

Food fortification overview & regional update

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Burden : Vitamin and Mineral Deficiencies globally

- Impair millions of growing minds and lowers national IQ
- Cause damage to immune systems and deaths of more than a million children a year
- Cause 300,000 serious birth defects annually (including neural tube defects)
- Contribute to the death of approximately 60,000 young women a year during pregnancy and childbirth
- Reduced protection and immunity against disease



The Problem: Neural Tube Defects (NTD)



Spina Bifida Occulta



Meningocele



Myelomeningocele



Anencephaly

Magnitude of Micronutrient Deficiencies in Tanzania 2010 (TDHS)

Children <5 years	%	Women 15-49	%
Stunting ¹ (Zinc deficiency proxy)	42	Low Body mass index	11
Underweight ¹	16	Iodine Deficiency	36
Anemia ²	69	Anaemia	40
Iron Deficiency ²	35	Iron deficiency	30
Vitamin A Deficiency ²	33	Vitamin A deficiency	37

1Children 0-59 months.2Children 6-59 months



Why do we have high rates of vitamin and mineral deficiencies?

- Diets are characterized by cereals and tubers that are low in micronutrients
- Lack of nutrition education
- Food insecurity
- Escalation of food prices
- Diseases (infection & infestations) that reduce micronutrient absorption

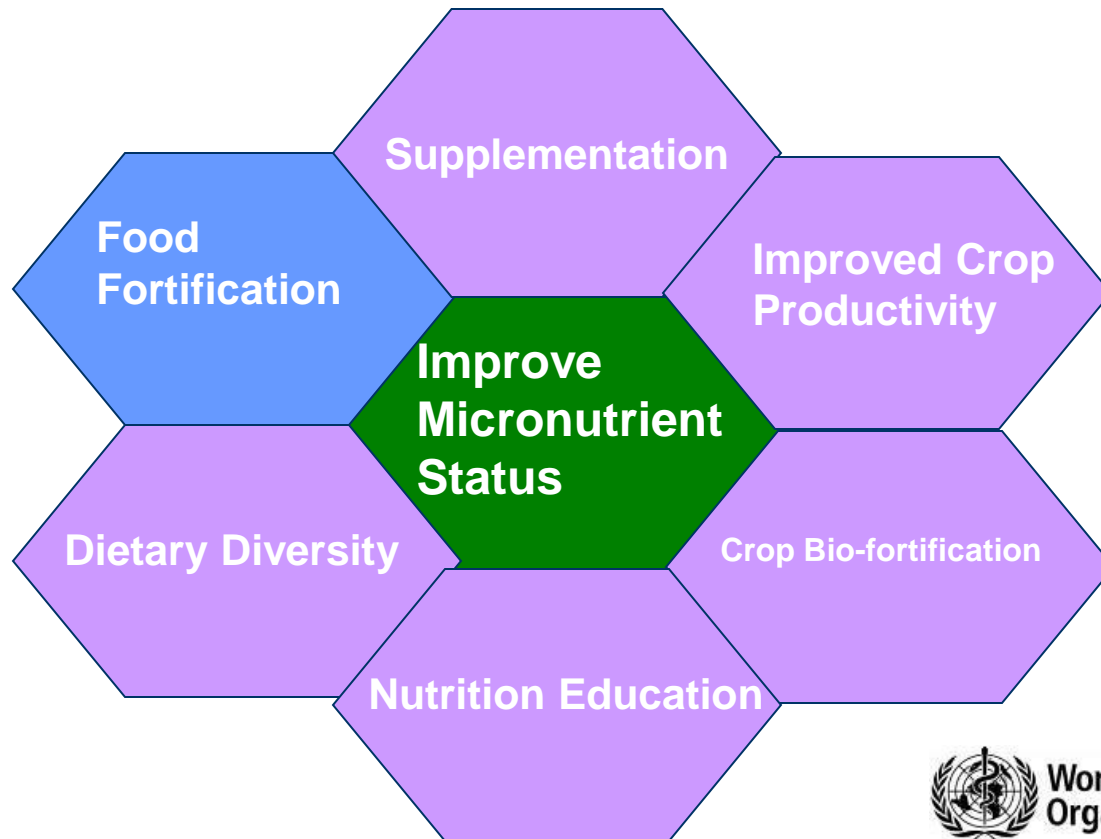


Diets are characterized by cereals and tubers that are low in micronutrients

NUTRIENTS	Milk	Meat/ Fish/ Poultry	Eggs	Refined Cereals / Sugars, Oils	Fruits and vegetable s	Beans, peanuts
Iodine	√	√	√	-	-	-
Zinc	-	√√√	√	-	-	(√)
Iron	-	√√√	-	-	-	(√)
Calcium	√√√	√	√	-	(√)	(√)
Vitamin A	√√√	√	√√	-	(√ √)	-
Folate	-	√	√	-	√√	√√√
Vitamin B-12	√√	√	√√	-	-	-
Vitamin B-2	√√	√√	√	-	√	√
Vitamin C	-	-	-	-	√√√	-



Interventions to Address Vitamin and Mineral Deficiencies



What is food fortification?

- Is the practice of **deliberately** increasing the content of essential micronutrient, i.e. vitamins and minerals in foods, so as to **improve** the nutritional **quality** of the food supply and provide a public health benefit with **minimal risk** to health (WHO).



FORTIFICATION PROCESS

Premix addition-industry



Fortified flour



Advantages of Food Fortification

- Socially acceptable intervention;
- Does not require change in food habits;
- Can be introduced quickly under industrial-production settings;
- Low daily dose optimizes efficacy and safety;
- Costs are relatively small: 0.5% - 2% of the product's retail price;
- Costs can be passed on to food industry and then to the consumer (estimated at roughly 80 cents/year for a Tanzanian family for wheat, maize and oil fortification)



Expected Outcomes

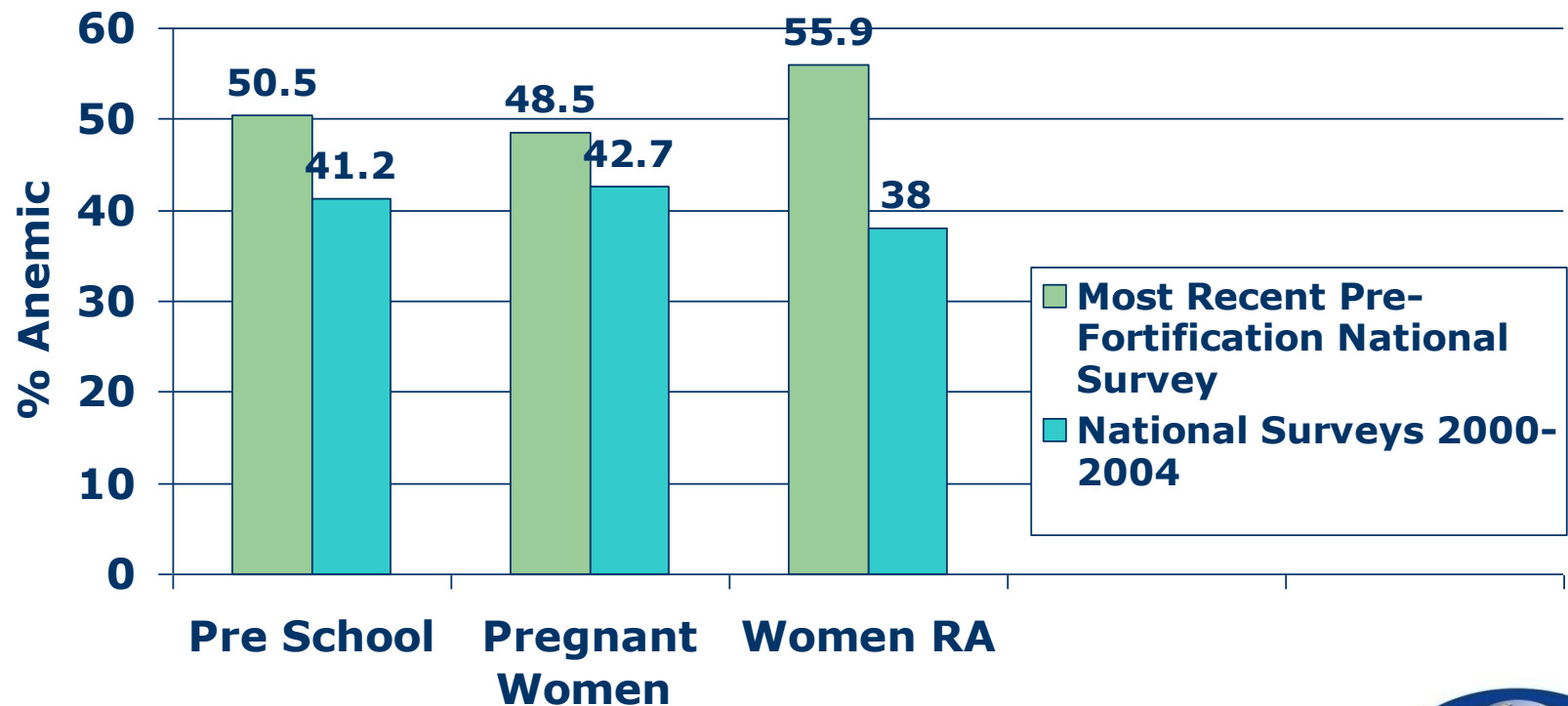
- Reduced rates of micronutrient deficiencies leading to
 - Improved health
 - Reduced mortality and morbidity
- Increased work productivity
- Economic progress
 - **US \$ 518 Million around 2.65% of TZ GDP**
- Stronger, smarter and healthier population



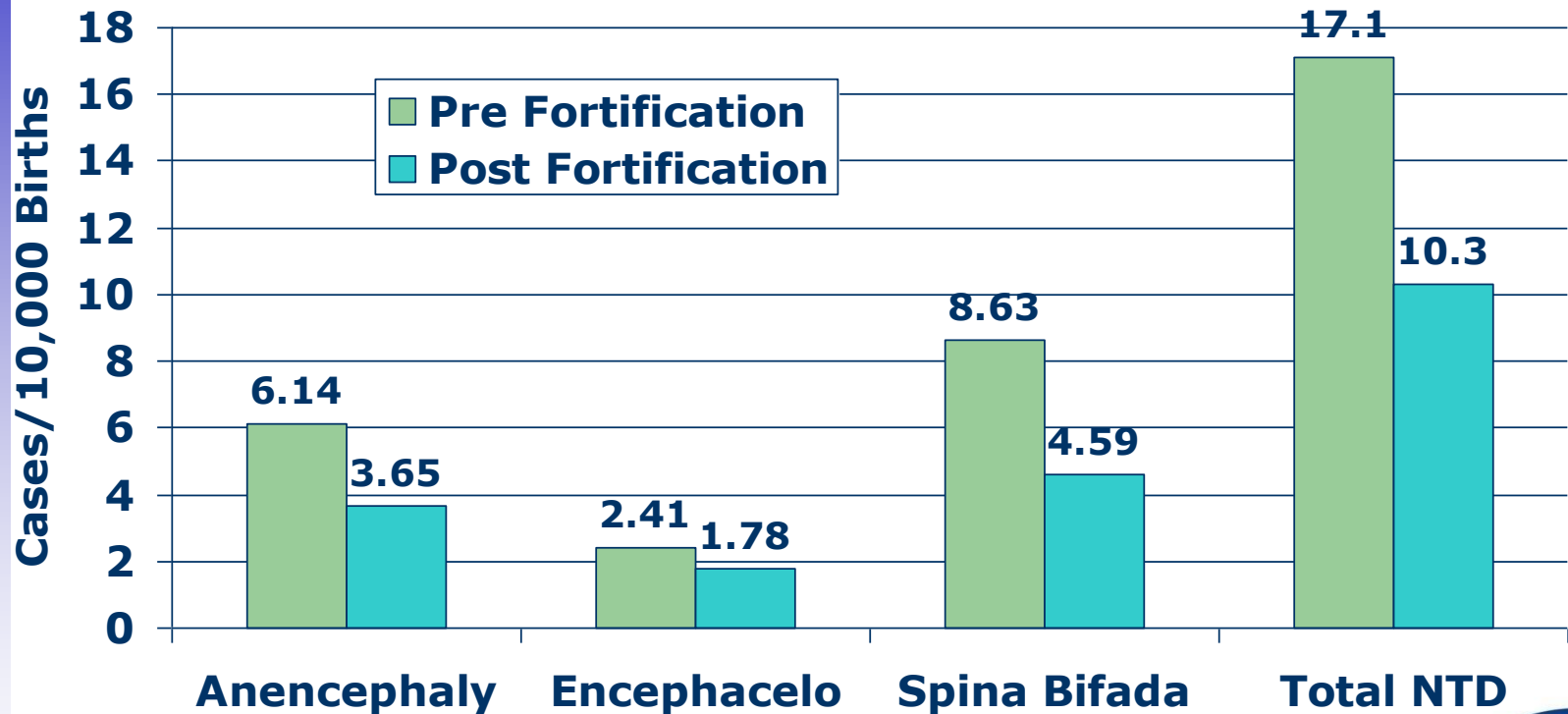
Evidence



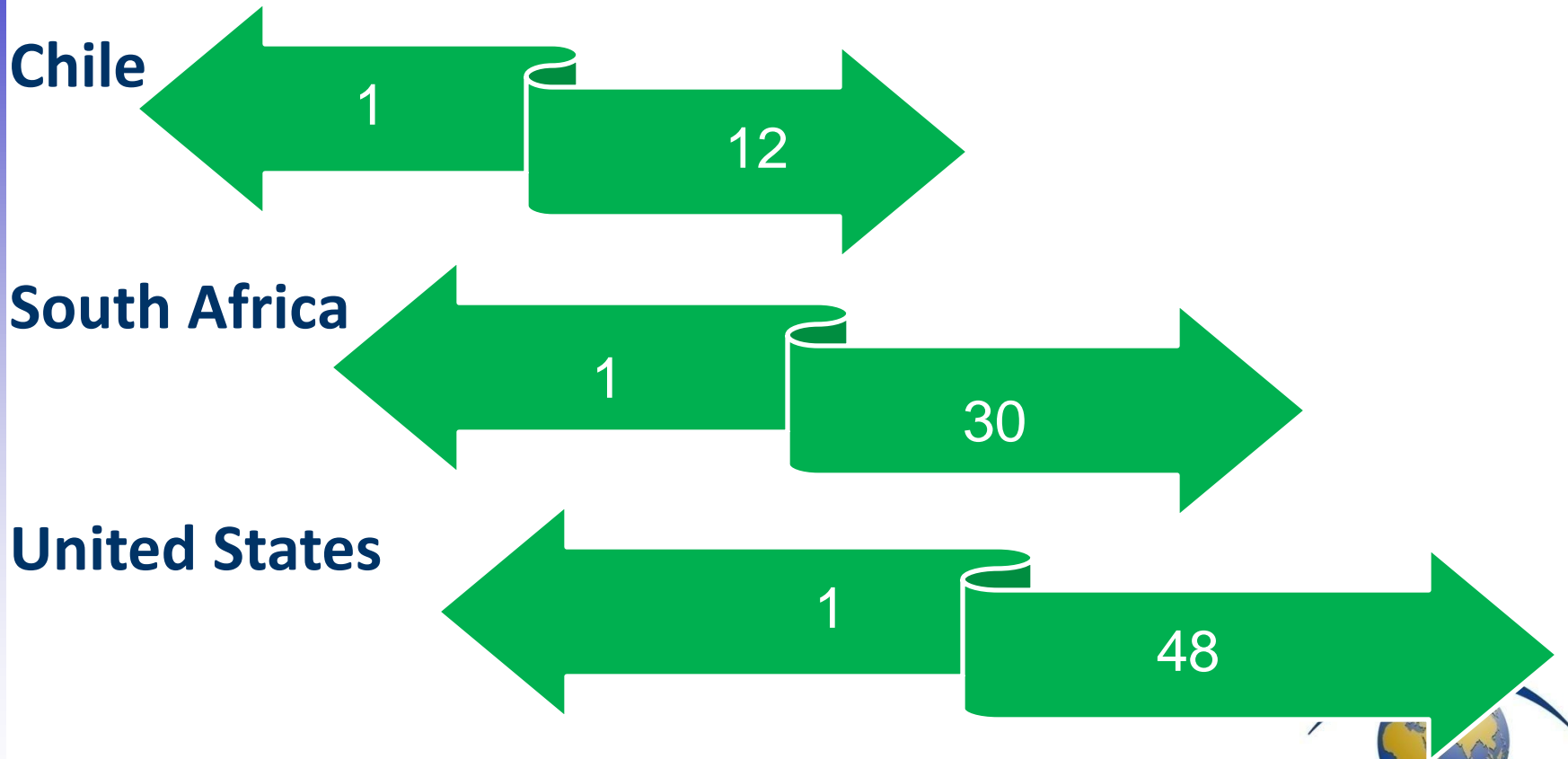
Oman: Pre-Post Fortification National Decrease in Anemia 18-32%



Chile Folic Acid Fortification: 40% Decrease in NTDs



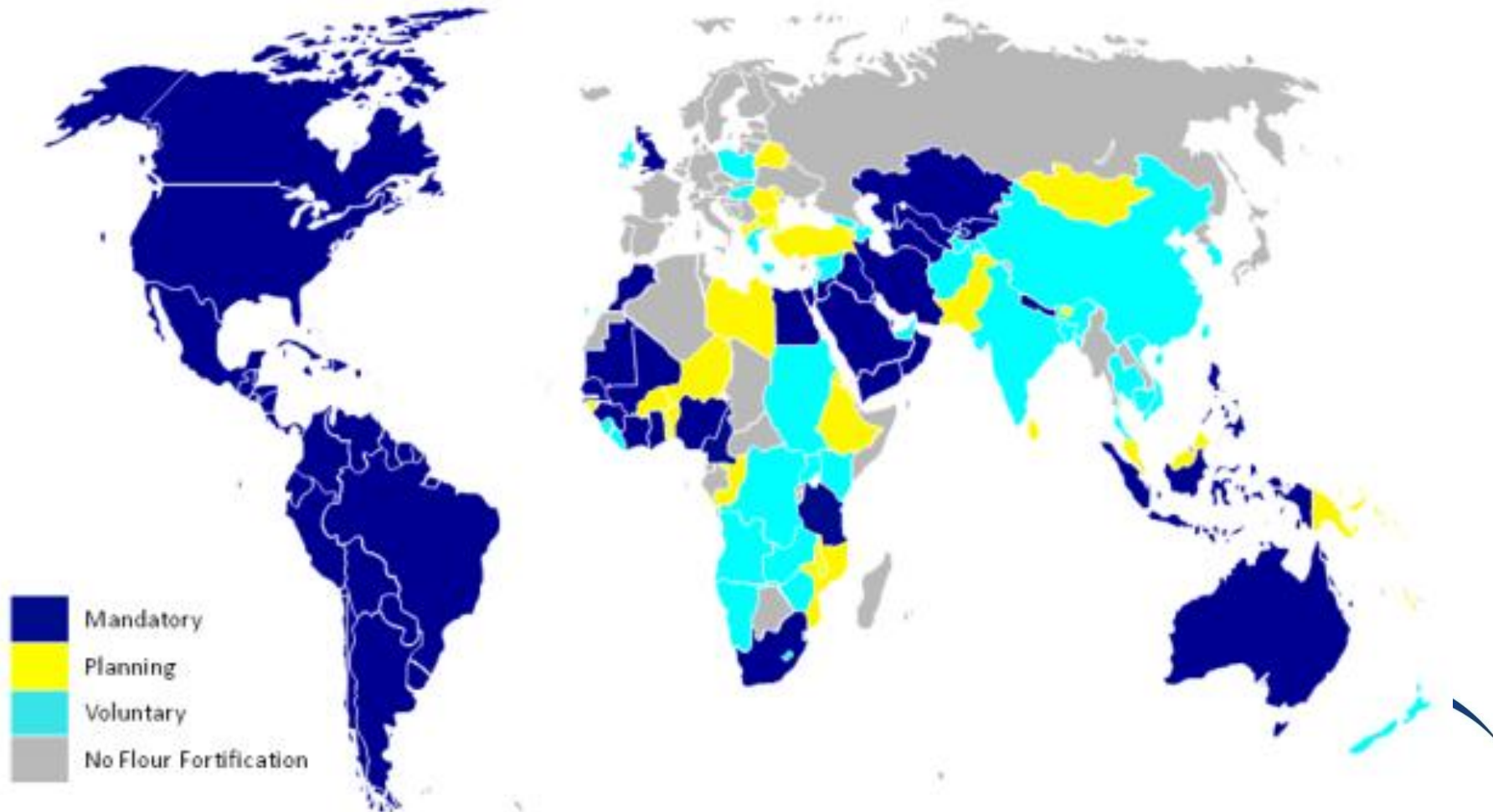
Cost: Benefit Ratio for Preventing Spina Bifida



Current Status



Global Flour Fortification Status - January 2012



Fortification Initiatives in the ECSCA Countries

Country	Foods fortified
Uganda	Salt, Oil, Maize flour and Wheat flour
Kenya	Salt, Oil, Maize flour, Sugar (mandatory fortification)
Tanzania	Salt (oil, maize flour and wheat flour) mandatory food fortification July, 2011
Zambia	Sugar and considering to fortify maize flour and oil (mandatory fortification 1998)
Malawi	Oil, Maize flour and trials on sugar fortification successfully completed, will start in January
Lesotho	Importing fortified salt, maize flour and wheat flour from SA and planning to fortify maize flour
Swaziland	Importing fortified salt, maize flour and wheat flour from SA and planning to start maize flour

Fortification and CAADP: Where does it “Sit”?

- CAADP – Pillar 3:
Prioritizes food fortification
- Feed the Future programs can/should include food fortification
- PPP:
 - Industries
 - Consumers
 - Ministries of Industry, Commerce, Health
 - Technical and Financial partners



Implementation



KEY ELEMENTS in FORTIFICATION:

- **Population-based identification of food vehicles (usually with FRAT)**
- **Industry assessments**
- **Legal framework (regulations/legislation)**
- **Quality assurance (standards)**
- **Marketing of concept of fortified foods (public)**
- **Marketing of fortified food products (private)**
- **Monitoring and evaluation**

FORGING PARTNERSHIPS

ADVOCACY

Best Practices and Lessons Learned

- Bottom-up approach – focusing on industries as center of program
- Creating partnership synergies not competition or duplication of efforts (UNICEF, FFI-Smarter Futures, MI, BASF, UEMOA, WAHO, GAIN ,DFID)
- Harmonizing standards across region to facilitate intra-regional trade in fortified foods with harmonized regional consumer logo – UEMOA
- **Moving towards harmonized standards for EAC**
- Provision of tax exemption for premix and other Fortificants (essential medicines)



Challenges:

- Needs strong M& E by responsible regulatory government bodies to ensure level playing field for all private industries
- Needs concerted and strong coordination due to the multi-sectoral nature of the program

Further Resources

- Helen Keller International fortification documents:
<http://www.hki.org/reducing-malnutrition/food-fortification/large-scale-food-fortification/>
- Videos from UEMOA-wide information campaign:
<http://www.youtube.com/user/afrohki>
- World Bank Institute Case Study:
<http://siteresources.worldbank.org/CGCSRLP/Resources/1Fairetachedhuilecase.pdf>
- Copenhagen Consensus Center:
<http://www.copenhagenconsensus.com/Default.aspx?ID=1303>
- World Health Organization interim guidance on wheat and maize flour fortification:
http://www.who.int/nutrition/publications/micronutrients/wheat_maize_fort.pdf
- Helen Keller International & University of California, Davis – Nutrition News for Africa:
<http://www.hki.org/research-publications/nutrition-news-for-africa/>



Thanks for those supporting FF in the region



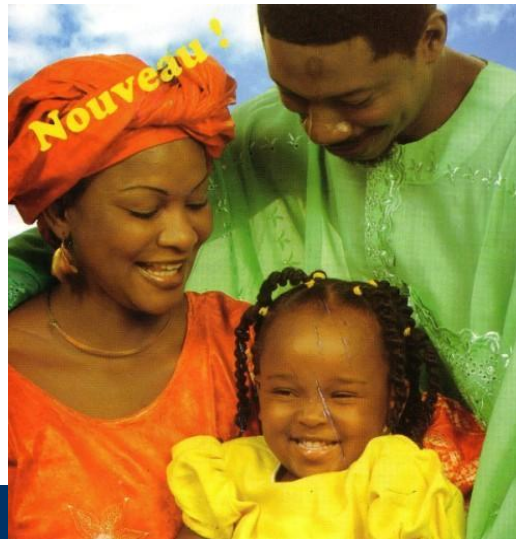
USAID
FROM THE AMERICAN PEOPLE



UKaid
from the British people



Fortification logos:



Helen Keller
INTERNATIONAL

Thank You

Merci

Obrigado



Quand je suis sur l'emballage,
le bien-être est dedans!

An illustration showing three food products: a green can of oil, a bag of flour, and a yellow jug of oil. A cartoon character with a yellow head and orange body is pointing towards the products. The products are labeled "ENRICH", "Farine", and "Huile".

Mangez mieux!
Consommez les aliments enrichis!

Organisation mondiale de la Santé
Helen Keller INTERNATIONAL
gain
ministère de la Santé
République de Côte d'Ivoire

*“Alone we can do so little;
together we can do so much.”
(HK)*



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