FOOD FORTIFICATION - ADDRESSING MICRONUTRIENT MALNUTRITION
The Rationale for Food Fortification!

- Widely prevalent VM deficiencies in Pakistan
- Half of women and children are anaemic, iron, zinc, vitamin A, Vitamin D deficient – >11,000 NTD cases annually
- FAO study found that 41.4* million people in Pakistan not getting proper nourishment despite it being a food surplus country
- High consumption of wheat flour and edible oil/ghee in the country
- Government commitment to end malnutrition – Pakistan Vision 2025, SUN Movement, Multi-sectoral Nutrition Strategies etc..

*Regional Overview of Food Insecurity Asia & the Pacific by FAO 2015
SPENDING PATTERNS BY POOR AND NON-POOR HOUSEHOLDS ON WHEAT

Source: HIES 2010-11
WHEAT IS THE MAJOR SOURCE OF ENERGY

Source: HIES 2010-11
WHEAT FLOUR FORTIFICATION
LESSON LEARNED FROM EARLIER WHEAT FLOUR FORTIFICATION PROJECTS

- Enabling environment
- Premix availability
- Microfeeders;
  - Specification
  - Repair/maintenance
- Rapid expansion
- Private Sector capacity
FOOD FORTIFICATION PROGRAMME; SUMMARY

• DFID funded 5 year programme Feb 2016 – January 2021
• 2 Commodities targetted (Wheat Flour & Edible Oil/Ghee)
• Location; Nationwide-Gradual Expansion to all provinces
• Implemented by Mott MacDonald and The Micronutrient Initiative partnership
• 4 Key Component
  1. Technical assistance to Federal and all Provincial/Regional Governments
  2. Technical assistance to Wheat Flour & Edible oil/ghee industries
  3. Public advocacy, media and communications
  4. Targeted studies and research regarding food fortification
# The Target!

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline</th>
<th>Target (January 2021)</th>
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<tbody>
<tr>
<td>Iron Deficiency (ID) in children under 5 (Measured by low ferritin concentration)</td>
<td>44%</td>
<td>29% (at least 1/3 reduction)</td>
</tr>
<tr>
<td>Iron Deficiency Anemia (IDA) in children under 5</td>
<td>33%</td>
<td>22% (at least 1/3 reduction)</td>
</tr>
<tr>
<td>Reduction in incidence of neural tube defects in new-borns - Measured by serum folic acid deficiency among women of reproductive age</td>
<td>40%</td>
<td>28% (30% reduction in serum folic acid deficiency)</td>
</tr>
<tr>
<td>Vitamin A deficiency in children under 5 (Severe plus moderate Vitamin A deficiency)</td>
<td>54%</td>
<td>35% At least 35% reduction</td>
</tr>
<tr>
<td>Iron Deficiency in women (Measured by low ferritin concentration).</td>
<td>37% pregnant women</td>
<td>25% (at least 1/3 reduction)</td>
</tr>
<tr>
<td>Iron Deficiency Anemia in women</td>
<td>25% pregnant women</td>
<td>16% (at least 1/3 reduction in ID)</td>
</tr>
<tr>
<td>Vitamin A deficiency in women (measured by retinol levels)</td>
<td>46% pregnant women</td>
<td>34% (27% reduction)</td>
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<tr>
<td></td>
<td>42% non-pregnant women</td>
<td>31%</td>
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CREATING ENABLING ENVIRONMENT

- Coordination Platforms Established
  - NFA and PFAs established – close coordination: WFP, GAIN and FFP
- National Food Fortification Strategy- supported WFP/NFA
- Punjab Food Fortification Strategy being developed - WFP
- PSQCA/PFA revised Food Fortification Standards, for Oil
  - Vitamin D added with Vitamin A
  - Range for level of fortificants established for better conformity - WFP, GAIN, FFP
- Wheat Flour Fortification Standards revised
  - Increase Iron contents with addition of Folic Acid, Zinc & Vit B12
CREATING ENABLING ENVIRONMENT

- Fortification made compulsory in Punjab –PFA
- Strengthen External Monitoring
  - Relevant Government Laboratories Strengthened
- QA/QC and Training manuals on wheat flour and edible oil/ghee fortification -build on work done by GAIN & WFP
- FFP given membership of PSQCA Tech Committees on Wheat Flour and Edible Oil/Ghee standards & Core Committee of Provincial Fortification Alliance
- Punjab Food Department to pass on the cost of fortification to consumers in a phased manner aligned to the FFP subsidy scheme
- Fortification Management Information System (FortIS) database developed
BUILDING CAPACITY OF PRIVATE SECTOR

- **Need Assessment**
  - Information on the number of operational mills
  - Production capacity to assess the number & type of the microfeeders

- **MF provided free of cost by FFP**

- **Millers are paying cost of installation & repair maintenance**

- **Procurement of MFs and Lab Equipment completed for first 2 years**

- **Support to strengthen internal QA/QC**
  - Cluster Labs
  - Rapid Test Kits
  - On job training to ensure adequate fortification

- **Premix Supply System established**

- **Additional monitoring support to strengthen Internal QA/QC by deputing FFOs**

- **Sliding Subsidy -if fortification adequate -through Third Party Lab**
# Rollout At A Glance; Cumulative To Date

<table>
<thead>
<tr>
<th>Year 2: Quarter 3</th>
<th>Districts</th>
<th>Mills engaged</th>
<th>Volume adequately fortified (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Punjab</td>
<td>Sindh</td>
</tr>
<tr>
<td>Wheat</td>
<td>10</td>
<td>4</td>
<td>106</td>
</tr>
<tr>
<td>Oil</td>
<td>5</td>
<td>2</td>
<td>27</td>
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</tbody>
</table>
For sustainability

- **Buhler**—the microfeeder supplier
  - Local back up system for repair maintenance
  - FBR agreed in principle to wave off duties on MF import

- **Premix Supplier**
  - Import Duties Exempted by government
  - Price negotiations-access to market/mills
  - Door Step delivery
  - Local Production of premix
PUBLIC ADVOCACY, MEDIA AND COMMUNICATIONS

- Influencing decision makers
  - Relevant material and messages developed to target audiences (politicians, policy makers and officials, development partners, civil society and media)
  - Sharing of knowledge, findings and recommendations

- Increasing public awareness – firm hired
  - Community awareness raising activities
  - Targeted media campaigns
Establish a RTAG to inform selection of studies and review results. Membership includes experts from NI, GAIN, UNICEF, WFP, WHO, Center for Spina Bifida Research, Prevention and Policy in Emory, Atlanta, CDC, USAID and independent international experts including Jack Bagriansky, Quentin Johnson and Philip Randall.

- FACT Survey-supported by GAIN
- District Rolling Study
- Private Sector Incentives Study