Public-private-civic partnerships for maize-flour and corn-meal fortification

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8 April 2013
Consultation: Technical considerations for maize flour and corn meal fortification in public health
A definition of public-private partnerships (PPPs)

“Public–private partnerships are ongoing agreements between government and private sector organizations in which the private organization participates in the decision-making and production of a public good or service that has traditionally been provided by the public sector and in which the private sector shares the risk of that production.”
Public-private-civic (implicit)

Widdus 2005; http://www.ffinetwork.org/about/index.html
Why enter into PPPs?

“[To combine] different skills, expertise and other resources—ideally in a framework of defined responsibilities, roles, accountability and transparency — to achieve a common goal that is unattainable by independent action.”

blogspot.com
Challenges of PPPs

- Different reasons for entering into PPPs

- Potential conflicts of interest and biases

- Lack of leadership

- Different accountability, governance, working cultures

History of PPPs
Special case of fortification

“Food fortification is a public health intervention that is adopted by and delivered through the private sector using its delivery expertise and efficiency, with strong support from the government.

Few other large-scale programs use this method of delivery.”
Examples of partnerships to advance fortification

- Salt
  - Sub-national
- Oil
  - Regional
- Wheat Flour
  - Global
PPP to iodize salt in Michigan (USA)

- **Goal**: prevent goiter in women and children
- **Years**: 1922-1924
- **Actors**: Michigan State Medical Society, Michigan Salt Producers Association, University of Michigan, salt retailers, press, physicians, school teachers, State Department of Health

Bishai 2002
PPP to iodize salt in Michigan (USA)

- Iodized Salt Committee established
- Reviewed annual salt consumption, iodine toxicity, taste of iodized salt
- Conferences held between MSMS & MSPA
- Passed legislation to mandate fortification
- Investigated salt industry’s concerns
- Worked out technology for large-scale manufacture
- Educational campaign organized: press, public lectures, classroom
- Goiter evaluated pre fortification

1922-1924
PPP to iodize salt in Michigan (USA)

- **Success**: 74-90% reduction in goiter between 1924-1935
- **Factors**:
  - Cooperation, health workers and salt industry, planning stage
  - a public education campaign / introduction of food*
  - evidence of success

*No other fortified food available in the country at the time

Bishai 2002
PPP to fortify oil with vitamin A in West Africa

- **Goal**: improve vitamin A status of vulnerable populations
- **Years**: 2004-2010
- **Countries**: Benin, Burkina Faso, Côte d’Ivoire, Guinea-Bissau, Mali, Niger, Senegal, Togo
PPP to fortify oil with vitamin A in West Africa

Private sector organizations:
- Vegetable oil industries (AIFO-UEMOA)
- Consumer associations
- Importers of vegetable oil
- Marketing agencies of vegetable oils/retailers
- Fortificants producers/supply industries (BASF, DSM)
- Equipment manufacturers
- Media/press

Regional/national public sector institutions:
- Ministries of Health of member countries
- National alliances for food fortification
- Regional health institutions (WAHO)
- Regional political institutions (UEMOA/ECOWAS)
- Ministries of Commerce and Industries
- National regulatory agencies and customs

Public-private partnership for accelerated vegetable oil fortification

Leveraged resources:
- Funding
- Advocacy
- Social marketing
- Technical capacity
- Food technology, QA/QC
- Regulations
- M&E

Public-private non-governmental/civil society organizations:
- Private voluntary organizations (HKI)
- MI
- Local CSOs

Public-private bilateral and multilateral development partners/agencies:
- USAID
- GAIN
- MSDF
- Taiwanese Government
- UNICEF
- WFP
- FAO
PPP to fortify oil with vitamin A in West Africa

Negotiated (AIFO-UEMOA & HKI) supporting local cooking oil industries to fortify

AIFO-UEMOA adopted a resolution to embark on vitamin A fortification of all cooking oil

Organized regional dialogues

Harmonized regional standards on cooking oil fortification

Assessed & strengthened technical capacity

Created multi-sectoral national alliances

Developed and disseminated social marketing

2004-2010
PPP to fortify oil with vitamin A in West Africa

Success:

- Countries fortifying: 0→19
- Coverage: ~55 M with daily access to vitamin A–fortified cooking oil
- Initiative broadened: wheat-flour fortification
PPP to fortify oil with vitamin A in West Africa

Lessons learned:

• Private sector industries can act quickly
• Sustainability is ensured through mandatory policies and enforcement of decrees
• Policy development requires a significant length of time
• Local presence and understanding required to nurture partnerships
PPP for wheat-flour fortification

- **Goal**: establish global recommendations for wheat-flour fortification
- **Years**: 2004-2010
- **Actors**: nutritionists, pharmaceutical representatives, cereal scientists, milling experts
PPP for wheat-flour fortification

Objectives:

• Review the latest scientific and technical information regarding wheat-flour fortification with iron and folic acid
• Identify technical and practical barriers that may impede the implementation of fortification
• Provide practical recommendations to overcome barriers

Participants:

• Public-health agencies, research institutions, premix manufacturers, milling industries, development agencies
PPP for wheat-flour fortification

Second Technical Workshop on Wheat Flour Fortification: Practical Recommendations for National Application
March 30 to April 3, 2008
Stone Mountain, Georgia, USA

Nearly 100 leading nutrition, pharmaceutical and cereal scientists and milling experts from the public and private sectors from around the world gathered for four days to harmonize advice for countries considering national wheat and/or maize flour fortification.
## PPP for wheat-flour fortification

Table 1. Average levels of nutrients to consider adding to fortified wheat flour based on extraction, fortificant compound, and estimated *per capita* flour availability

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Flour Extraction Rate</th>
<th>Compound</th>
<th>Level of nutrient to be added in parts per million (ppm) by estimated average per capita wheat flour availability (g/day)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;75² g/day</td>
</tr>
<tr>
<td>Iron</td>
<td>Low</td>
<td>NaFeEDTA</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ferrous Sulfate</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ferrous Fumarate</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrolytic Iron</td>
<td>NR³</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>NaFeEDTA</td>
<td>40</td>
</tr>
<tr>
<td>Folic Acid</td>
<td>Low or High</td>
<td>Folic Acid</td>
<td>5.0</td>
</tr>
<tr>
<td>Vitamin B₁₂</td>
<td>Low or High</td>
<td>Cyanocobalamin</td>
<td>0.04</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>Low or High</td>
<td>Vitamin A Palmitate</td>
<td>5.9</td>
</tr>
<tr>
<td>Zinc</td>
<td>Low</td>
<td>Zinc Oxide</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Zinc Oxide</td>
<td>100</td>
</tr>
</tbody>
</table>

¹ Estimated average per capita wheat flour availability

² Extraction rate below 75% is considered low, and above 75% is considered high.

³ NR: Not recommended.
PPP for wheat-flour fortification
PPP for wheat-flour fortification

Lessons learned:
• Constructive dialogue can be facilitated among sectors
• A focus on problem solving (e.g. what can we recommend to countries?) is productive
• Several meetings may be necessary to reach consensus
• Extensive resources needed

Scott Montgomery, Laird Ruth, Bob Baldwin, personal communication
Applicability to maize-flour and corn-meal fortification

- Mass fortification of any food requires collaboration among public-private-civic partners
- Educational/social marketing campaigns are useful
- Evaluations can document success
- Legislation & monitoring ensure sustainability
- On-the-ground presence to nurture partnership
- Allow time for frequent dialogue & policy-development process
Conclusions

- Public-private-civic partnerships have been used to meet public-sector goals
- Successful large-scale fortification requires partnerships
- Experiences with & partnerships forged for fortification of other foods can accelerate maize/corn fortification
- Champions needed
References for download

http://www.sph.emory.edu/~hpacho2/
(in folder *PartnershipsMaize*)

For more information

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