Championing ‘Smarter Futures’ in Africa through Flour Fortification

21 August 2012

After a successful launch, the “Smarter Futures” partnership to promote improved nutrition through flour fortification in Africa is scaling up its efforts with a commitment from the Ministry of Foreign Affairs of the Netherlands to contribute 1.5 million Euros (US $1.8 million) over the next five years. The Dutch support will be matched with financial and in-kind contributions from public and private sector partners including AkzoNobel, the Flour Fortification Initiative (FFI), Helen Keller International (HKI) and the International Federation for Spina Bifida and Hydrocephalus (IF).

Flour fortification involves adding essential vitamins and minerals to flour as it is milled, which in turn makes foods prepared with fortified flour more nutritious. Iron, zinc, folic acid, and other B vitamins are commonly added to wheat and maize flours. This has proven to be a cost-effective means of reducing the prevalence of iron deficiency anaemia and neural tube birth defects and improving overall health. Many countries in Africa also fortify cooking oil with vitamin A to prevent childhood blindness and improve child survival.

“We are very pleased that with the continued support of the Dutch Government, we can take Smarter Futures to the next level,” said Scott Montgomery, Director of the Flour Fortification Initiative which serves as an umbrella organization for Smarter Futures. “We are committed to working efficiently and transparently with our vast network of partners on the ground in Africa to make cereal grain fortification standard milling practice across the continent.”

In September 2008, only six countries in Africa had legislation to require wheat flour fortification. Currently 18 countries in Africa have these mandates, at least three countries fortify more than half their flour through voluntary efforts, and six countries have documented efforts that they are planning a national-scale flour fortification program. See a list of African countries and their wheat flour fortification legislative status.

Country fortification efforts are most successful when they are led by national leaders of multi-sector groups representing the public, private, and civic sectors. These groups often form National Fortification Alliances. Smarter Futures partners work in collaboration with these alliances. Accomplishments from the initial Smarter Futures partnership, a three-year project from 2009 to 2011, include:

- An African network of millers and their public sector and civic partners was established to provide access to up-to-date technical knowledge and skills about flour fortification.
- Millers worked constructively with national food control authorities and other public health and civic parties to ensure that high-quality wheat and maize flour, fortified according to the World Health Organizations recommendations, became available on the African market.
- Based on current scientific evidence, sodium iron EDTA, a highly bio-available iron source, was promoted as a preferred compound for fortifying whole wheat (high protein) flour. A new easy-to-use and qualitative method for determining sodium iron EDTA concentration in flour was developed.
Smarter Futures

• Goal: improve health in Africa by fortifying wheat flour and maize products with essential vitamins and minerals

• Supports public-private-civic partnership at all levels
  – Millers, governments, nutrient suppliers, international organizations, academic institutions

• Adds technical expertise and training tools

• Brings people together across sectors and countries
Smarter Futures

• does not itself invest large programme resources but supports and strengthens the efforts of network partners, including:
What is IF?

Mission

The mission of IF is to decrease the incidence of Spina Bifida and Hydrocephalus by primary prevention and to improve the quality of life of those affected.

Domains

- Human Rights
- Prevention
- International Solidarity
- Network Development
What is Spina Bifida?

• Birth defect needs care and surgery at birth
  develops early in pregnancy
  • can be prevented
  • by folic acid

• Incidence EU: 1/1000
• Incidence LMIE: 2-10/1000

Spina Bifida (and related Hydrocephalus)
What is Hydrocephalus?

CSF = Cerebrospinal fluid

Absorption of CSF

Circulation / function

Production of CSF
Situation without treatment
Prevention of NTDs and H

<table>
<thead>
<tr>
<th>Spina Bifida</th>
<th>Hydrocephalus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition aspect - Folic Acid</td>
<td>Improved maternal Health</td>
</tr>
<tr>
<td>(supplementation/fortification)</td>
<td>Prevent neo-natal infections</td>
</tr>
<tr>
<td>Supplementation in all projects to</td>
<td>Combat malnutrition and prematurity -</td>
</tr>
<tr>
<td>woman at extra risk</td>
<td>resilience</td>
</tr>
<tr>
<td>Other strategies: Diet, Oral</td>
<td>Early detection</td>
</tr>
<tr>
<td>contraceptive + Folic Acid</td>
<td>Information and referral</td>
</tr>
</tbody>
</table>


Related MDGs

Preconception care, preventative measures

Access to health care (capacity)

Inclusion in society, follow-up care

Registration at birth

Registration later

Eradicate extreme poverty

Promote gender equality and empowerment

Global partnership for development

Improve maternal health

Reduce child mortality

Combat HIV/AIDS, malaria and other diseases
A New Opportunity to Improve Iron Status
Ferric Sodium EDTA as a novel food ingredient
Helen Keller International
Overview of Nutrition and Fortification Programs
HKI’S PROGRAM PORTFOLIO

**Eye Health**
• Cataract
• Primary Eye Care
• Refractive Error
• Diabetic Retinopathy
• Inclusive education

**Nutrition**
• Micronutrients (vit A, iron, zinc)
• Infant and young child feeding
• Maternal nutrition
• **Large Scale Food fortification**
• Homestead Food Production
• Bio-fortification

**Neglected Tropical Diseases**
• Onchocerciasis
• Trachoma
• Soil transmitted helminths
• Schistosomiasis
• Lymphatic filariasis
HKI’S PROGRAM PARTNERS

In West Africa, HKI works closely with many partners including:

• GAIN

• USAID

• UNICEF

• MI

• UEMOA/ECOWAS

• Industry Associations/Industry
Fortification of cereal flour with zinc, iron, folic acid and B vitamins

- **Flour: mandatory**
- **Flour: voluntary**
- **Flour: No Industry**

Fortifying countries include:
- Senegal
- Côte d’Ivoire
- Sierra Leone
- Liberia
- Guinea
- Gambia
- Guinea-Bissau
- Cape Verde
- Benin
- Togo
- Ghana
- Nigeria
- Mali
- Niger
- Burkina Faso
Fortification of oil with vitamin A

- **Senegal**
- **Nigeria**
- **Benin**
- **Togo**
- **Ghana**
- **Côte d’Ivoire**
- **Guinea**
- **Liberia**
- **Sierra Leone**
- **Guinea Bissau**
- **Cape Verde**
- **Mali**

- **Niger**

- Oil: mandatory
- Oil: voluntary
- No industry fortifying
2011 Africa Landscape Analysis

- Process/Timeline
- Africa Context
- FFI Milestones
- Country Profiles
- Partner Activities
- Industry Analysis
- Consumption Patterns
- Health Impact
- Consolidating Data
- Priority Matrix
- Proposed Strategy

Flour fortification photo from Uganda
### 2011 Data

Country name on map is followed by population in millions.
Number on color block below indicates number of countries in that color code.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total Population</th>
<th>Urban Population</th>
<th>% of Total African Urban Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Over 75% of industrial-milled flour fortified in country. FFI's main role is monitoring.</td>
<td>361,202,000</td>
<td>175,003,090</td>
</tr>
<tr>
<td>11</td>
<td>Confident country will move to 75% by January 2012. Targeted support as needed.</td>
<td>138,017,000</td>
<td>39,289,580</td>
</tr>
<tr>
<td>14</td>
<td>Organized efforts to increase fortification within country. Without support to fill gaps, moving to 75% unlikely.</td>
<td>357,287,000</td>
<td>111,398,530</td>
</tr>
<tr>
<td>24</td>
<td>No fortification activity in the country. Major support necessary to reach 75% fortification.</td>
<td>158,913,000</td>
<td>74,591,400</td>
</tr>
<tr>
<td>2</td>
<td>Fortification of wheat and/or maize likely to have very limited health impact; or no data on country.</td>
<td>16,584,000</td>
<td>2,812,830</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,032,003,000</strong></td>
<td><strong>403,095,430</strong></td>
<td></td>
</tr>
</tbody>
</table>
2011 Proposed Strategy

• **Secure funding**, desire is to be fully funded for the 5-year duration to execute our strategic intent.

• Establish annual **work plans** with clear deliverables and milestones, using the prioritization matrix and input from network partners. Deliverables and milestones to be approved by the EMT and funding partner.

• Create and execute a clear **private sector strategy** with input from the EMT and Global Secretariat

• Work closely with UNICEF and other key partners to **align activities** and garner support

• Track all activities of our **network partners**, communicate progress and lend support as necessary

• Establish **local secretariat**
Africa Coordinator Ronald Afidra

- Food fortification advisor and monitoring specialist
- Collaborated with networks such as:
  - New Partnership for Africa’s Development (NEPAD)
  - Comprehensive Africa Agriculture Development Programme
  - Regional health initiatives such as East and Central Southern African Health Community (ECSA-HC)
- Master’s degree in applied human nutrition
Planned Activities for 2014
North Africa

Algeria
- One large miller willing to demonstrate wheat flour fortification
- FFI team to visit in second quarter 2014

Libya
- 30 mills
- Too unstable to visit
Ethiopia

- Good progress toward national ownership of mandatory fortification for flours, oil, sugar, salt
- Government to present fortification action plan to partners this month
  - Will seek funding for technical assistance in QA/QC, marketing, monitoring, policy development, etc.
- Public sector training workshop being discussed
- Next steps:
  - On-going technical support to National Steering Committee on Flour Fortification
  - Advocacy meetings with private sector
  - Mill assessment on-going
  - National micronutrient survey in early 2014
Africa Future Work Plan Highlights

- Harmonization of standards meeting in UEMOA and ECOWAS regions to strengthen trade
- West Africa FORTIMAS training & implementation
- Country visits: Namibia, Botswana, Mozambique, Ghana, Zimbabwe, Zambia, etc.
- Continued NTD surveillance training for people who are working in Africa
- Africa network meeting third quarter 2014 in Kampala, Uganda
QA/QC Training

• Workshop for countries in WHO EMRO region, which includes Middle East and North Africa
  – Tentatively set for second quarter 2014 in Morocco
• Tentative plans for another QA/QC regional training for sub-Saharan countries in late 2014
• Country QA/QC training for Liberia, Kenya, Uganda
Cost Benefit Analysis Training

• Training on how to conduct cost benefit analysis
  – Education on existing cost benefit tools
  – 10-14 December 2013
  – Dar es Salaam, Tanzania

• Second cost benefit analysis training planned for West Africa in 2014
  – Countries in the Economic and Monetary Community of Central Africa will be included
Thank You

For more information:

www.SmarterFutures.net
www.IFglobal.org
www.HKI.org
www.Akzonobel.com
www.FFInetwork.org

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