

Rice Landscape Analysis

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Overview

- Rice fortification can be an effective strategy to reduce micronutrient deficiencies in areas where rice is widely consumed
- The full potential of the strategy can only be realized when it is feasible to fortify a significant proportion of the rice consumed
- Understanding the rice supply chain is therefore critical to design effective programs

Setting the Scene

- Widespread micronutrient deficiencies in the target population
- Large proportion of the target population consume rice in adequate amounts
- There is general concurrence amongst key stakeholders (public and private) on issues related to sensory properties, efficacy and technology

Key success factors for rice fortification at large scale

Market attractiveness

- Micronutrient deficiencies
- Adequate per capita rice consumption
- Absolute market size
- Consumer awareness & acceptance
- Existence of large safety nets with significant reach

Many Asian countries meet majority or all of the factors for market attractiveness

Key success factors

Ease of implementation

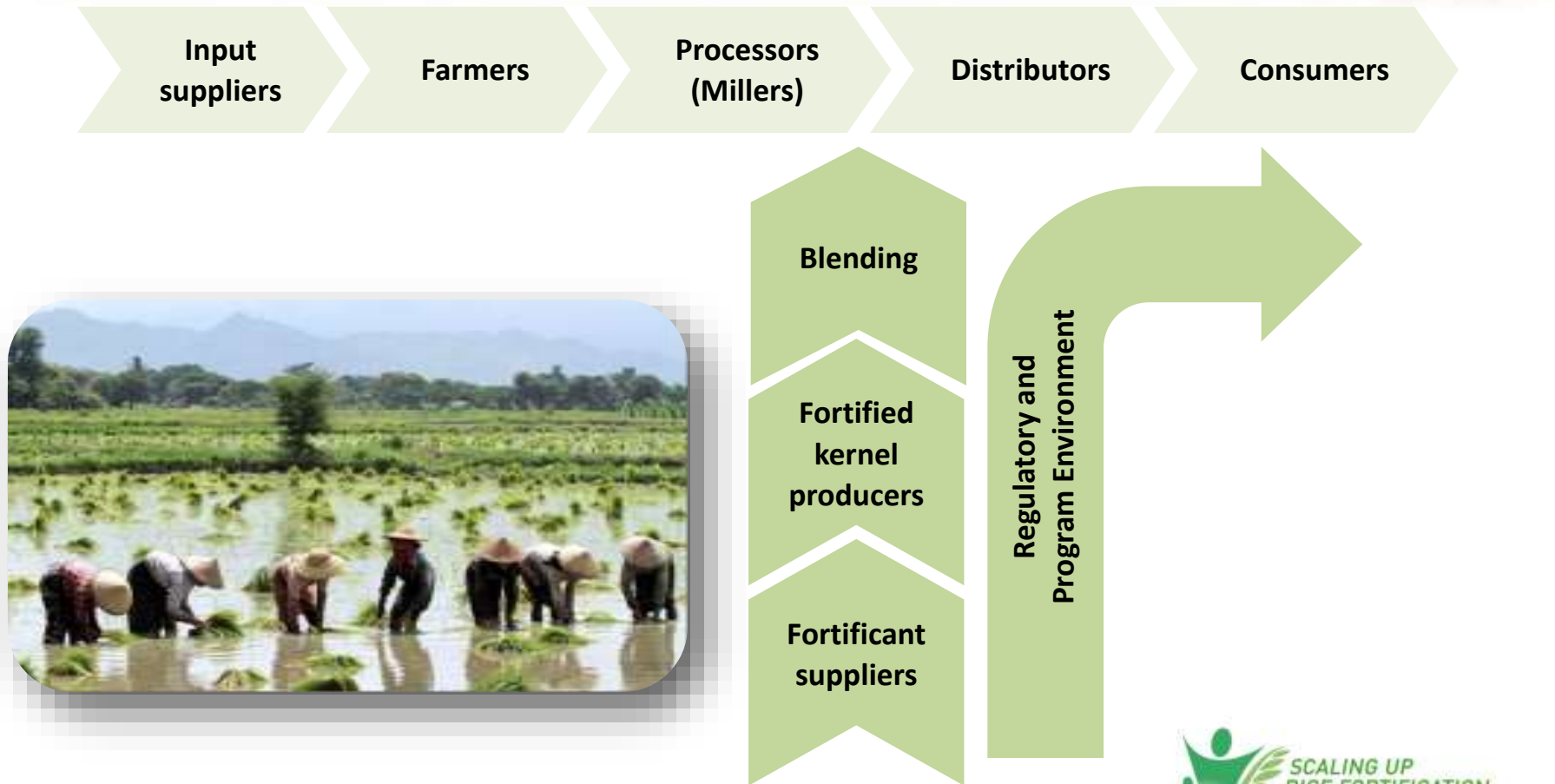
- Adequate capacity in the rice processing industry
- Adequate and cost-effective technology
- Broad public and private support
- Minimal restrictions on rice trade
- Ease of doing business

Barriers to rice fortification

Exploring Rice Fortification

- A close scrutiny of the rice supply chain is essential when considering scaling up or introducing rice fortification
- The feasibility increases when the following objectives are met:
 - Degree of consolidation in the rice industry is high
 - Costs along the supply chain are minimized
 - Complexity and number of interventions required along the rice supply chain are minimized
 - Total proportion of rice that is fortified is maximized
 - Ensure the needed micronutrients of the right quality are delivered

Changes in the Rice Supply Chain When Fortification is Introduced

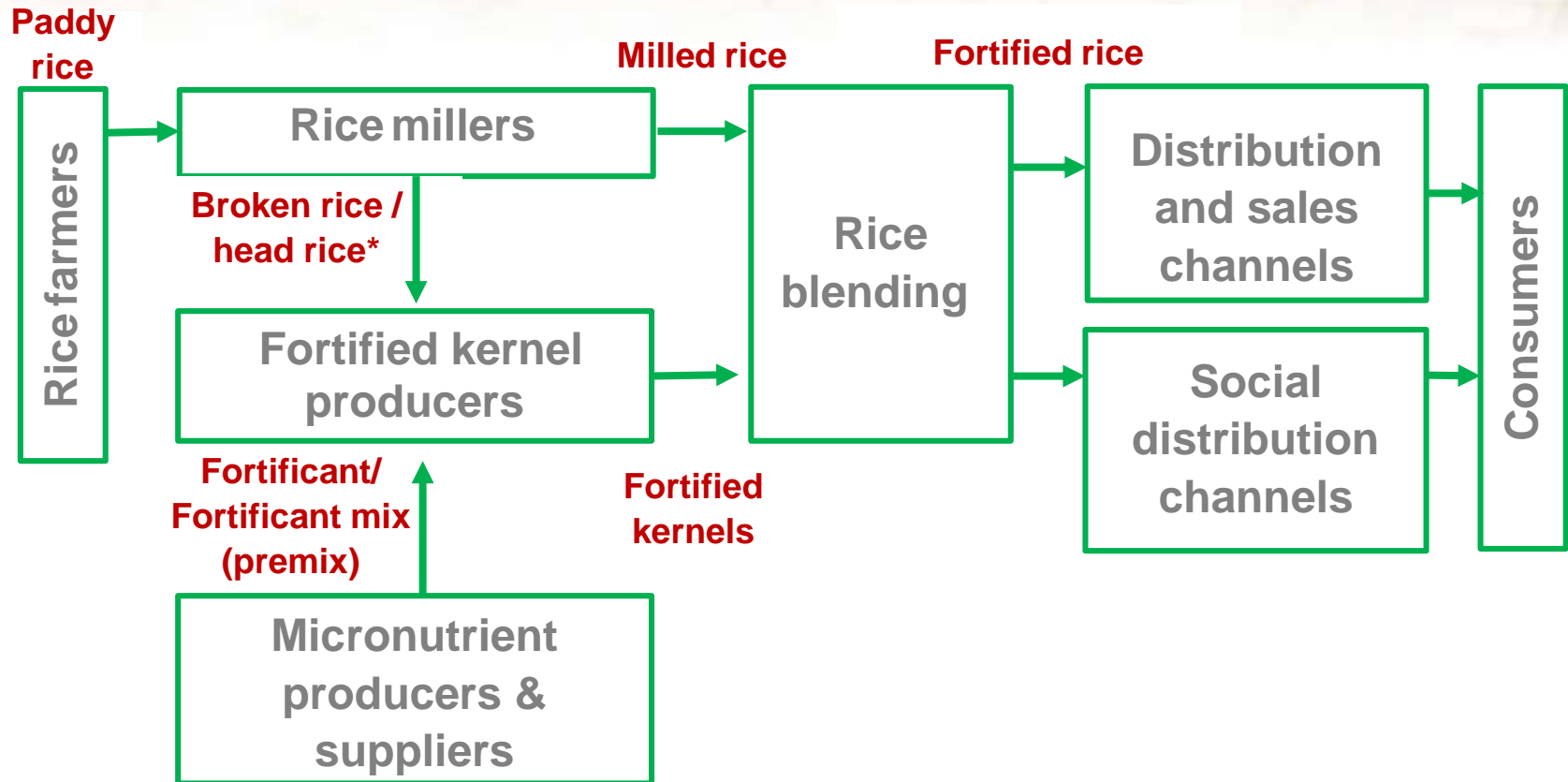


Rice Fortification Landscape Matrix

Additional Components	Key issues
Fortificant supply for Fortified Rice Kernel Production	<ul style="list-style-type: none">• Distribution of fortificants/ fortificant mix to fortified kernel producers• standards and quality of fortificants
Fortified Kernel Production	<ul style="list-style-type: none">• Broken rice /Head rice supply to the FK or coating facility• Investments in technology and operating costs
Blending	<ul style="list-style-type: none">• Distribution of FK to blending sites• Investment in blending machinery• Internal QAQC
Program and Regulatory Environment	<ul style="list-style-type: none">• Program management and coordination resource requirement• Additional regulatory systems, monitoring and evaluation• Policy, advocacy and sensitization

Fortified Rice Supply Chain

Applies to coating and extrusion



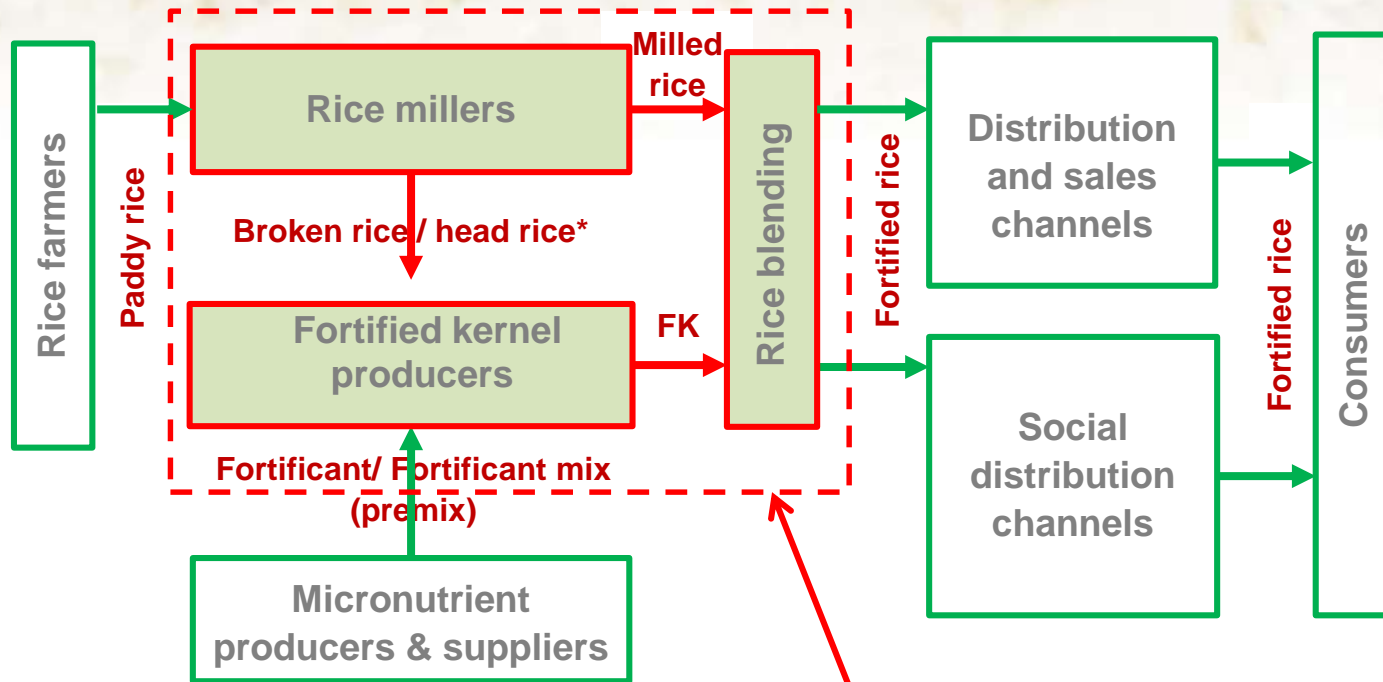
* For extrusion technology broken rice can be used to produce fortified kernels, with coating technology head rice is required

Important Considerations for Landscape Analysis

- Industry structure
 - What is the milling infrastructure?
 - What is milling capacity?
 - What is the market share of mills in the country?
 - Where is market demand?
 - What is industry organization?
- Rice source
 - How much of the rice supply is from local farming and imports?
 - How many varieties of rice are consumed?
- Distribution
 - What proportion of rice is distributed through commercial channels and social safety nets?
- What kind of commerce/business regulations surround the Rice Industry?
- What are the consumer preferences and purchasing behaviours?

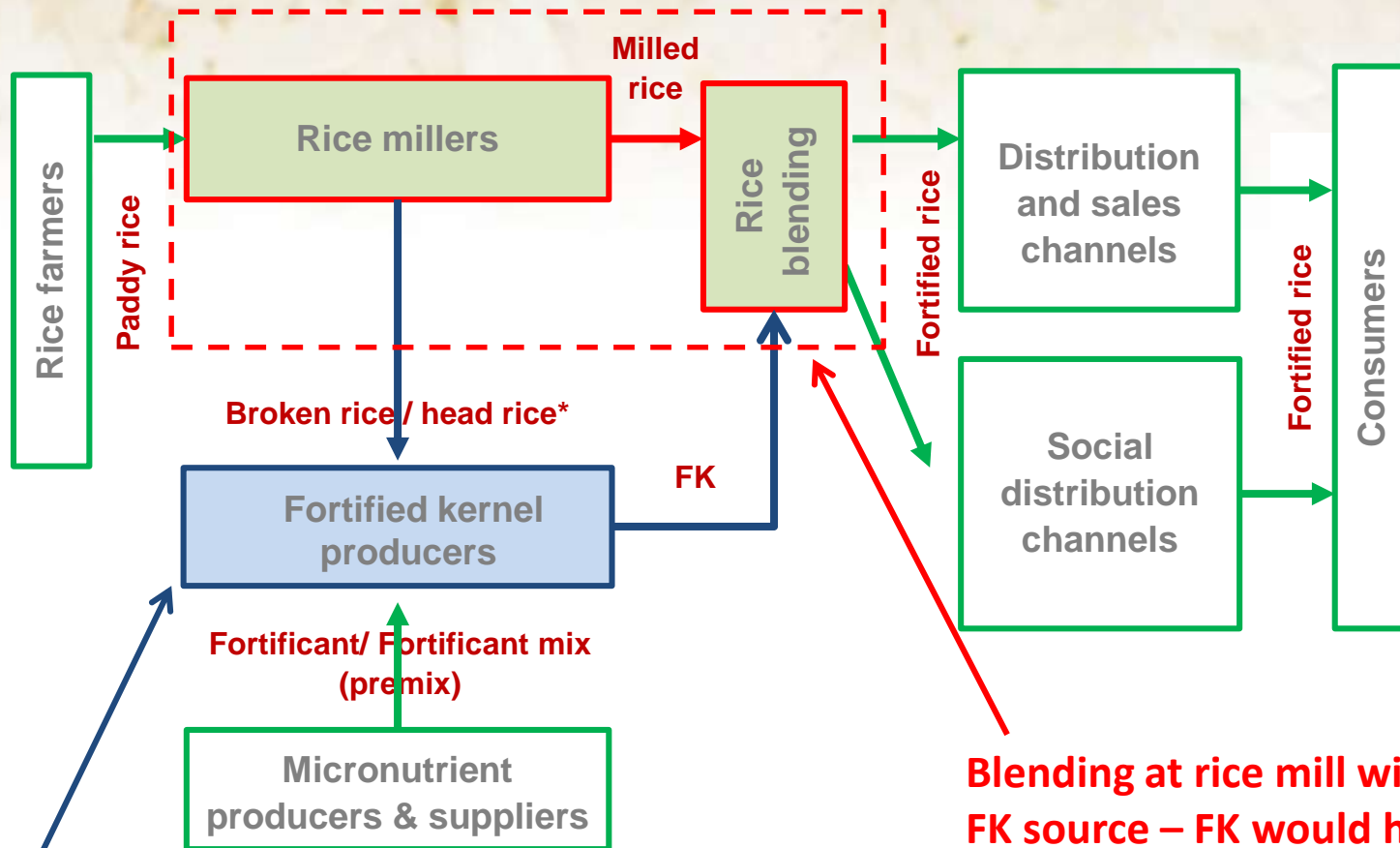
Examples of how opportunities
within the supply chain can be
explored under different contexts

Small number of rice millers and/or high production volume at a mill



Milling, FK production and blending in one location – this model has the highest cost effectiveness potential but applies mainly to mills with high production volumes

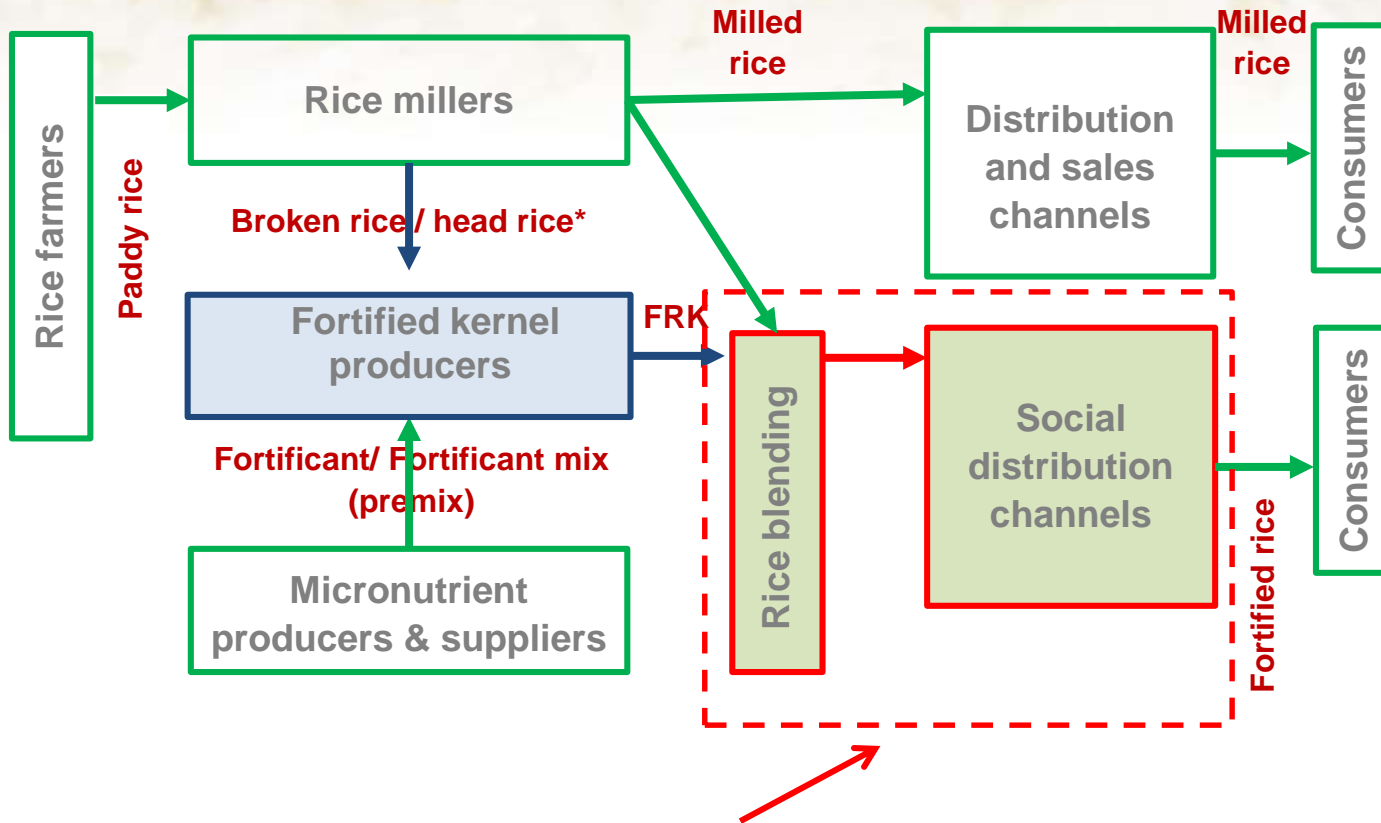
Large number of rice millers and/or small milling volumes at multiple locations



An independent FK facility or larger rice mill supplying FK to multiple mills. Additional transport costs for broken/head rice to FK facility and FK to blending locations would be incurred

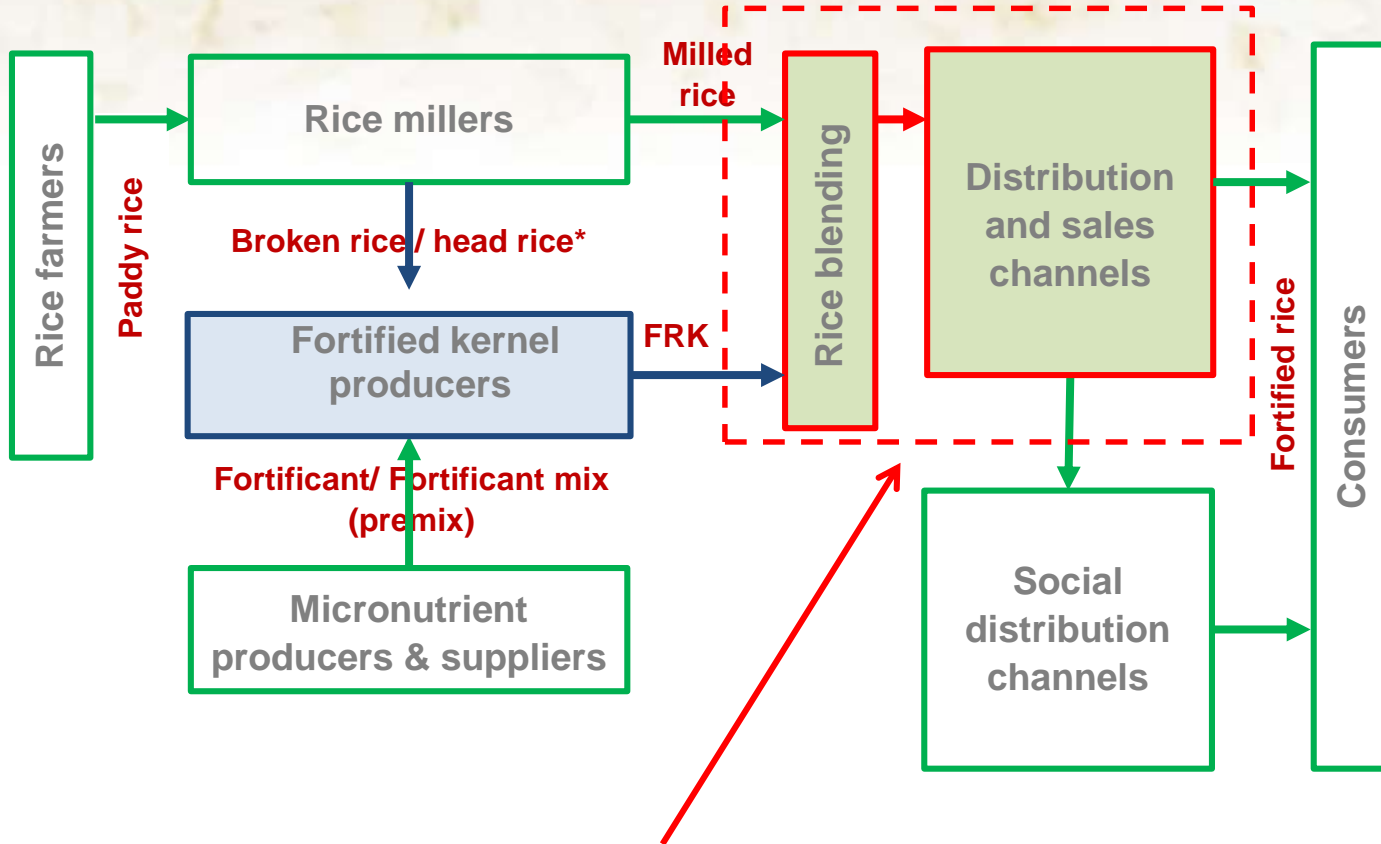
Blending at rice mill with an external FK source – FK would have to be sourced and distributed to multiple milling locations.

Existence of social safety net programs



Blending at safety net distribution point – FK would have to be sourced. Reach would be limited to safety net recipients

Small number of distributors who consolidate milled rice supply



Blending at distribution point – FK would have to be sourced.

Additional Considerations

- While some countries maintain emergency stocks of rice, access to this is challenging
- The rice supplied through safety net programs has to be carefully reviewed since there are challenges that include:
 - Regularity of supply
 - Effectiveness and sustainability of existing safety programs
 - Disparity with local preferences or stigmatization
 - Varieties of rice distributed may not be regular
- Establishing markets is very important and requires strong public –private partnerships and regulatory environments and is not limited to consumer awareness

Closing remarks

- It is critical that a detailed landscape analysis is done before embarking on a rice fortification initiative
- An Important starting point would be to identify opportunities where the level of consolidation in the rice supply can be improved and strengthened and an enabling environment is created
- The landscape analysis at the very least should contain information on volumes, who is involved and the flow of rice/ fortified kernels and outline the public and private entities that are involved



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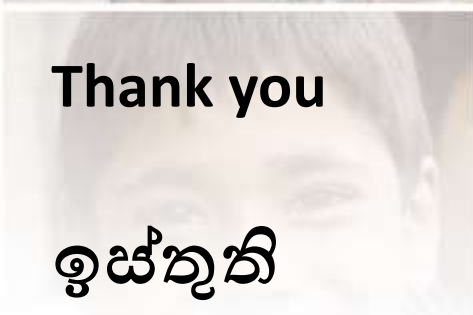
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Thank you

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Terima kasih

Salamat Po



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SCALING UP
RICE FORTIFICATION
IN ASIA

Bangkok, September 16-19, 2014

