Creating lasting nutrition and development impact via public-private-people partnerships
PATH’s Rice Fortification Program

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Project Director
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PATH is an international nonprofit organization that transforms global health through innovation

- Bringing innovations to scale
- Strengthening systems
- Encouraging healthy behaviors

PATH works in 70 countries

- Vaccines
- Devices
- Diagnostics
- Drugs
- System and service innovations
29% of children under 5 are stunted.

58% of pre-school children are anemic.

7% of children under 5 are acutely malnourished.

* Figures from Myanmar Demographic and Health Survey 2015-16
Staple food fortification is a proven, cost-effective strategy to improve micronutrient health

- Adopted in developed countries since the early 20th century
- Supported by WHO, WFP, FAO, and the World Bank
- Ranked by the Copenhagen Consensus 2012 as one of the highest-return interventions in global development¹
- Particularly effective with rice, a staple food for half of the world population

Our Myanmar project brings together nutritional and economic impact

**Purpose:** To reduce micronutrient deficiencies in the population while creating income-generation opportunities for supply-chain and distribution actors through the introduction of fortified rice in Myanmar

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**Project goals**

1 Million+ fortified rice consumers
(population-based approach)

Reduced select micronutrient deficiencies

24 local supply chain and distribution actors
(50%+ with increased income)
LEVERAGING PUBLIC-PRIVATE-PEOPLE PARTNERSHIPS
We are leveraging public-private-people partnerships to scale up rice fortification in Myanmar.
We are leveraging public-private-people partnerships to scale up rice fortification in Myanmar (cont.)
Our goal is to achieve market sustainability.

**Introduction phase**
- Local evidence on acceptability
- Health needs assessment
- Logistical feasibility
- Value chain analysis
- Policy development
- Project management

**Core cost components of rice fortification**

- **Extrusion technology**
- **Blending technology**
- **Sales or distribution of fortified rice**

**Quality Control and assurance (QA & QC)**

**Scale-up phase**
- Greater efficiency in supply chain
- Social marketing; advocacy
- Economies of scale
- Commercialization

**COSTS**
Key achievements

PATH has achieved promising results in the fortified rice market through strategic public-private-people partnerships.

- National Rice Fortification Alliance established
- Acceptance by population validated
- National Rice Fortification Policy drafted
- Enabled 2 fortified grain producers
- Enabled 2 blender fabricators
- Enabled 8 fortified rice producers
- Distributed to 300 retailers and 33 outlets of City Mart
- Demand generation campaign and nutrition education ongoing
- Consumer feedback used to inform production and design
Thank you
BACK UP
PATH works along the value chain to maximize impact

- **Develop technology** to meet the need and prove its efficacy
- **Promote access to technology in rice supply and distribution chains**
- **Policy change**: encourage national and/or programmatic mandates to **ensure sustainability**

**PUSH (SUPPLY)**

**PULL (DEMAND)**
Rice value chains offer significant opportunity for social and economic impact from field to fork

The fortified rice value chain

- Input suppliers
- Producers
- Processors (Millers)
- Distributors
- Consumers

- Fortified grain producers
- Blending equipment fabricators

[Image of fortified rice value chain diagram]
Social marketing is essential for scale up in non-mandated environments like Myanmar

PATH is reaching hundreds of thousands of households in Myanmar through a strategic social marketing campaign

- Developed fortified rice as a category brand
- Partnered with the “Population Services International” for demand generation campaign
- Promoting nutrition education through traditional and social media
Fortified Rice Distribution Channels

- Fortified grain manufacturer
- Mill blending
- Wholesaler/rice aggregator
- Warehouse blending
- Point-of-use blending
- Public sector/food security programs
- Fortified grains only
- Rice miller
- Large retailer
- Supermarkets/hypermarkets
- Small retail/open markets
- Consumers
- Fortified rice (blended)
PATH has built a robust evidence base for the Ultra Rice® technology

30 research and field studies

Key research areas

• Effectiveness
• Safety
• Stability
• Acceptance
• Cost

Peer-reviewed research highlights

• Fortified rice was more effective than iron drop supplements in improving the iron status of children between the ages of 6 months and 2 years in the southwest region of Brazil

• Schoolchildren in India between the ages of 5 and 12 years who ate fortified rice had a significant increase in iron stores

• The prevalence of iron deficiency reduced significantly in Mexican women who consumed fortified rice in comparison to the control group

PATH’s strategy for market introduction and scale up of fortified rice rests on four pillars:

- Supply chain
- Distribution channels
- Advocacy
- Demand generation
Accelerating innovations across the value chain
Getting innovative ideas from concept to action

- Identify problem and potential intervention
- Generate evidence for approval
- Secure regulatory approvals and endorsements
- Manufacture, distribute, and introduce
- Implement across multiple regions
Rice fortification is ready for a quantum leap in reaching the most vulnerable populations in Myanmar
PATH capabilities in India create a hub for market expansion across Asia

- Replicable distribution models
  - Micro-retail channels
    - Empowering women entrepreneurs
  - School-feeding programs
    - Unleashing children’s potential

- Capacity to enable fortified rice value chains in South and Southeast Asia

PATH recently partnered with Sakhi Unique Rural Enterprise, a distribution network of women retailers in India
Our rice fortification work spans multiple dimensions and geographies.

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<th>Project work</th>
<th>AMERICAS</th>
<th>AFRICA</th>
<th>ASIA</th>
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- Planning in progress: The project team is exploring funding and partnership opportunities that will facilitate movement into the specific geography.
- Active: Project work has been launched and remains ongoing.
- Achieved: In-country project work has been completed.
- Available: Fortified rice, using any fortification technology is commercially available in-country.
PATH in Myanmar

- **2012**: Office opened in Myanmar
- **2013**: MOU signed with MoH
- **2017**: 2\textsuperscript{nd} MOU signed with MoH
- **Today**: 14 staff and growing, 3 active projects and many more in pipeline
PATH’s Projects in Myanmar

- Fortified Rice
- Japanese Encephalitis vaccine
- Health care waste management
- Reproductive health policy support
- Total Market Approach for Family Planning
Micronutrient malnutrition places a heavy burden on the health and economy of Myanmar.

- **3 million** People considered “food poor”\(^1\)
- **18%** Pregnant women with Vitamin A deficiency\(^5\)
- **-0.7%** Gross Domestic Product (GDP) lost annually as a result of chronic undernutrition in Myanmar\(^4\)
- **7%** Children under 5 are wasted (acutely malnourished)\(^2\)
- **5.5%** Under-5 deaths due to maternal thiamine deficiency\(^3\)
- **29%** Children under 5 are stunted\(^2\)
- **58%** Children age 6-59 months with iron-deficiency anemia\(^2\)
- **29%** Children under 5 are stunted\(^2\)

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\(^1\) Integrated Household Living Conditions Assessment (2009-2010)
\(^2\) Ministry of Health and Sport (MOHS) and ICF. 2017. 2015-16 MDHS Key Findings. Rockville, Maryland, USA: MOHS and ICF.
Rice is an ideal fortification vehicle at the heart of a key value chain in many developing economies

- Staple food for over 2 billion people
- Largest source of calories in many developing countries
- Core component of agriculture and nutrition in most of Africa and Asia
- Important element of many food security initiatives
Addressing micronutrient malnutrition requires an integrated strategy that includes fortification.

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<th>Diet diversification</th>
<th>Supplements/ Micronutrient powders</th>
<th>Fortification</th>
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<tbody>
<tr>
<td><strong>Cost</strong></td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
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<tr>
<td><strong>Results</strong></td>
<td>Long term</td>
<td>Short term</td>
<td>Medium term</td>
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<td><strong>Change of habits/ Compliance</strong></td>
<td>High</td>
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Staple food fortification provides a population-based safety net against micronutrient malnutrition, especially relevant to children and women of reproductive age.
PATH depends on strong global partnerships to scale up rice fortification worldwide