Preliminary Findings of the MSU/MDRI Agriculture and Food Security Diagnostic Team

Michigan State University (MSU) and Myanmar Development Resource Institute, Center for Economic and Social Development (MDRI/CESD)

This study is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of Michigan State University and the Myanmar Development Resource Institute and do not necessarily reflect the views of USAID or the United States Government.
Outline

1. Overview
2. Key findings
3. Strategic options
Objectives

a) Identify key opportunities for stimulating broad-based agricultural growth and food security.

b) What needs to happen to realize this potential?
   – public investments
   – supportive policies
   – options for USAID
   – private sector agribusinesses and farmer roles
# Team members

<table>
<thead>
<tr>
<th>MSU</th>
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<tbody>
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<td>Tun Min Sandar</td>
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Methods

• Review recent empirical studies
• Field visits to 3 dozen villages, 2 dozen townships
• Six background papers
• Benchmarking against peer countries
Outline

1. Overview
2. Key findings
3. Strategic options
Key findings

a) High potential
b) Yet poor performance
c) Because of structural impediments
d) Three alternative pathways forward
a) High potential

- Exceptional resources (water, land, location, climate)
  - Water: 10 times as much per capita as China and India; 2 times as much as Vietnam, Thailand and Bangladesh
  - Land: 14 million acres virgin and fallow; 83 million acres of forest
  - Strategic location: near major regional markets

- Diverse ecosystems → diversification potential
Diverse ecosystems
Large potential for diversification

Production Growth Rate
1985 to 2010

Cereals
- paddy, GOM: 3%
- paddy, USDA: 1%
- maize: 6%

Oilseeds: 6%

Pulses: 9%

Horticulture: 7%

Poultry: 6%
Diversification → growing markets, high value
b) Poor agricultural performance

- Low productivity
- Extreme inequality → high poverty, malnutrition
- High volatility
Low agricultural productivity

<table>
<thead>
<tr>
<th>Country</th>
<th>Agricultural income per worker</th>
<th>GDP per capita</th>
<th>Poverty (%&lt; $1.25/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>$19,807</td>
<td>$20,540</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>$6,680</td>
<td>$8,373</td>
<td>4</td>
</tr>
<tr>
<td>Indonesia</td>
<td>$730</td>
<td>$2,952</td>
<td>3</td>
</tr>
<tr>
<td>Thailand</td>
<td>$706</td>
<td>$4,614</td>
<td>8</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>$507</td>
<td>$675</td>
<td>11</td>
</tr>
<tr>
<td>Cambodia</td>
<td>$434</td>
<td>$795</td>
<td>5</td>
</tr>
<tr>
<td>Vietnam</td>
<td>$367</td>
<td>$1,224</td>
<td>4</td>
</tr>
<tr>
<td>Myanmar</td>
<td>$194</td>
<td>$380</td>
<td>26</td>
</tr>
</tbody>
</table>
High levels of food insecurity: Stunting by state/region
High volatility
c) Structural requirements for broad-based agricultural growth

- Improved water control
- Reduced transport and transaction costs
- Conflict mitigation
- Predictable policies
- Improved access to land
- Increased budgets for key supporting ministries
- Reforming agricultural support institutions
- Effective, responsive farmer organizations
- Improved data quality
Skewed land access

<table>
<thead>
<tr>
<th>Land owned (acres)</th>
<th>Percent of Rural Households</th>
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<tbody>
<tr>
<td></td>
<td>Delta/coastal</td>
</tr>
<tr>
<td>0</td>
<td>72</td>
</tr>
<tr>
<td>&lt; 5</td>
<td>7</td>
</tr>
<tr>
<td>5 - 10</td>
<td>9</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>12</td>
</tr>
<tr>
<td>total</td>
<td>100</td>
</tr>
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</table>

Source: LIFT Baseline (2012), Table 54.
## Limited public budget for agriculture

<table>
<thead>
<tr>
<th>Location</th>
<th>Agricultural research spending ($ per $100 in agric. output)</th>
</tr>
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<tbody>
<tr>
<td>Developed world</td>
<td>2.40</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>0.72</td>
</tr>
<tr>
<td>Developing world</td>
<td>0.53</td>
</tr>
<tr>
<td>Asia, 2008</td>
<td>0.41</td>
</tr>
<tr>
<td><strong>Myanmar, 2003</strong></td>
<td><strong>0.06</strong></td>
</tr>
</tbody>
</table>

Source: ASTI (2009).
Structure of agricultural support institutions

- Need to strengthen links between farmers, research and extension
- Control and monitoring functions well developed; institutional culture and resources for listening to farmers, linking them to research solutions poorly developed
- Policy has liberalized but [ministerial support structure has not]. Need to strengthen ministerial support structure for new policies.
Farmer organizations weak

- Illegal before 2011 (other than government-controlled cooperatives)
- Labor law now permits organizing
- Freedom of assembly permits gatherings
Unreliable data

<table>
<thead>
<tr>
<th>Item</th>
<th>Data variability</th>
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<tbody>
<tr>
<td>Population</td>
<td>+/- 20%</td>
</tr>
<tr>
<td>GDP growth rate</td>
<td>+/- 160%</td>
</tr>
<tr>
<td>Rice production</td>
<td>+/- 50%</td>
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<td>Cattle population</td>
<td>+/- 40%</td>
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</table>
Unreliable data

- Prevent sound policy decisions
- Limit transparency in policy discussions
- Impede private sector investment
Outline

1. Overview
2. Key findings
3. Strategic options
Three Alternative Pathways

1. The Short Game: Agricultural Investments Without Structural and Policy Reforms

2. The Long Game: Agricultural Investments Accompanied by Structural and Policy Reforms

0. Baseline Trajectory: Business as Usual
Business as Usual

• Low productivity agriculture
• Inequitable distribution of assets & income)  
  → high poverty & malnutrition
• High volatility

Myanmar can do better!
The Long Game: Structural and Policy Reforms Necessary for Rapid, Broad-Based Agricultural Growth

+ increase public resources for agriculture
+ structural reform of support institutions
  - market-oriented, farmer-centered research system
  - extension mobility and modernization
  - agricultural education investments
  - farmer organizations
+ improve data quality
+ predictable policies
+ improved water management systems
+ improved land access
+ rural education
The Short Game:
Improving Performance in the Absence of Structural and Policy Reforms

+ productivity of monsoon rice
+ diversification → high-value horticulture, fishing, poultry
+ build human capital of landless children
+ safety nets
Short Game Productivity Gains:
+25%-50% increase in paddy yields in 5-7 years

• Timely and effective land preparation
• Better adapted varieties
• Seed quality improvement
• Fertilizer levels and precision of use
• Weed control (especially direct seeded rice)
• Integrated pest management
• Improved water distribution and management
• Farm consolidation and mechanization
• Post harvest quality management
• Diversification of summer crops
## Complementarities

<table>
<thead>
<tr>
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<th>Short Game</th>
<th>Long Game</th>
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<tr>
<td><strong>Farming</strong></td>
<td>+ agronomic practices</td>
<td>+ land access</td>
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<tr>
<td></td>
<td>+ seed quality</td>
<td></td>
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<td></td>
<td>+ diversification: high-value, scalable (horticulture, poultry, fish ponds)</td>
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<td></td>
<td>+ water management</td>
<td>+ water system management</td>
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<td></td>
<td>+ agricultural graduate deployment</td>
<td>+ institutional reform (research, extension, education)</td>
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<td><strong>Value chain</strong></td>
<td>+ data quality</td>
<td>+ predictable policies</td>
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<td></td>
<td>+ post-harvest handling</td>
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<td>+ target niche markets</td>
<td>+ intermodal transport system logistics</td>
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<td></td>
<td>+ cell phones</td>
<td>+ rural financial institutions</td>
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<td></td>
<td>+ micro-finance, remittances</td>
<td>+ farmer organizations</td>
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<td><strong>Landless</strong></td>
<td>+ high value agriculture</td>
<td>+ high-wage careers (children)</td>
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<tr>
<td></td>
<td>+ nonfarm income</td>
<td>+ education curriculum reform</td>
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<tr>
<td></td>
<td>+ education access (FFE)</td>
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<tr>
<td></td>
<td>+ nutrition packages (horticulture, poultry, education, public health)</td>
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Team Recommendations

• Focus on Long Game reforms and associated early actions
• Complement with Short Game
Long Game Early Actions

1. Public expenditure and institutional review of agricultural ministries *(crops, livestock, fishing)*
2. Train a new generation of agriculturalists *(UDOCs)*
3. Land policy monitoring & support
4. Farmer groups micro-irrigation
5. Water control system assessment
6. Statistical system upgrading
7. Rural cell phone expansion
8. Rural finance: *MADB* assessment
9. Rural education: pilot reforms focused on landless children
Short Game Early Actions

1. Synthesize existing best practices
2. Review regional experience promoting high-value activities for landless households
3. Pilot rural education and nutrition programs
4. Pilot safety nets
Conclusions

• Importance of the Long Game
  – Myanmar’s regional competitors (China, India, Vietnam, Bangladesh) have committed to Long Game investments and reforms
  – To remain competitive in agricultural markets, Myanmar will also need to commit to the Long Game.

• Landless children: Given 50% rural landlessness, future prosperity and political stability in Myanmar will depend on developing human capital and livelihoods options for the children of today’s landless.
Strategic Options for the Landless

Parents: high-value activities, minimal land requirements

Children: long-term investments in human capital

Nutrition

Education