

Developing National Economies by Ending Hidden Hunger

**A Call to Action by
National Ministers of
Finance**

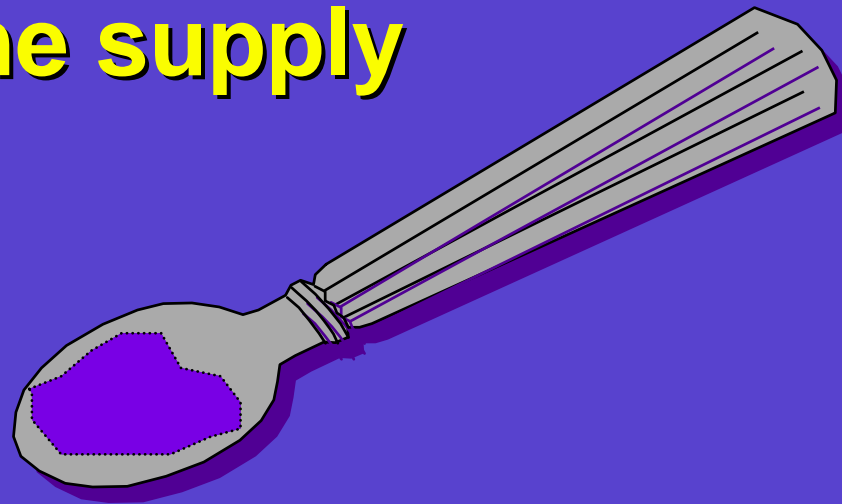
Food Fortification Helps End Micronutrient Malnutrition

Fortification:

- Financially responsible**
- Politically popular**
- Technically simple**
- Well established**

Iodine

lifetime supply



Hidden Hunger

No visible signs

Victims not aware



GG Tajikistan APC Review

International Commitments

1990: World Summit for Children

1991: Ending Hidden Hunger Conference

1992: International Conference on Nutrition

2001: UN Gen. Assembly Special Session Children



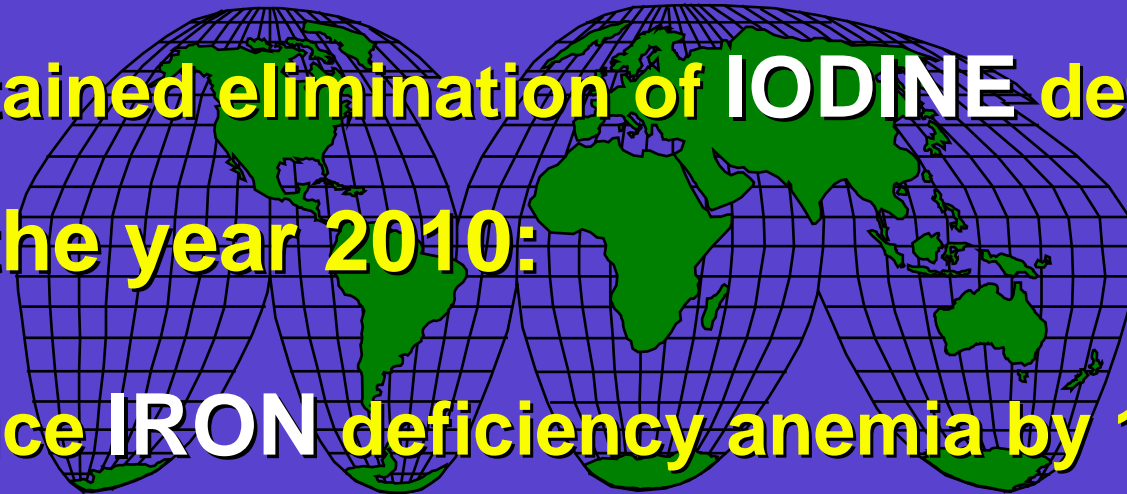
International Commitments

By the year 2005:

- Sustained elimination of **IODINE** deficiency

By the year 2010:

- reduce **IRON** deficiency anemia by 1/3



Population at Risk of Deficiency



Each Day of Delay

50,000 infants are born with reduced mental capacity due to iodine deficiency

300 mothers die in childbirth due to iron deficiency



Iodine Deficiency

Goitre



Iodine Deficiency in Pregnancy

Effects:

Mild mental retardation

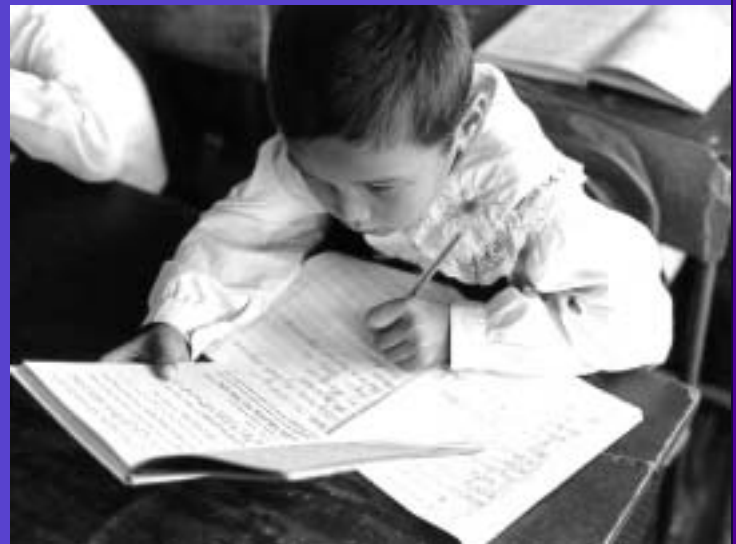
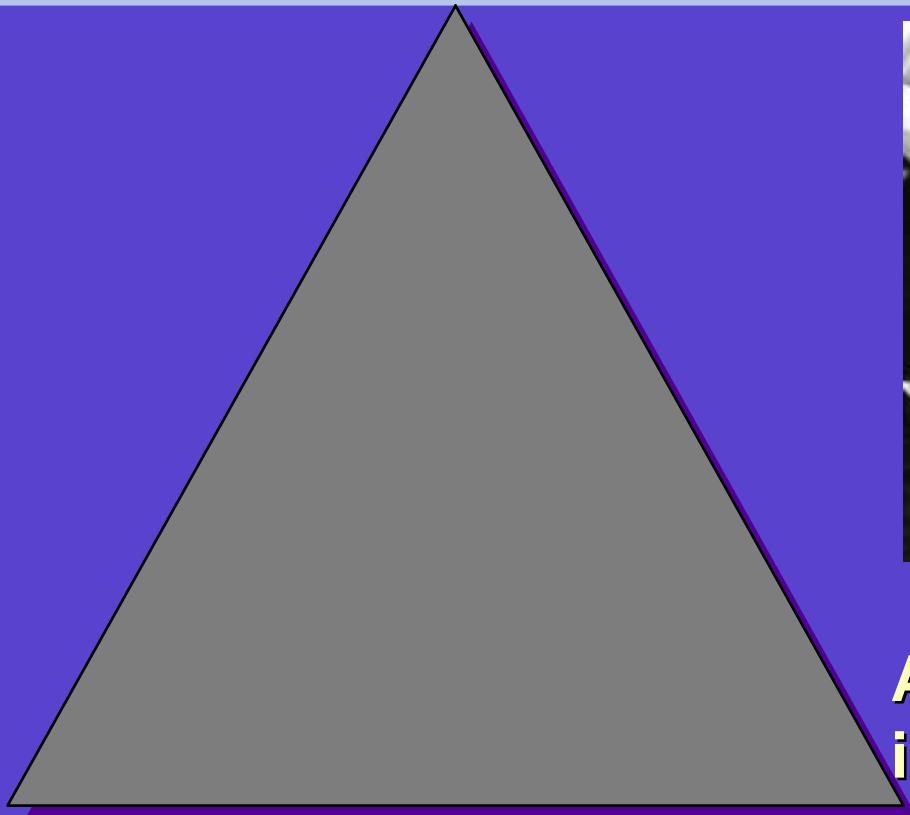
Cretinism:

- **severe brain damage**
- **deafness**
- **dwarfism**

Stillbirths

Infant deaths

Population with Iodine Deficiency

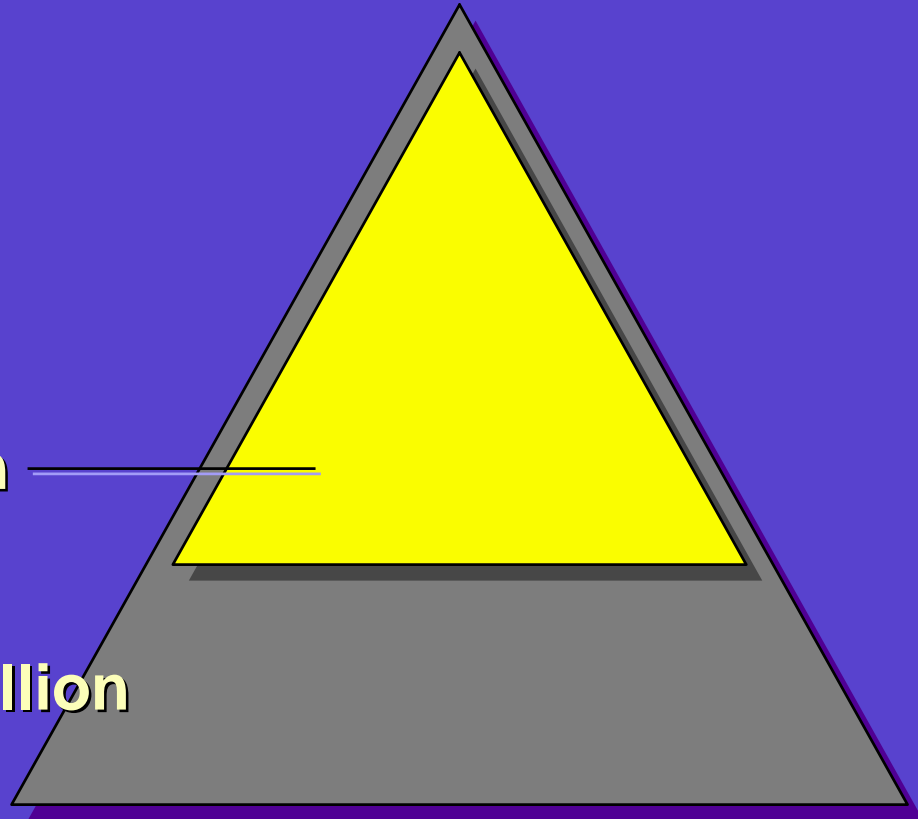


**At risk of mental
impairment: 1.6 billion**

Population with Iodine Deficiency

Goitre: 655 million

**At risk of mental
impairment: 1.6 billion**

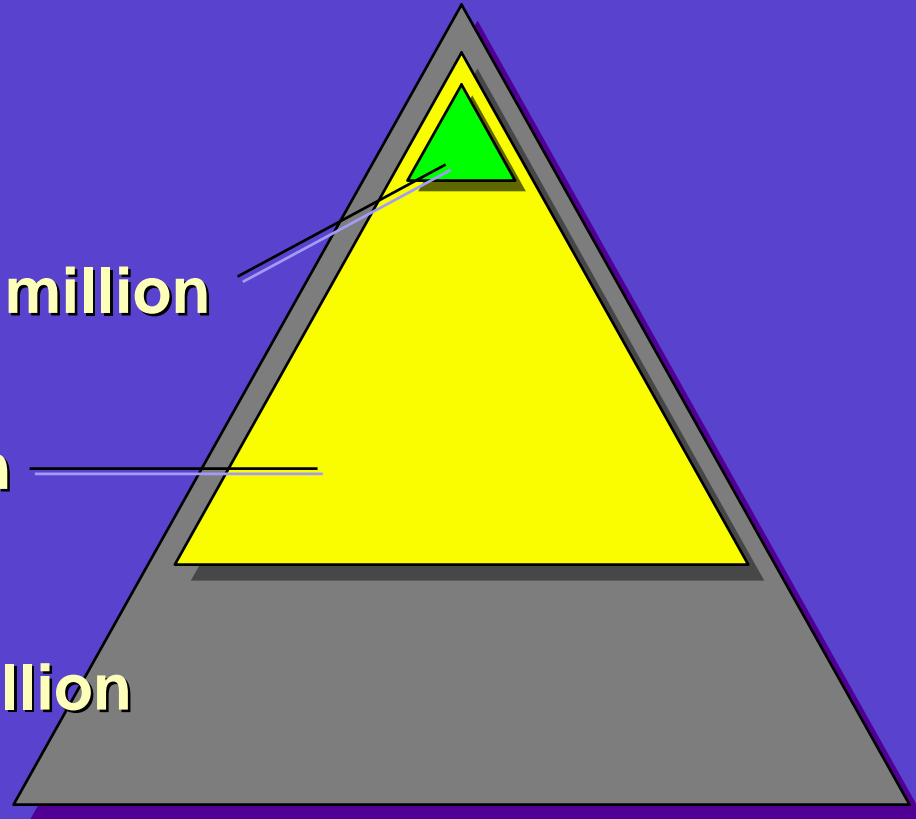


Population with Iodine Deficiency

Brain damage: 26 million

Goitre: 655 million

At risk of mental
impairment: 1.6 billion



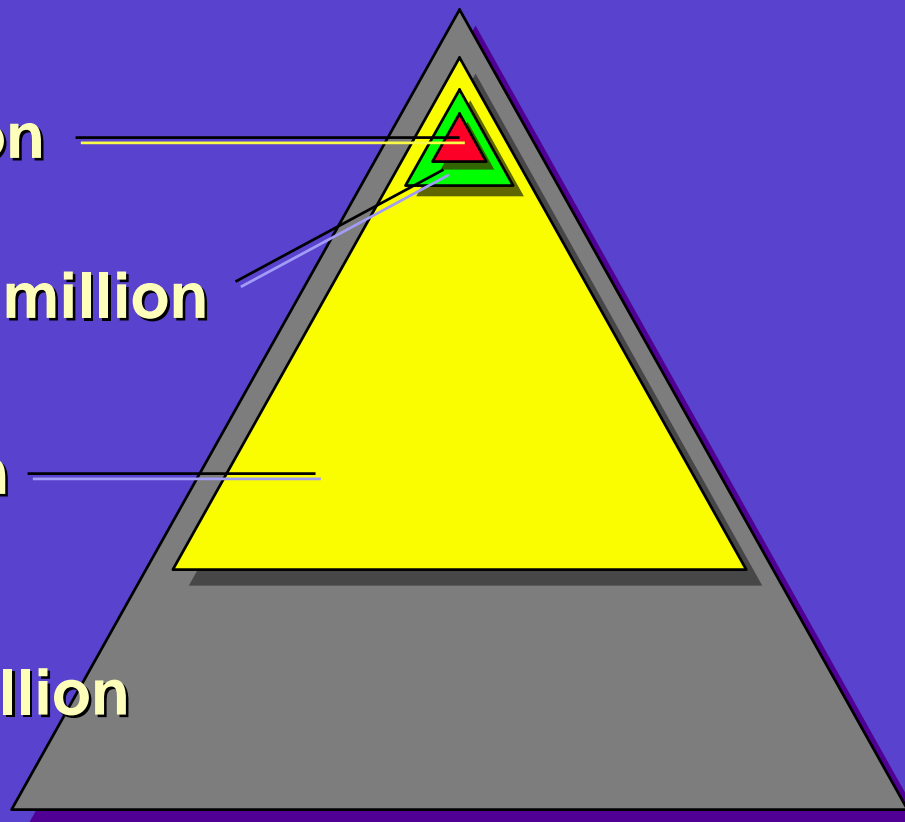
Population with Iodine Deficiency

Cretinism: 6 million

Brain damage: 26 million

Goitre: 655 million

**At risk of mental
impairment: 1.6 billion**



source: UNICEF

Iodine Deficiency and Intelligence

**Average reduction
in IQ:
13.5 points**



U Kartoglu

Iodine Deficiency

Reduces:
intelligence
education
productivity



Iodine Deficiency: Solutions

**Iodine deficiency
must be corrected
before conception.**

Iodine Deficiency: Solutions



G. Gleason

fortification

Iodine Deficiency: Solutions

fortification



UNICEF/89-006/Beswick

Iodine Deficiency: Solutions

fortification

also reduces short term effects on children and adults:

- lethargy
- motor impairment
- mental impairment

Iodine Deficiency: Solutions



UNICEF/C22-2/Schytte

supplementation

Iodine Deficiency in Pregnancy:

**Mental
impairment
of
18 million
infants each
year**



Additional Economic and Social Benefits:

- **improved health and work capacity**
- **improved efficiency of education**
- **reduced health care expenditure**
- **improved quality of life**

Call to Action: Iodine

By the year 2000:

Universal availability and consumption of iodized salt.

Anemia in Pregnancy

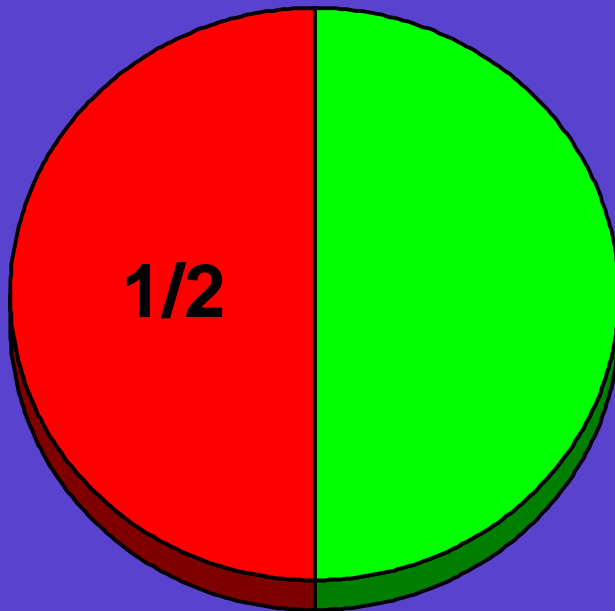


Developing Countries



South Asia

Anemia in Pregnancy

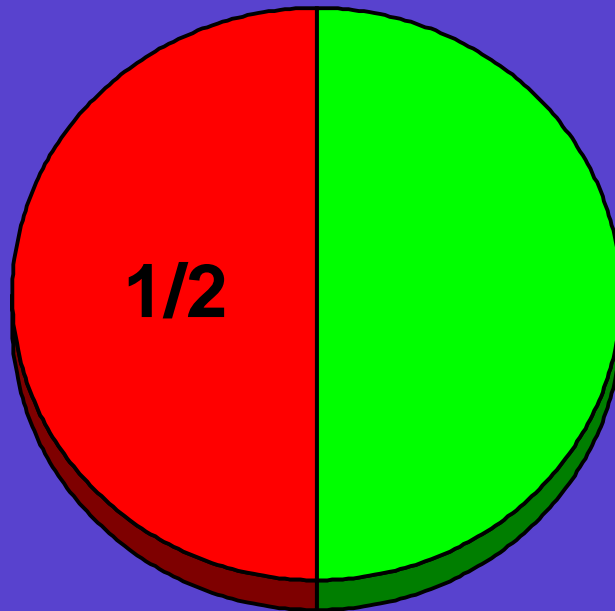


Developing Countries

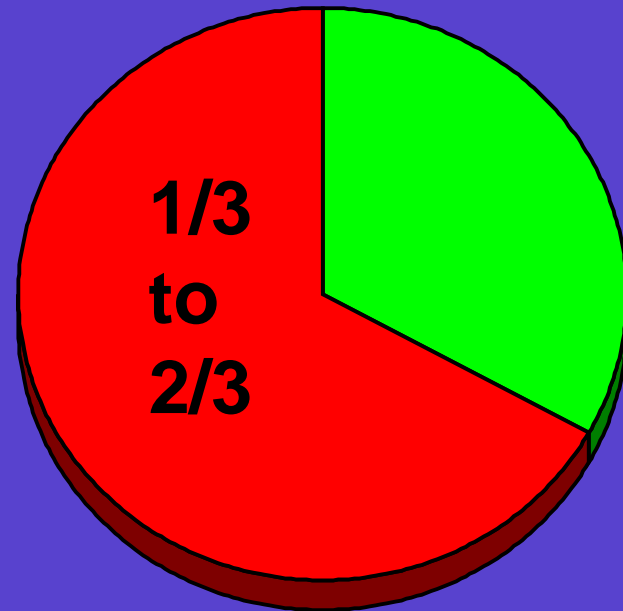


South Asia

Anemia in Pregnancy



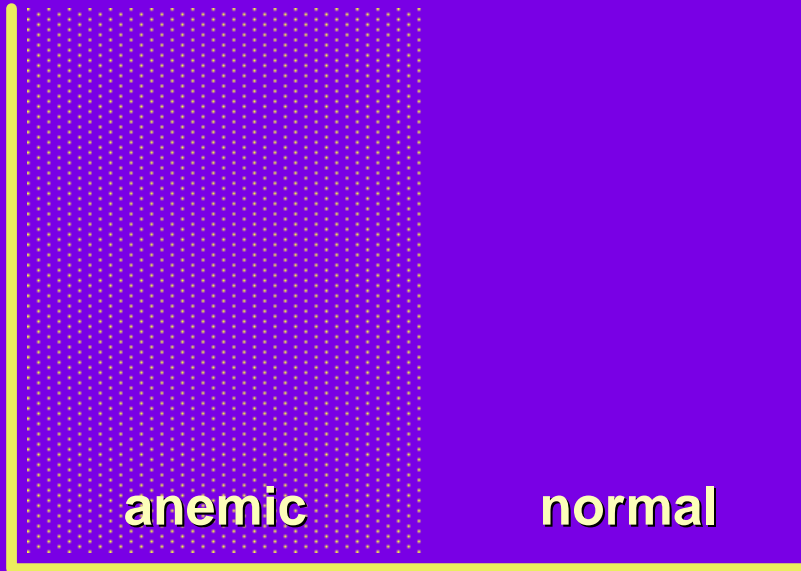
Developing Countries



Central Asia

Iron Deficiency

**work
capacity**



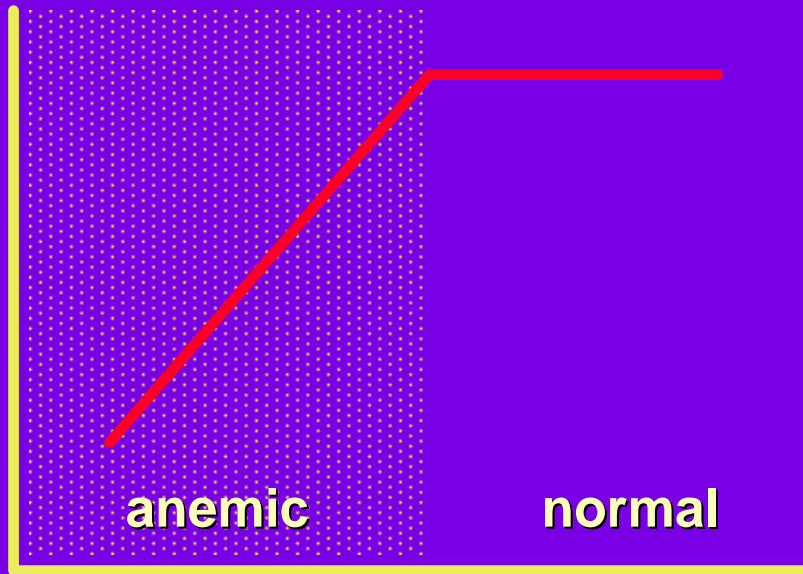
anemic

normal

hemoglobin

Iron Deficiency

**work
capacity**



anemic

normal

hemoglobin

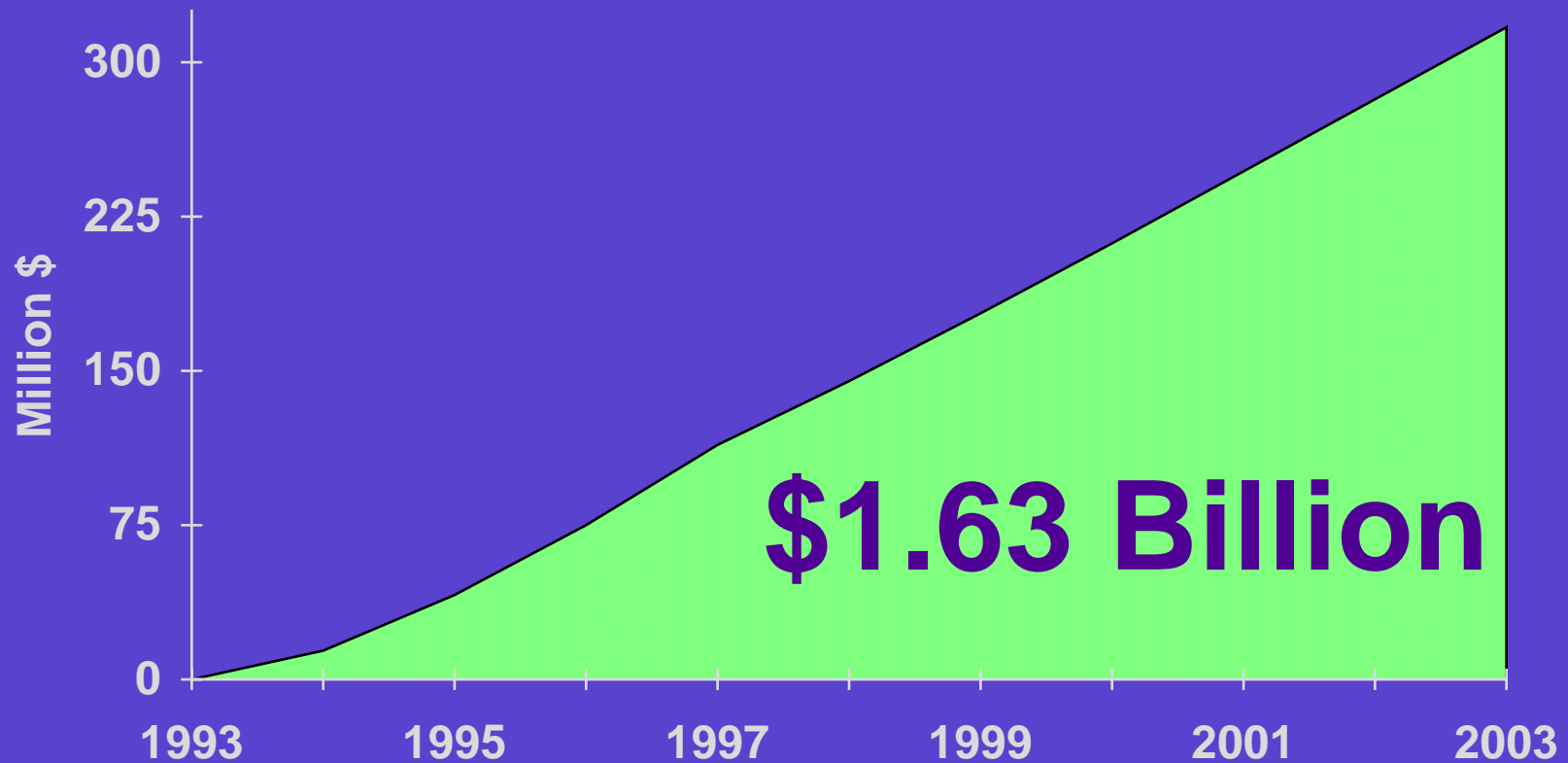
Costs and Benefits:

Oral Iron Supplement

Benefit:Cost ratio

= 260:1

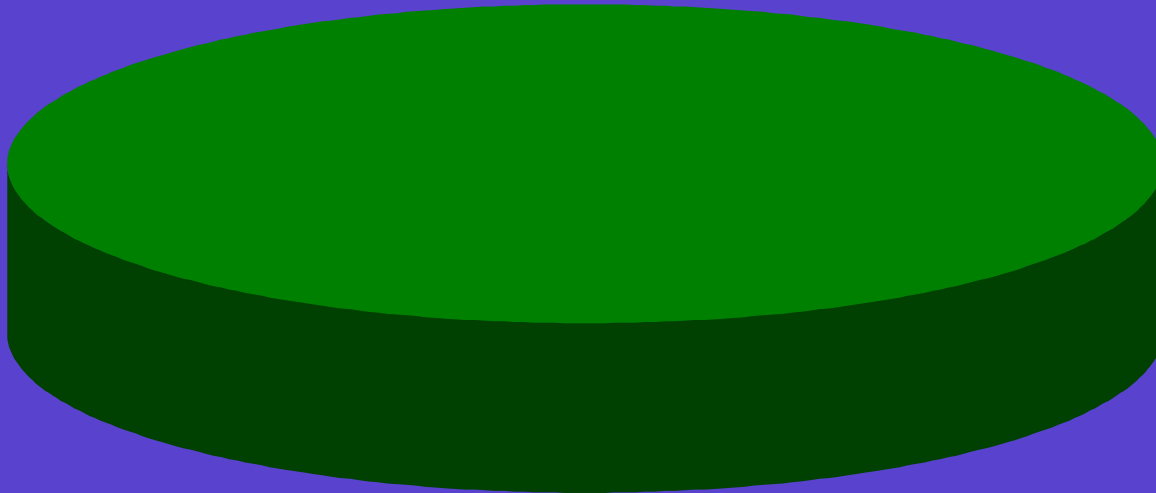
Bangladesh: Gains from Reduced Iron Deficiency 1993-2003



source: PROFILES

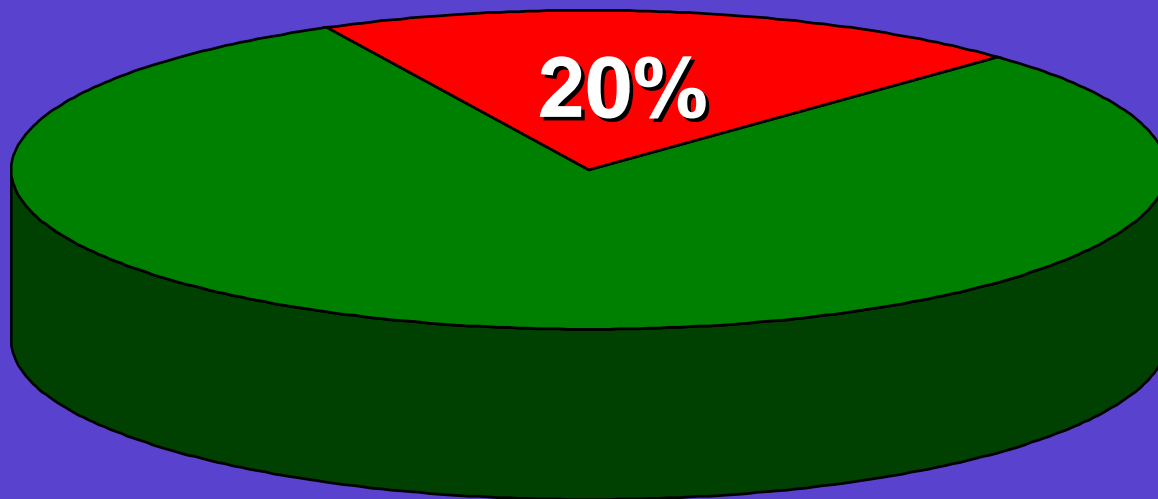
Maternal Mortality

Each Year: 500,000 maternal deaths



Maternal Mortality

Each Year: 500,000 maternal deaths
100,000 due to iron deficiency



Effects on Infant



- stillbirth
- infant death
- brain damage

Iron Deficiency: Solutions

**dietary
diversification**



UNICEF/91-088/Goodsmith

Iron Deficiency: Solutions

Fortification

Wheat flour:

- widely consumed by target group
- centrally processed
- not changed by addition of iron and other micronutrients
- Soy sauce (China)



Integrate Solutions into Existing Programs:

Finance

Agriculture

Trade

Education

Poverty reduction

Women's programs

Health

Adapted by the Iron Deficiency Project Advisory Service

from a presentation by:

The Academy for Educational Development

for

The Micronutrient Initiative

