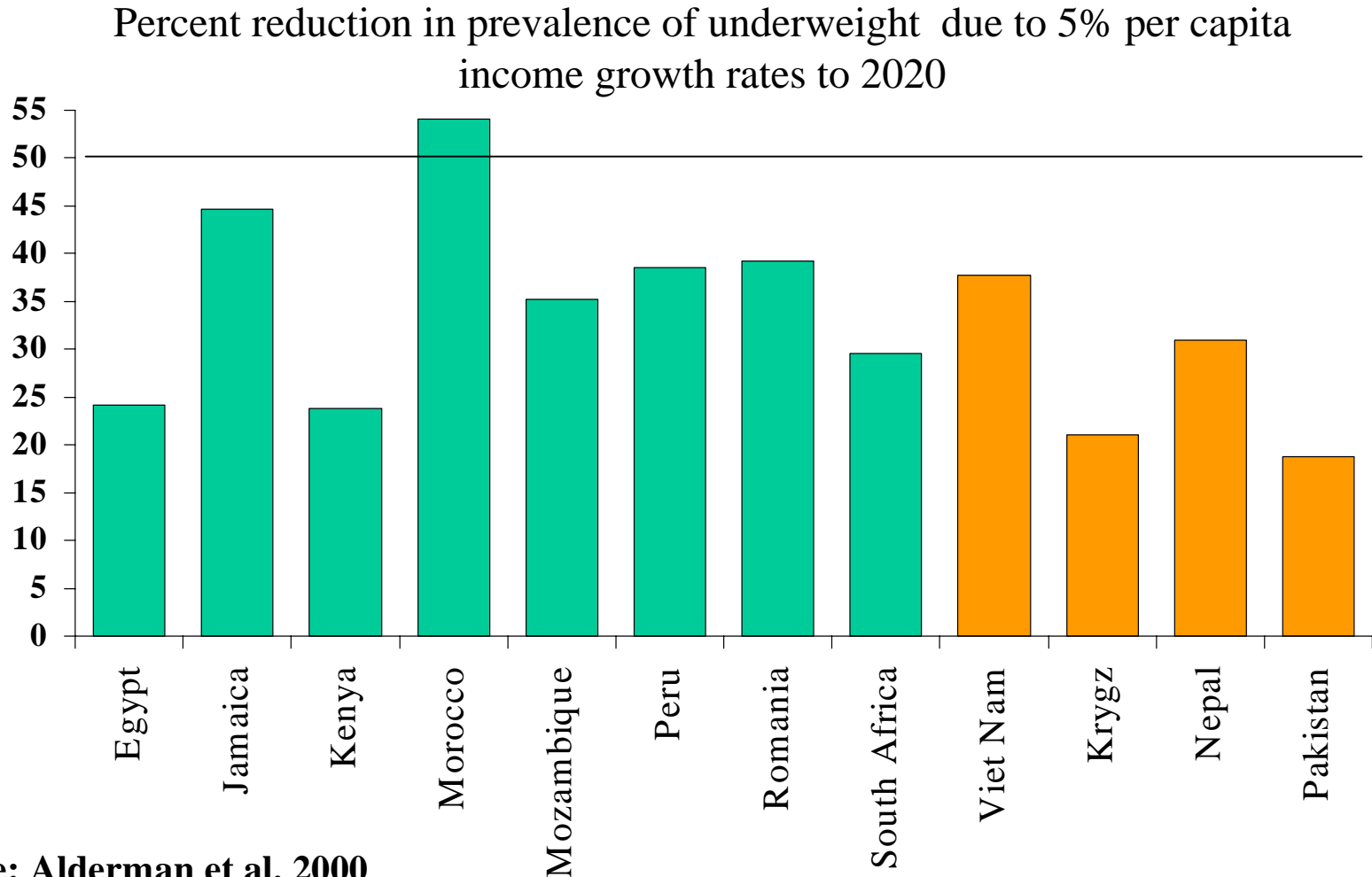
# The economic costs of diet-related chronic disease are also high

China's economic cost of diet-related chronic disease is 2.4 percent of GDP



Note: GDP loss likely to be much higher when taking into account morbidity

# Income growth is vital, but can get us only part of the way—direct nutrition interventions remain critical



Source: Alderman et al. 2000

# Success Factors in Nutrition Programs

- Contextual success factors
  - Political commitment
  - Gender and social equity
  - Organizational capacity
  - Leadership
- Program-specific factors
  - Community ownership
  - Outcome and process orientation
  - Appropriate program design
  - Good management, incl. info systems
  - Community-government partnerships

**Health:**  
infant diarrhoea,  
respiratory  
infections,  
malaria

**Nutrition:**  
low birth weight,  
iodine, iron, zinc deficits,  
breastfeeding,  
malnutrition,  
hunger

**Child  
Development**

**Psychosocial  
Environment:**  
stimulation, stress,  
discipline, care,  
school



WHAT WORKS?

CHEAPLY?

AFFORDABLY?

# Direct Nutrition Interventions for Undernutrition

- **Low birth weight:**
  - Improve pre-pregnancy weight (adolescents)
  - Increase pregnancy weight gain
- **Young child growth:**
  - Exclusive breastfeeding to 6 months
  - Complementary feeding from 6 months
  - Micronutrient supplementation
  - Fortification



# Direct Nutrition Interventions for Undernutrition, contd..

- **Iron** deficiency
  - supplementation, fortification, diet modification
- **Iodine** deficiency disorders
  - salt iodization, iodized oil
- **Vitamin A** deficiency
  - breastfeeding, supplementation, diet mod., fortification



# Nutrition Interventions for Obesity and Overweight

- School-based training for improving diet and activity levels (e.g. Singapore)
- Extension workers to teach traditional cooking methods (e.g. South Korea)
- Dietary Guidelines for nutritional well-being (e.g. China)
- Mass Media (e.g. campaign to reduce overweight in Brazil)
- Food Labeling
- Agricultural research to decrease the fat content of livestock products

# The capacity constraint

- In a recent World Bank review, only 18% of health/population/nutrition projects projects 1991-98 achieved institutional objectives.
- Two thirds of these projects cited “poor assessment of capacity” as the main constraint.

# Ingredients of capacity

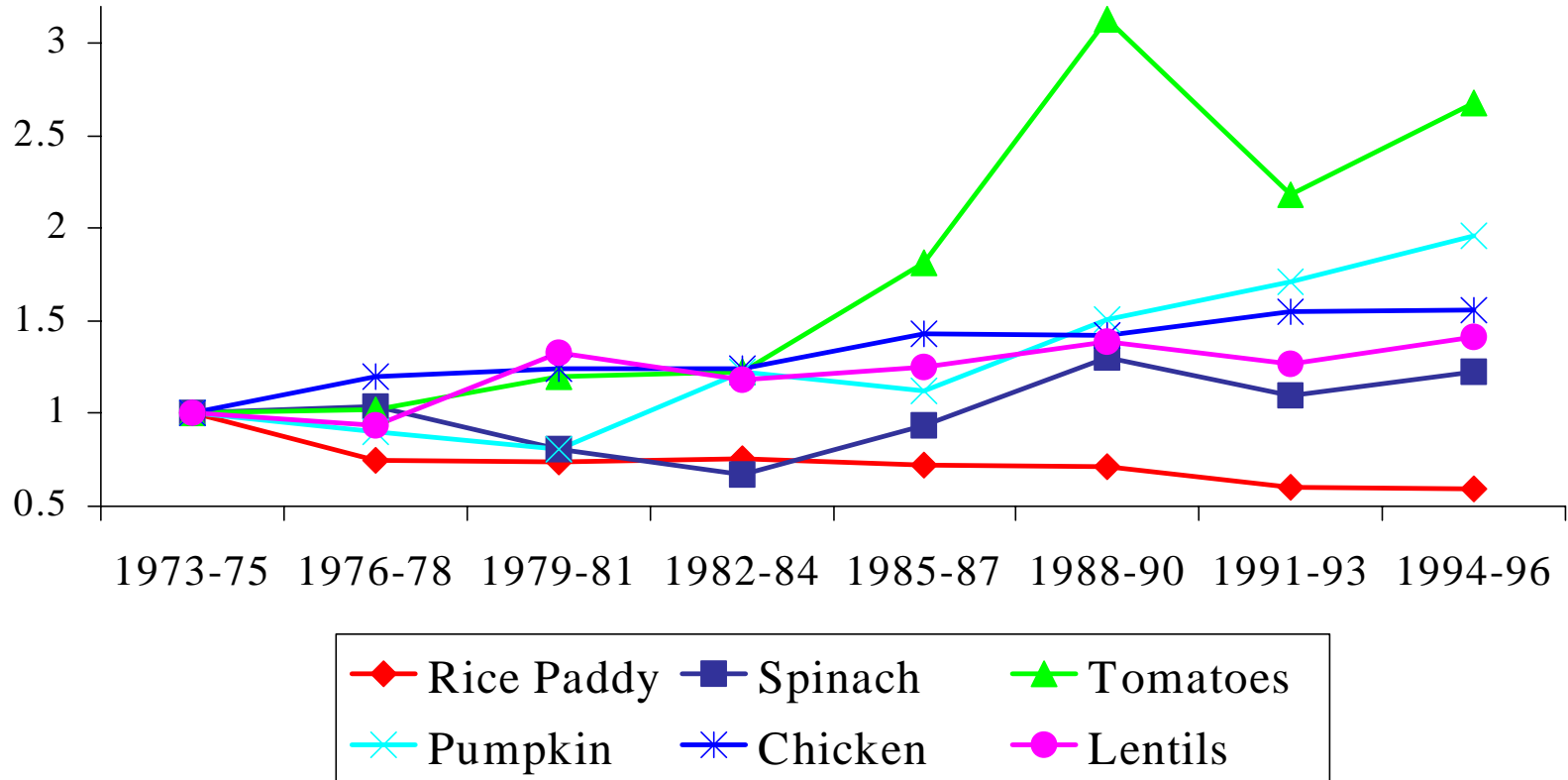
- Space/authority to act
- Motivation (incl. incentives)
- Leadership (incl. governance)
- Systems for problem-solving and decision-making
- Resources (human, economic, organizational)

# Supporting or “indirect” actions

- Food Security: Increase the poverty and malnutrition focus of agriculture and agricultural research
- Care: Improve the status of women and girls
- Health and Sanitation Environment: Improve the delivery of effective sanitation and water infrastructure to the poor

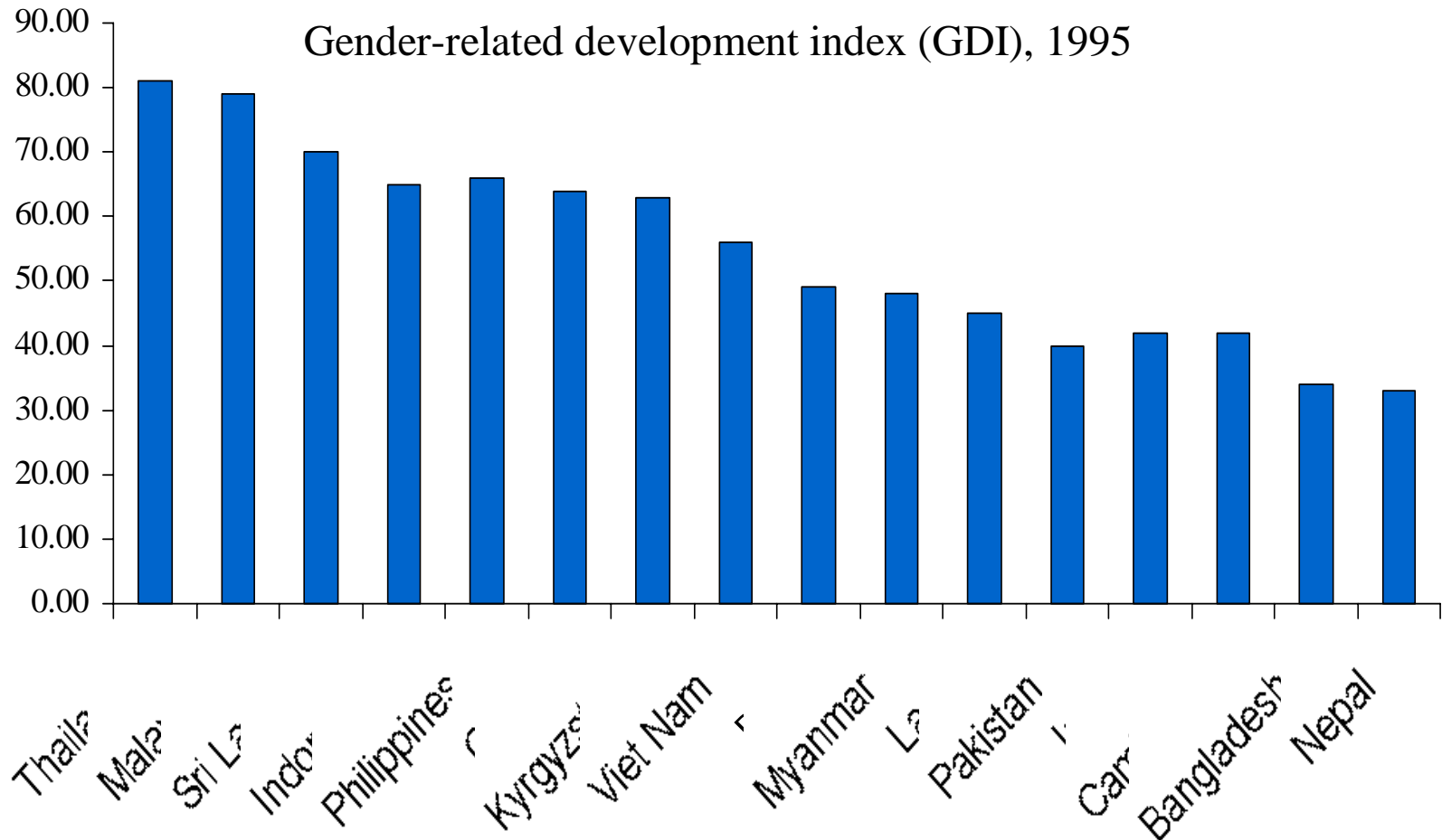
# Is Agricultural Research Doing Enough To Lower the Real Price of Non-Staples?

Food Price Trends in Bangladesh, 1973-1996



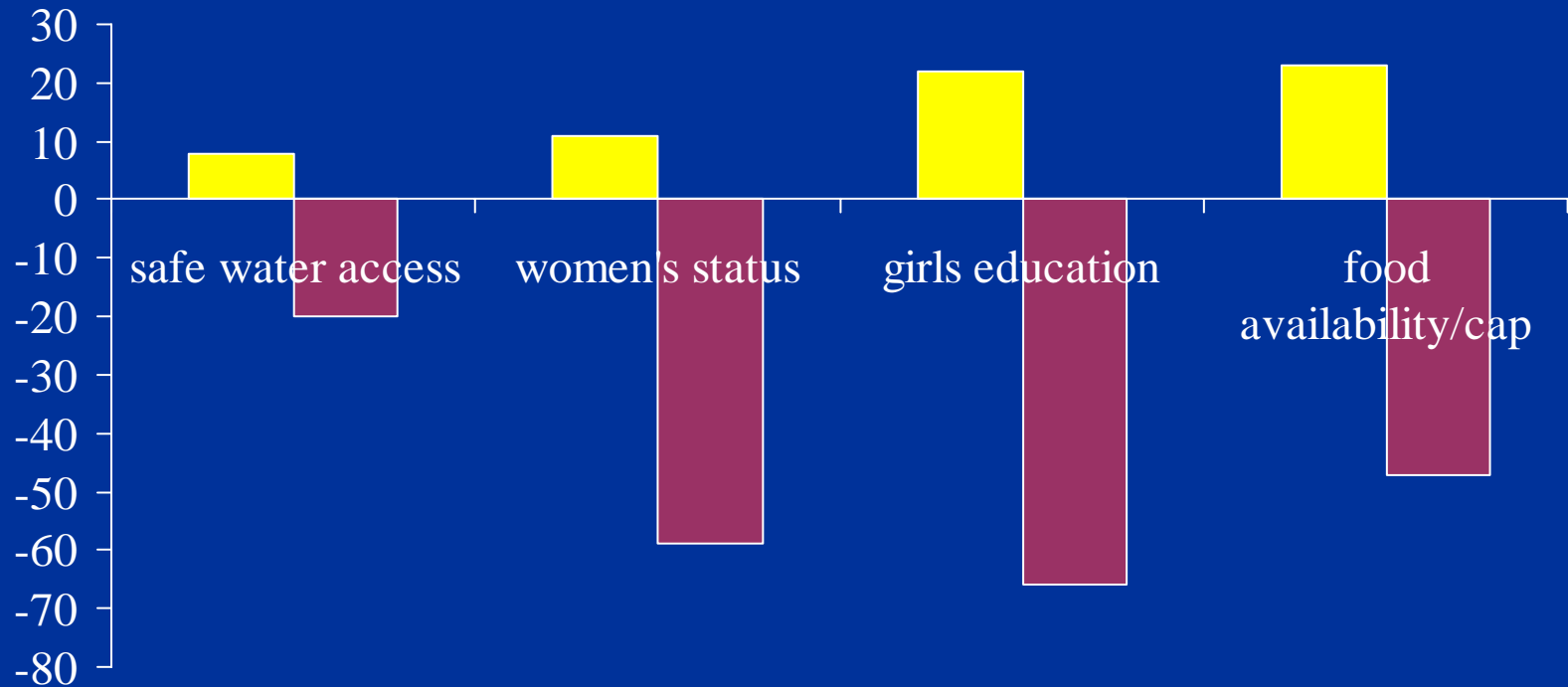
Source: Bouis 2000

# The status of women is lowest in South Asia



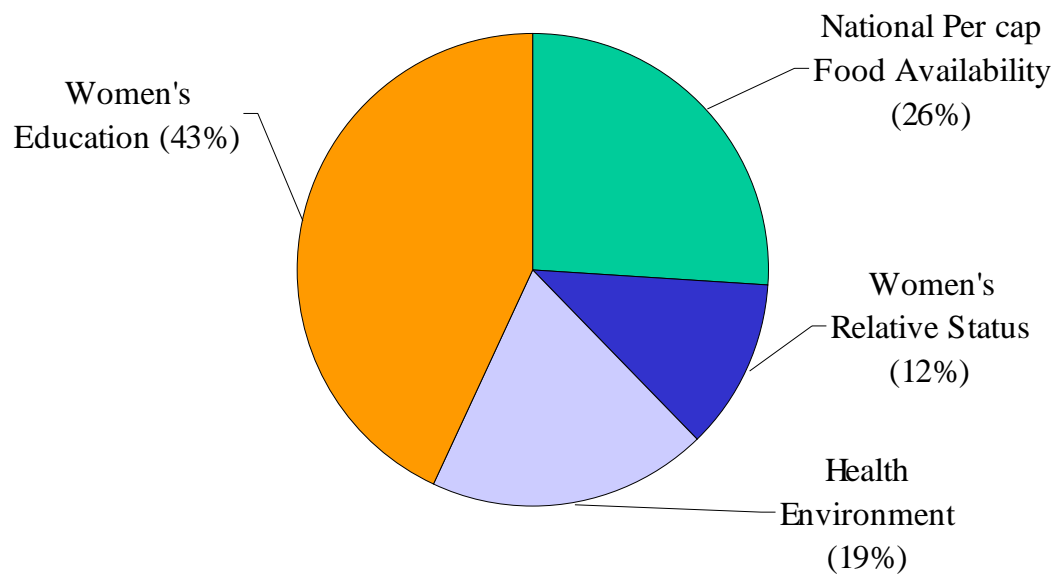
Source: UNDP <http://www.undp.org/hdro/98gdi.htm>

# Priorities at the indirect level for South Asia



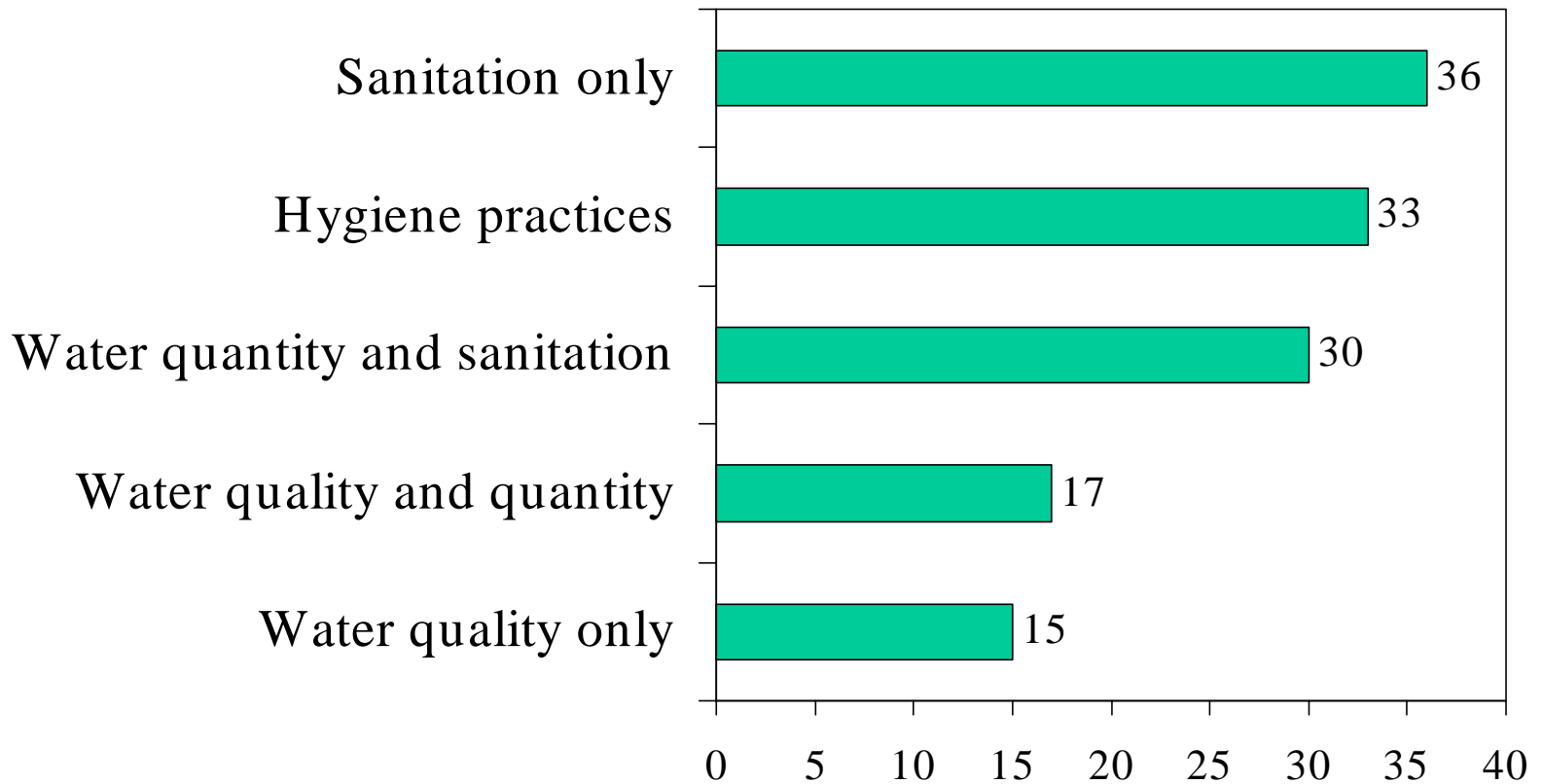
■ ppt decrease in low WA due to a 1% increase in factor \*100, 1970-95  
■ percent factor is below ideal in 1995

**Figure 4.1: Contributions of underlying determinants to reductions in child underweight, 63 developing countries: 1970-95**



Source: Smith and Haddad 2000

# Simultaneous improvements in sanitation, water quantity and water quality give large reductions in diarrheal morbidity



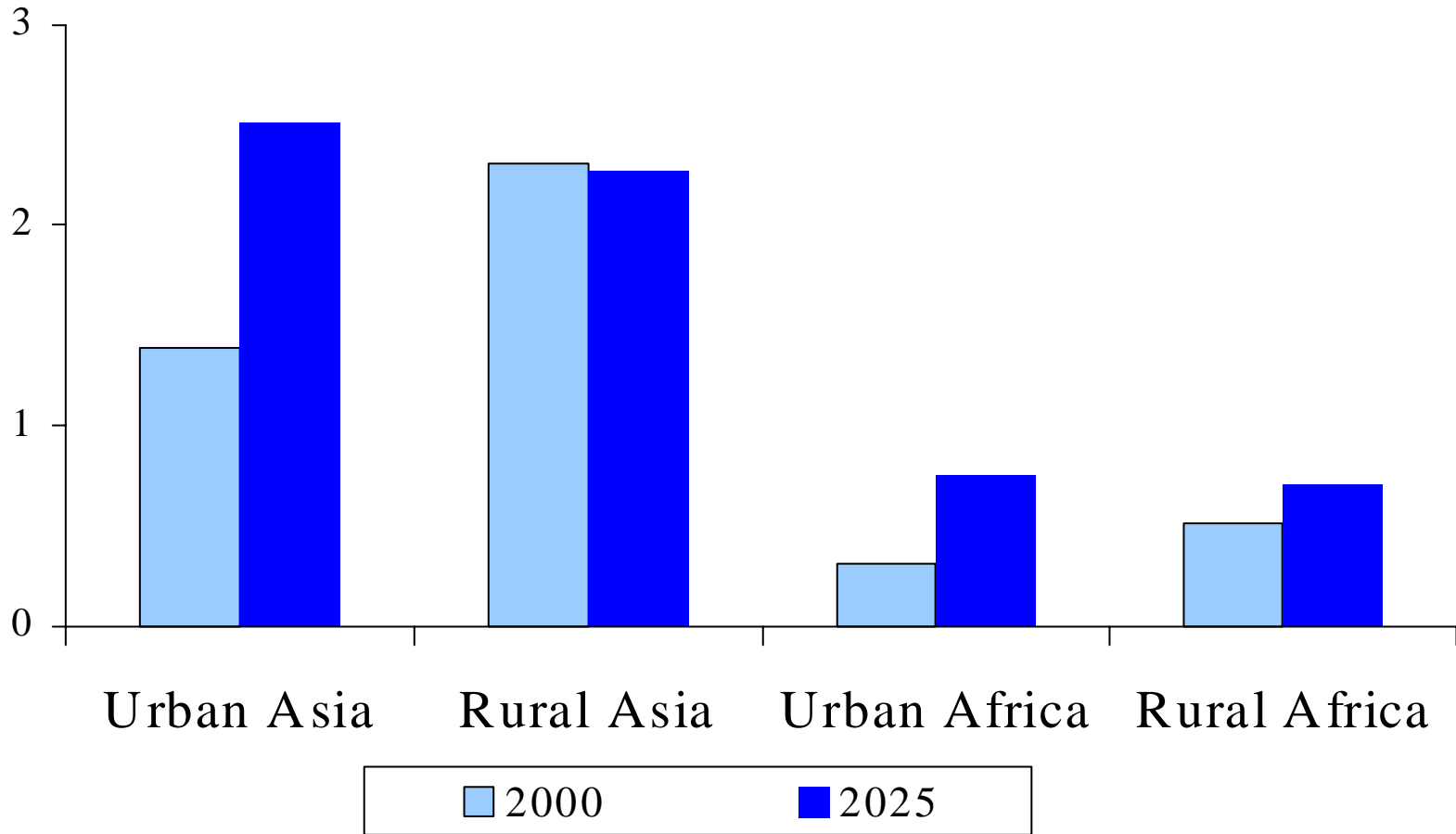
**Source: Esrey et. al. 1991**

# All actions need to be aware of rapidly changing contexts

- Globalization
  - Financial flows
  - Trade in goods
  - Information
- Urbanization
- Decentralization
- Aging
- HIV/AIDS

# Asia will urbanize rapidly in the next 25 years

Growth in urban and rural population by developing region (Billions)

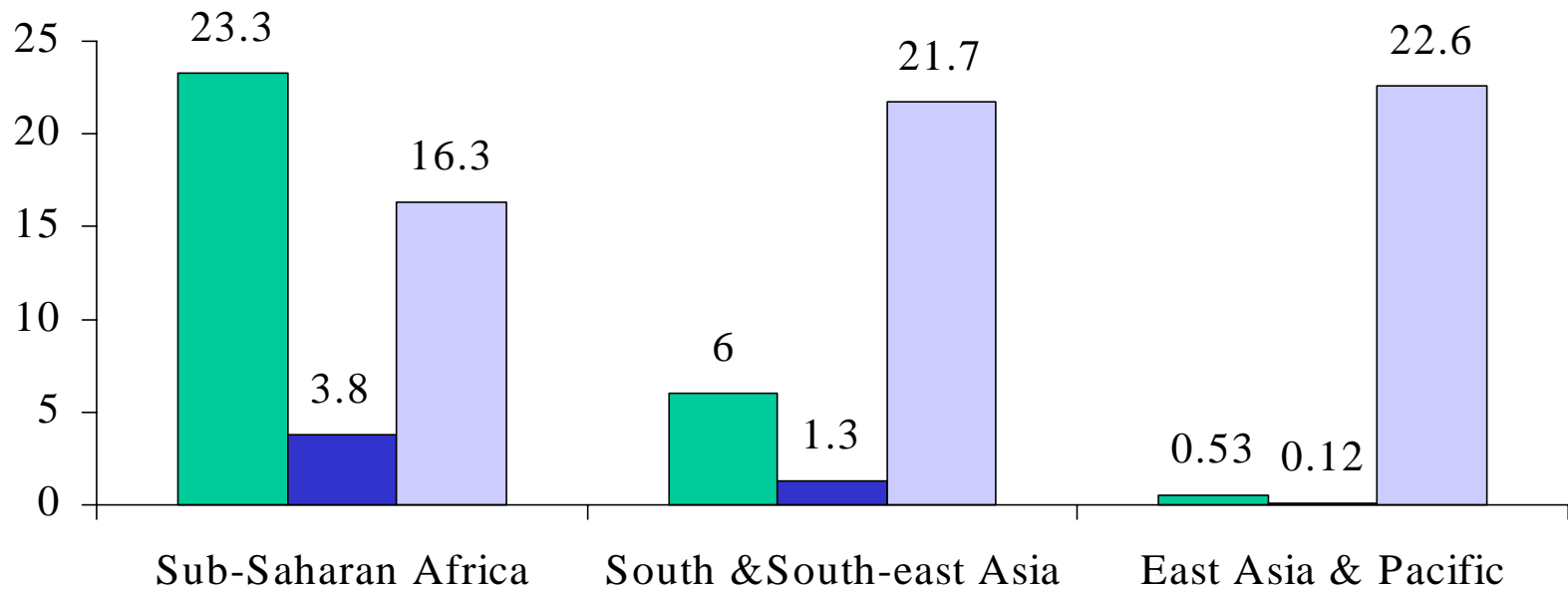


Source: UN 1998

# Is malnutrition also urbanizing?

- We know that urbanization is associated with increased *overweight and obesity*--**even in poor populations**--due to changes in diet and activity
- But *undernutrition* is also urbanizing..
  - In Bangladesh, China and the Philippines the national share of underweight preschoolers from urban areas is increasing

# HIV/AIDS is much lower in Asia than in Africa, but there is a danger of it catching up



■ Adults & children living with HIV/AIDS (millions)  
■ Adults & children newly infected with HIV (millions)  
■ Newly infected as a percent of those Living with HIV

# **Mobilizing the Processed Food and Seed Industries for Nutrition Security**

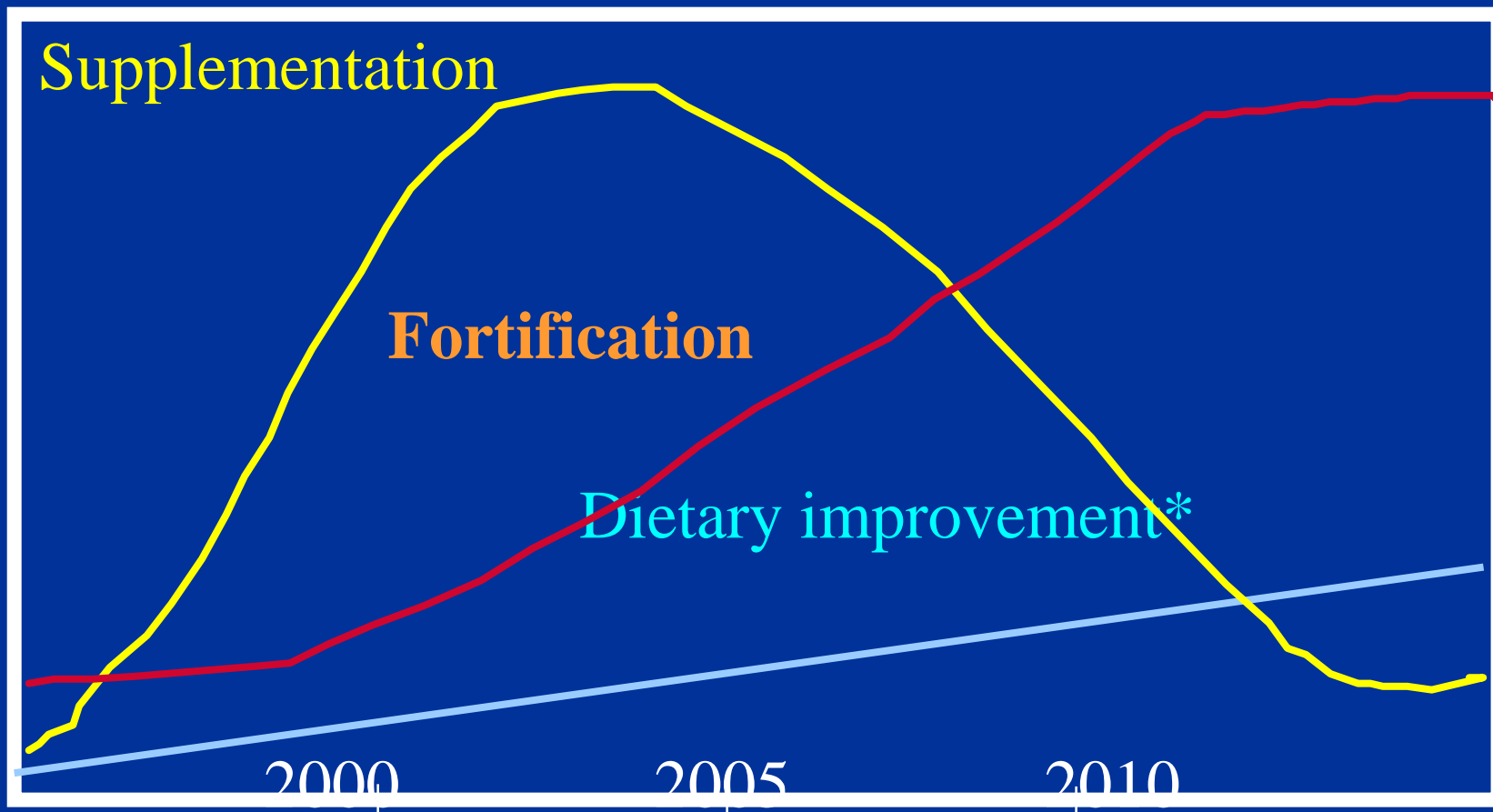


# The Agro-Industrial Partnership

- **FORTIFICATION:** Investing in fortified staples widely consumed by the poor;
- **BIOFORTIFICATION:** Investing in plant breeding research that will enrich staple crops, initially rice and wheat for Asia: B
- Modernize food industry's products to strengthen developing world as a global trading partner
- least cost, effective and sustainable solution



# COMPLEMENTARY INTERVENTIONS



\* Includes education, dietary diversification, food modification and new plant varieties.

# One Problem, Three Challenges

“It is likely that a young child with multiple micronutrient deficiencies is also underweight and later stunted.”

Lindsay Allen

**Regional Initiative  
on Salt and Flour Fortification for  
Improving Women and Children's  
Nutrition in Central Asia and  
Caucasus 2001-3**

**ASIAN DEVELOPMENT BANK**

**GOVERNMENT OF JAPAN**

**UNITED NATIONS CHILDREN'S FUND**

**KAZAKH ACADEMY OF NUTRITION**

# ADB-DANIDA

- REGIONAL PARTNERSHIP IN FORTIFYING STAPLES
- Salt, Wheat Flour, Oils/Margarines, Condiments
- Complementary Foods (infants)

# REGIONAL PARTNERS

- INDIA
- INDONESIA
- PAKISTAN
- PEOPLE'S REPUBLIC OF CHINA
- THAILAND
- VIETNAM
- THE KEYSTONE CENTER (U.S.A.)

Breeding for Iron-Rich Rice to  
Reduce Anemia in Asia

ADB-IRRI-IFPRI-4 NARS

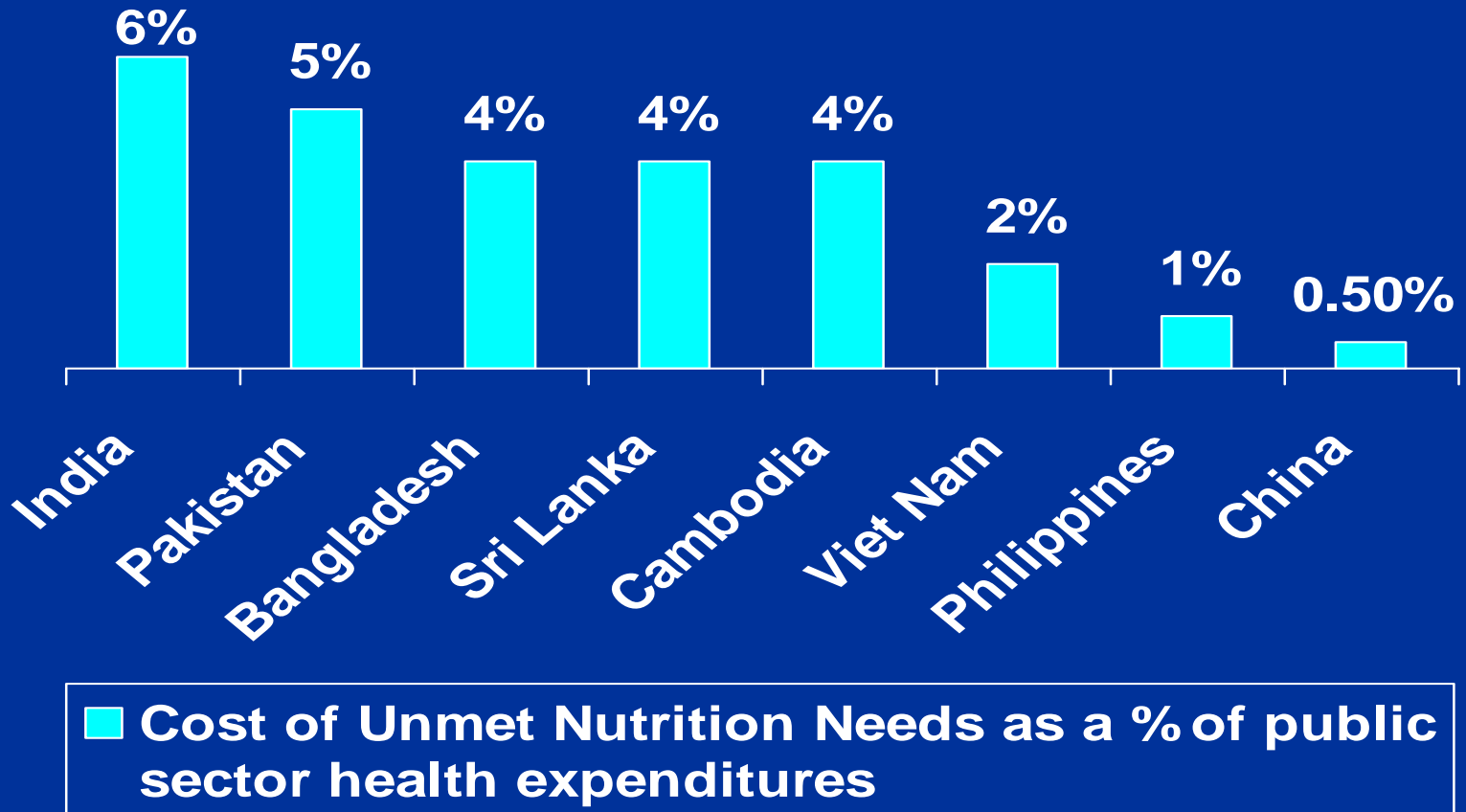
**2001-2003**

# **Regional Nutrition Action is Needed to Address $\frac{3}{4}$ of Global Malnutrition**

**Correcting micronutrient deficiencies can**

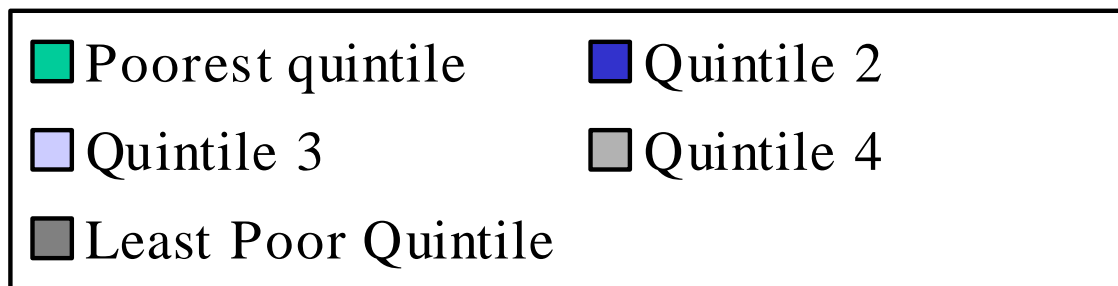
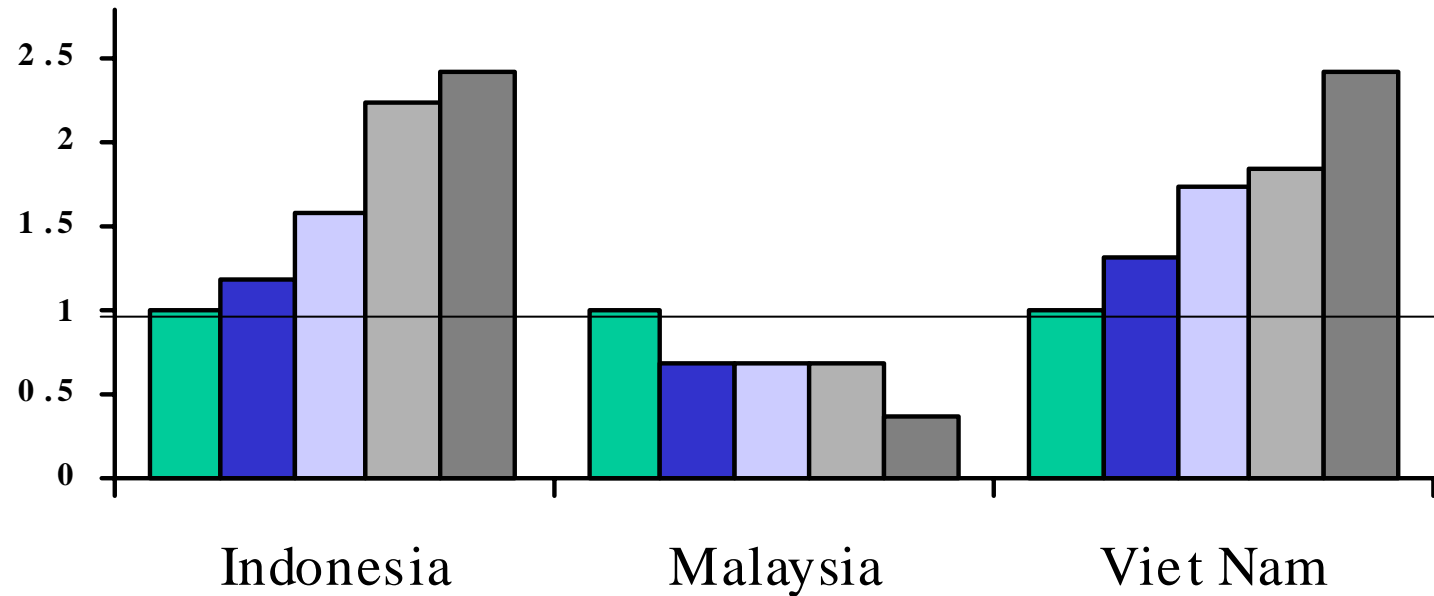
- improve population-based IQ by 15 points**
- reduce maternal deaths by 20 -25%**
- decrease infant and child mortality by 40%**
- increase work capacity by almost half**
- reduce health care and education costs by lowering illness and dropout rates**
- add at least 5 percent to long term economic growth**

# Estimates of the cost of meeting undernutrition needs of preschoolers in the region via community based programs



Source: From Mason 1999

# The unequal distribution of public spending on health by income quintile



Source: World Bank 2000b, WDR

# Conclusion

- 1. Improving nutrition of mothers and children is an investment bargain that produces benefit streams to families, individuals and mothers.**
- 2. Essential to improve health status and educational attainment.**
- 3. Cost-effective approaches are proven and should be applied.**



# Conclusion (2)

- 4. Integrated programs for mother and child get best results.**
- 5. Broad public-private partnership have political and investment potential for market-based solutions to child needs.**
- 6. Convergence of food fortification and biofortification (nutrient-enriched plant breeding) supports nutrition security of the poor**

