

Why FFI?

How can flour fortification make our people healthier, smarter, and stronger?



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Workshop
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The Case for Flour Fortification

“Every year an estimated 300 million tons of flour are made into bread, biscuits and pasta to feed the world’s population. Behind this figure are tens of thousands of mills, large and small, that produce the materials for our daily bread, day in, day out.”

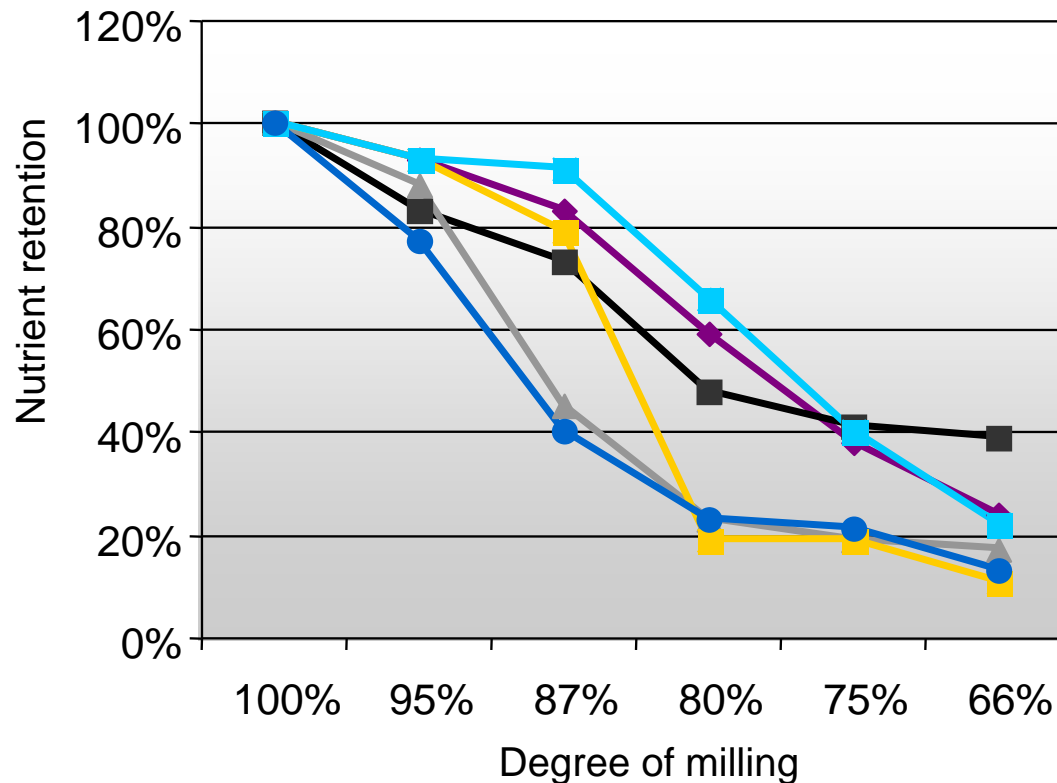
Future of Flour

Volkmar Wywiol
Managing Partner
Mühlenchemie GmbH & Co. KG



The Case for Flour Fortification

Loss of vitamins and minerals during milling of wheat



Fortification replaces nutrients lost during the milling process and can add other vitamins and minerals. Why not use fortification to address micronutrient deficiencies?

- ◆ Thiamin
- Riboflavin
- ▲ Vit. B6
- Folate
- Iron
- Niacin



Cost to Fortify

“The cost is miniscule. The benefit enormous. We have acted on this issue both because it is right - and because it presents our business in positive light.”

Philip Purnama, the chief commercial officer of the largest mill in the world.

Recurring costs of buying quality premix ranges from \$1.50 to \$6 per metric ton, depending on the type of fortificant.

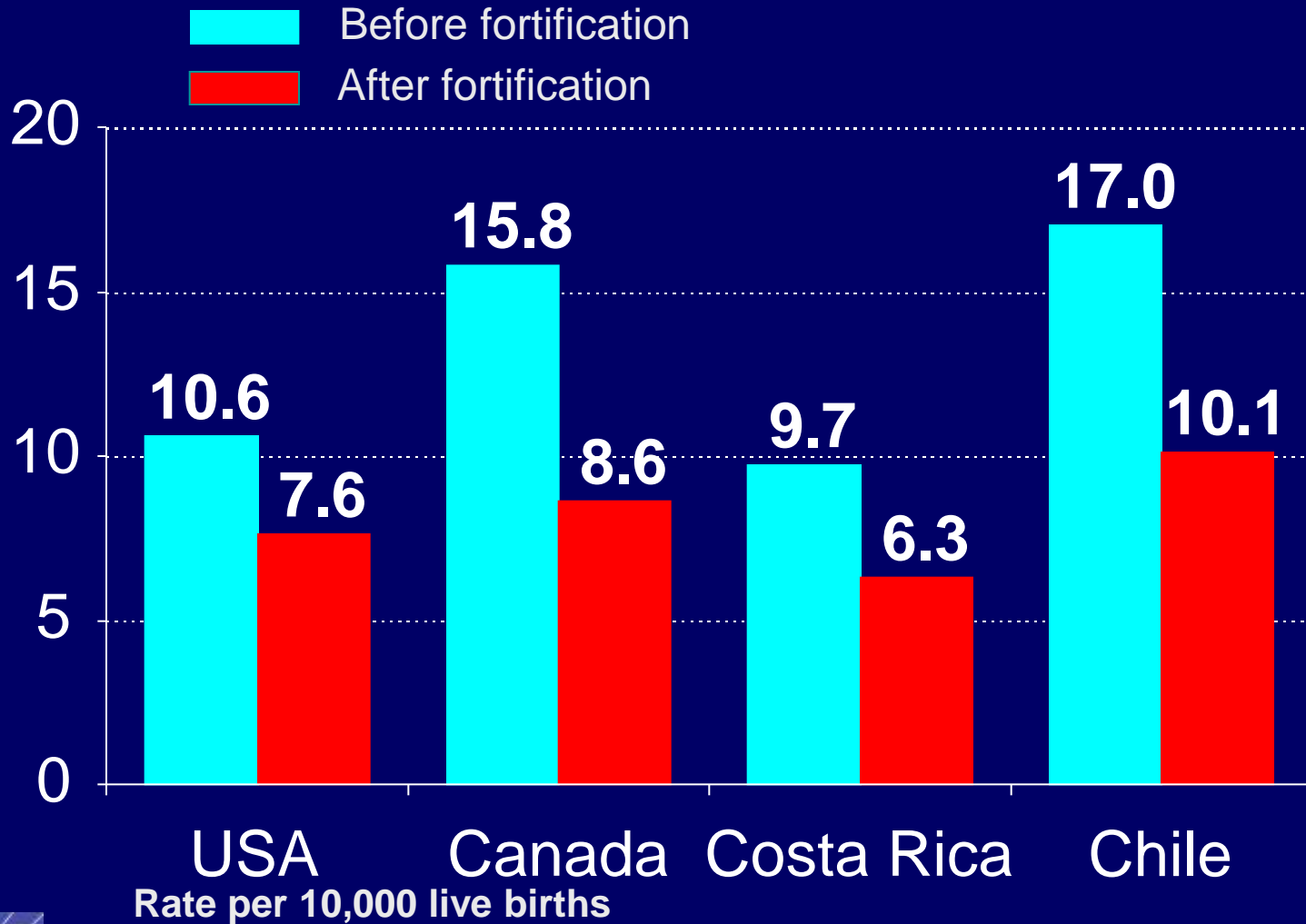
The per person, per year cost to fortify wheat flour may be as little as eight to ten cents, depending on variables such as the average consumption and price of grain.



Flour Fortification with Folic Acid
Can prevent children being born with disability



NTD Prevalence changes in the Americas before and after folic acid fortification



SAFER • HEALTHIER • PEOPLE™

Burden from Micronutrient Deficiencies

Global disability-adjusted life-years (DALY) among children younger than 5 attributed to micronutrient deficiencies

Deficiency	Disease burden (DALYs)	% of DALYs in children < 5yr
Vitamin A	22,668,000	5.3
Zinc	16,342,000	3.8
Iron	2,156,000	0.5
Iodine	2,614,000	0.6



Black et al, Lancet 2008.
(Data for 2004)

Global Impact

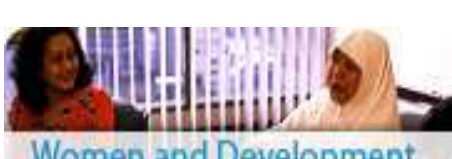
- Impairs millions of growing minds and lowers national IQ by 15%
- Causes damage to immune systems and deaths of more than a million children a year
- Causes 200,000 serious birth defects annually.
- Contributes to the death of approximately 60,000 young women a year during pregnancy and childbirth.

Micronutrient Initiative and UNICEF



DALYs = the sum of the years of life lost due to premature mortality and the years lost due to disability⁷

10 Development Challenges



The Copenhagen Consensus



Eight world-renowned economists

Jagdish Bhagwati, François Bourguignon, Finn Kydland*, Robert Mundell*, Douglass North*, Thomas Schelling*, Vernon L. Smith*, Nancy Stokey

* Denotes Nobel prize winner



Nutrition interventions are five of the top 10 most cost effective means to address global challenges, according to the 2008 Copenhagen Consensus

Rank	Solution	Challenge
1	Micronutrient supplements for children (Vitamin A and zinc)	Malnutrition
2	The Doha development agenda	Trade
3	Micronutrient fortification (iron and salt iodization)	Malnutrition
4	Expanded children's immunization	Diseases
5	Biofortification	Malnutrition
6	Deworming and school nutrition programs	Malnutrition and education
7	Lowering the price of schooling	Education
8	Increase and improve girls' schooling	Women
9	Community-based nutrition promotion	Malnutrition
10	Provide support for women's reproductive role	Women



UN Millennium Development Goals 1 - 6



Eradicate extreme poverty and hunger



Achieve universal primary education



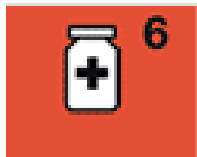
Promote general equality and empower women



Reduce child mortality



Improve maternal health



Combat HIV/AIDS, malaria and other diseases



Goal 1: Eradicate Extreme Poverty and Hunger

Goal 3: Promote Gender Equality and Empower Women



Anemia is associated with 17% lower productivity in heavy manual labour, 5% lower productivity in other manual labour, and an estimated 4% loss of earnings due to lower cognitive skills.



Goal 2: Achieve Universal Primary Education

Iron & Iodine
Improves:

↑ Cognitive
Skills

↑ School
Participation

↑ School
Achievement

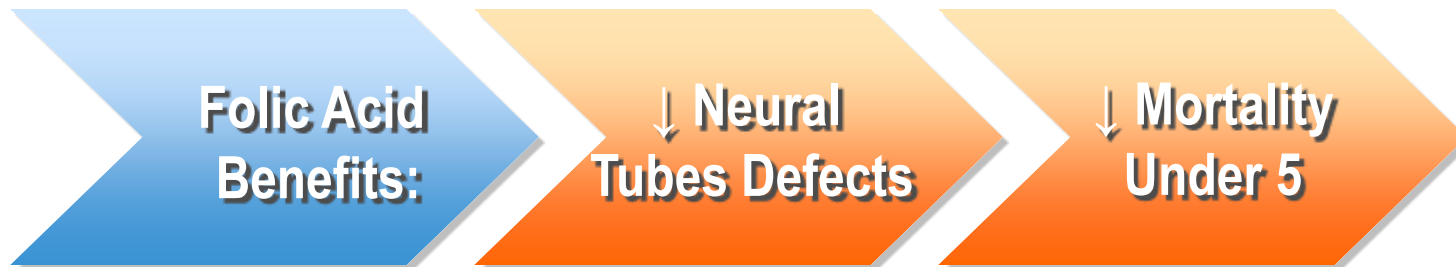
In one study in India, eliminating anemia was associated with a 5.8 percentage point increase in school participation, and a 20% decrease in absenteeism.

A meta-analysis of iodine deficient populations showed a shift in IQ distributions to lower levels by 13.5%



Goal 4: Reduce Infant Child Mortality

Goal 5: Improve Maternal Health



Goal 6: Combat HIV/AIDS, malaria, other diseases

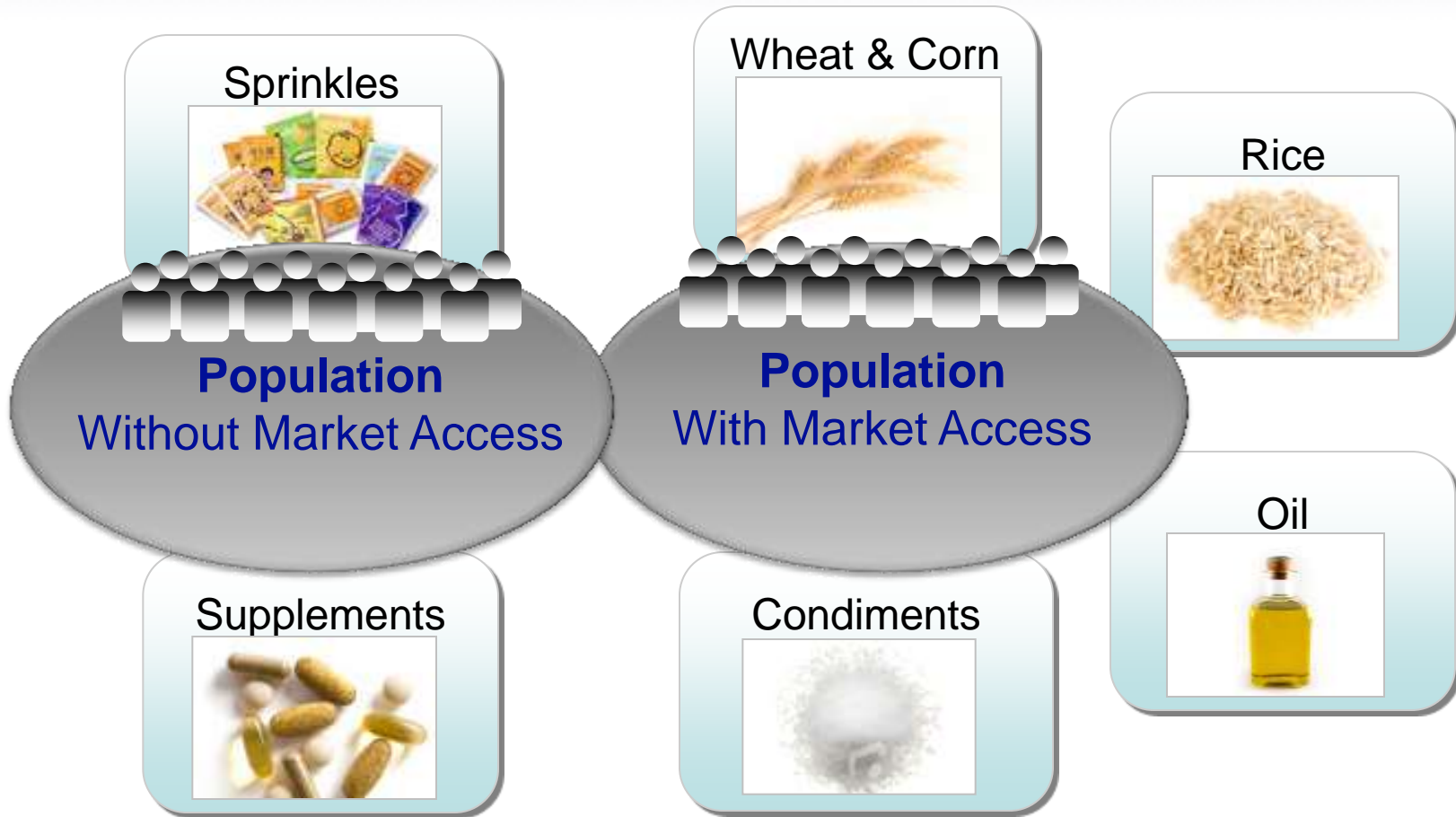


Supplementation trials conducted over the past twenty years have convincingly shown vitamin A to reduce preschool child mortality, by 23% to 34%. This effect has been attributed to reduced severity of measles, diarrhea or dysentery, malaria and other febrile illnesses.



Countries Need Multi-faceted Approach

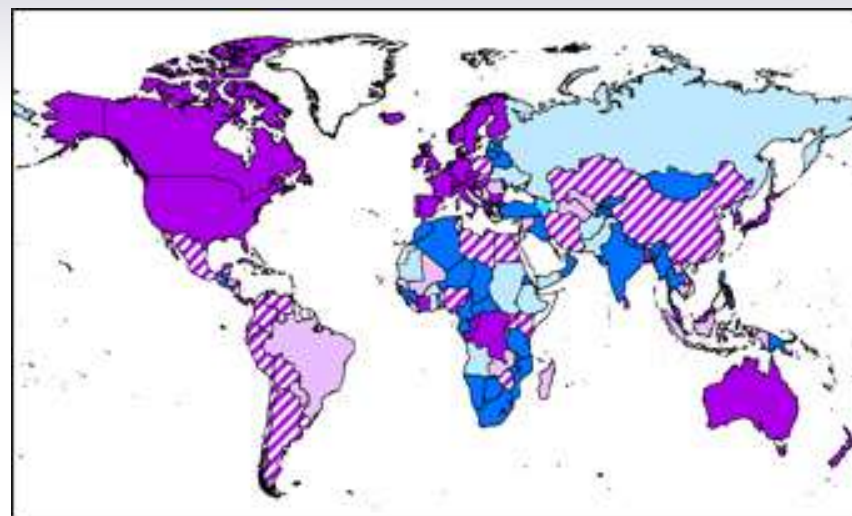
Each Country Needs Individual Plan



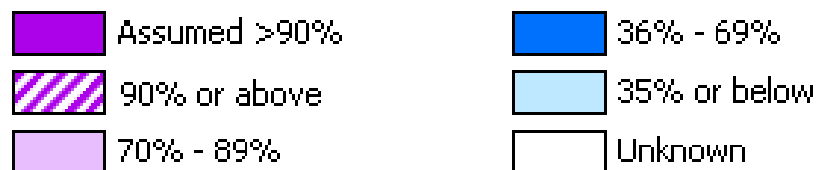
Universal Salt Iodization

Since 1990:

- ✓ Nearly 2.8 billion people have sufficient iodine intake while 3.0 billion people are iodine deficient.
- ✓ Growth in households with access to iodized salt has grown from less than 20% in 1990 to over 70% in 2008.
- ✓ Most countries have mandatory salt iodization except US, some countries in Europe, Australia and New Zealand. There is documented iodine deficiency in these countries.



Percentage of Households with Access to Iodized Salt



Source: ICCIDD www.iccidd.org



Goal Eight: Develop a Global Partnership

Public Sector
Enabling Environment,
Advocacy
Monitoring

The diagram features a background of blue human figures connected by a network of dashed lines. On the left, two overlapping circles are positioned: a grey one on top and a yellow one on the bottom. A large, light blue arrow points from the space between these circles towards a grey oval on the right. Inside this oval, there is a row of ten stylized human figures, with the text 'Consumer Health Benefit' centered below them.

Private Sector
Implementation
& Delivery

Consumer Health Benefit



A graphic of a water splash with ripples, positioned to the left of the main title.

FFI Development

— 2002-2004

- Develop concept
- Agree the goal
- Engage founding partners

— 2004–2006

- Develop strategic plan
- Develop structure
- Grow partnership
- Engage with selected acceleration countries

— 2006-2008

- Develop Regional concept
- Grow the partnership
- Encourage & Empower Countries

— 2008–2010

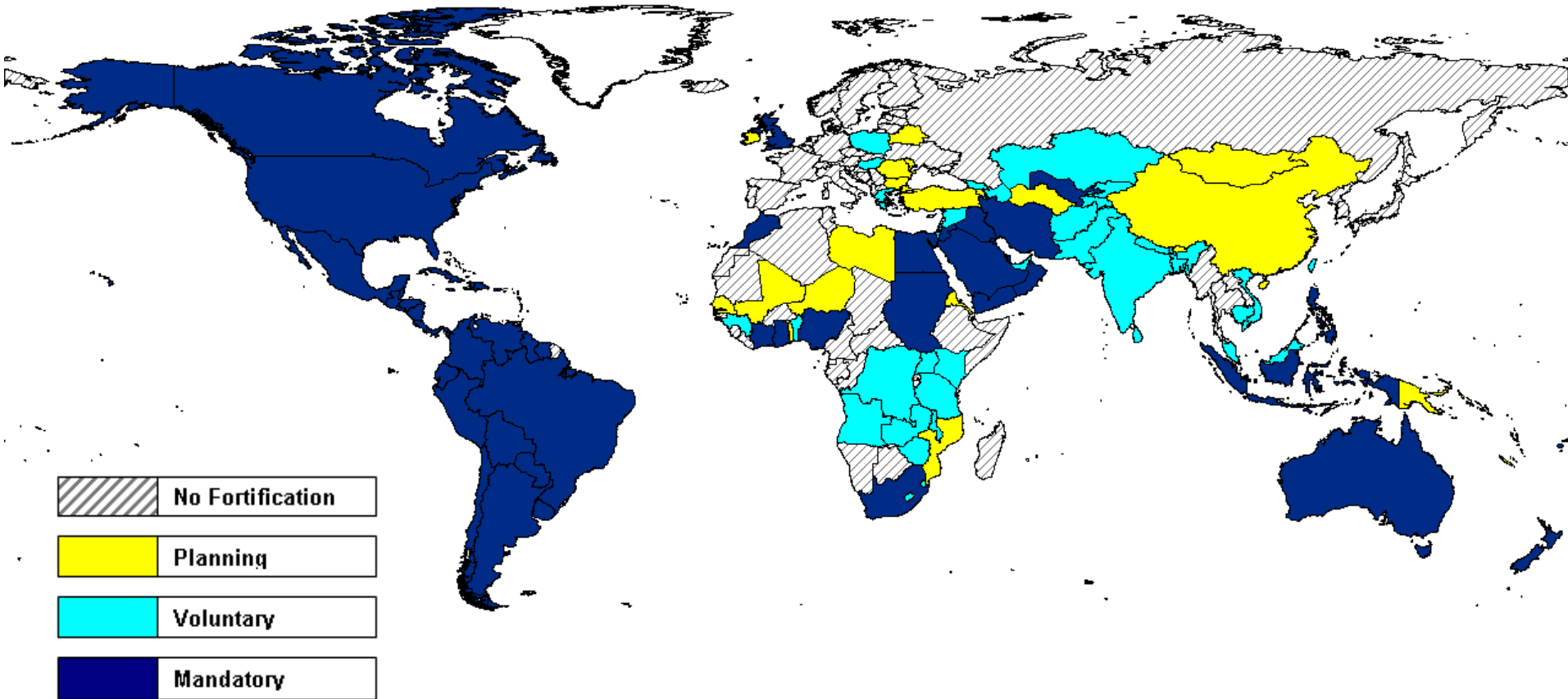
- Consolidate regional approach
- Enhance political support
- Energize partner commitment



Flour Fortification Progress

August 2008

Fortifying with at least iron and/or folic acid



Flour Fortification Progress

Since 2004:

- ✓ Nearly 2 billion people now have access to fortified flour - 858 million more than in 2004.
- ✓ Growth in fortified flour from roller mills increased from 18% to 30%
- ✓ The number of countries with documented national regulations for mandatory wheat flour fortification increased from 33 to 55.



FFI Focuses on National Action



**All efforts
lead to national action
with main focus on 14
acceleration countries**

New Regional Approach

**Executive Management Team
with eight members
Leaders Group with 55 members**

**Communications
Group with 14 members**

**Training/
Technical
Support Group offers
training around the world**

Secretariats



Helping Partners Reach Their Goals



Advancing Education and Training Opportunities.



Delivering Results at The Point of Impact



Healthy People in a Healthy World



Rollins School of Public Health.
Promoting Health,
Preventing Disease



From Golden Grain
to Finest Flours



To improve the health of, and ensure comprehensive health care services for, our community.



Challenges to Flour Fortification

For Political Success, Address Every Concern

Civic Consumer Citizen

-Concerns-

- How will it benefit me?
- Will it harm me?
- Will it cost me?
- Why are you taking away my freedom of choice?
- Will it undermine my disability rights?

Health Nutrition Sector

-Concerns-

- Will it reach the most affected and vulnerable?
- Will it have an impact by itself?
- What about other foods?
- What unintended negatives?
- Are supplements more targeted?
- Why not more “natural” nutrients?

Standards Food Authority

-Concerns-

- What about exceeding UL in some people?
- Is it safe?
- What type and amount of fortification?
- Will it have an impact?
- Will it have organolyptic consequences?
- Can current monitoring systems cope?

Agriculture Industry Trade

-Concerns-

- Will it damage the bottom line?
- How can we deal with high commodity prices and this now?
- What will be the pre-mix costs?
- How feasible to adopt it in all mills?
- What will my customers think?
- How will product quality control be impacted?
- Will the government intrude more?
- What about our image?

Finance Economic Planning

-Concerns-

- What does the Cost Benefit Analysis say?
- Who will pay for this?
- Will it impact the government budget?
- Will the free market system be impeded?
- What will be the impact on trade?



National Partnership Strategy



- **Flour fortification is most successful when it is driven by national leaders representing multiple sectors.**
- **Success of flour fortification in one country can have an accelerating influence in the region**
- **A mandatory approach is the most effective way forward**
- **Multiple sectors must work together**
- **Reaching the top decision makers is essential**



FFI Strategies



STRATEGY 1. Catalyse, support and sustain the operation of national partnerships

STRATEGY 2. Create and disseminate communication & training and technical support materials in key areas

STRATEGY 3. Through the Leaders' Group ensure that organizations are enabled to work together

STRATEGY 4. Secure adequate human and financial resources at national and global levels both for national activities and for the network in total.

STRATEGY 5. Monitor all national fortification programmes.

