Bangladesh National Food Security Strategies

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South Asia Policy Dialogue on Food Security Strategies
Taj Mahal Hotel, New Delhi, India
13-14 August 2013
Introduction

- Situated in the Bengal Delta at the confluence of GBM basin
- About 155 million people live in 147,570 sq. km area-highest population density in the world
- Bestowed with fertile land; hard working people
- About 10% area, hardly 1 meter above MSL;
Introduction

Topography and features

- Coastal area is about 32% of the total; i.e. one third under tidal excursions;
- Despite hurdles, Bangladesh managed to improve social & economic indicators:
  - School enrollment; Sanitation and drinking water; Iodine and Vitamin A supplementation; Maternal and Infant mortality rate; Life expectancy
  - Decent economic growth (5.5~6.8 %) in the last decade

Source: NDMP (2010)
Bangladesh food security: production and availability

- Substantial progress in making food available
- Since independence, rice production has been tripled and the country is nearly self-sufficient
- Foodgrain production growth outpaced population growth

Source: BBS
## Bangladesh food security: other indicators of availability

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2007/08</th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
<th>Target</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth of agricultural GDP (constant prices)</strong></td>
<td>3.00%</td>
<td>5.22%</td>
<td>5.24%</td>
<td>2.99%</td>
<td>4.50%</td>
<td>BBS</td>
</tr>
<tr>
<td><strong>Rice import dependency (3-years moving average)</strong></td>
<td>4.20%</td>
<td>3.31%</td>
<td>2.53%</td>
<td>2.37%</td>
<td>0%</td>
<td>DGF, BBS</td>
</tr>
<tr>
<td><strong>Instability of rice production</strong></td>
<td>4.09%</td>
<td>4.07%</td>
<td>3.39%</td>
<td>3.04%</td>
<td>0%</td>
<td>BBS</td>
</tr>
<tr>
<td><strong>Share of rice on total food value added (current price)</strong></td>
<td>41.52%</td>
<td>42.17%</td>
<td>42.44%</td>
<td>41.71%</td>
<td>Decreasing over time</td>
<td>BBS</td>
</tr>
</tbody>
</table>

Bangladesh food security: Crop production growth.....

Crop agriculture growth %

Source: BBS, various yrs
Bangladesh food security: poverty trends

- Income poverty reduction continues despite shocks;
- Over the last 5 years, poverty has declined faster;
- Poverty incidence declined more in urban areas than in rural areas;
- Over 80% of poor live in rural areas;

![Graph showing poverty trends from 1991 to 2010](image)

Food prices

Collective efforts of increased domestic supply, enhanced safety nets and PFDS interventions have helped in stabilizing prices in recent years.
Changes in rice-wage equivalents

Rice wage eq. is 10-11 kg per day at present, which was 4/5 kg five years back.

Source: BBS, DAM
## Bangladesh food security: Nutrition

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</thead>
<tbody>
<tr>
<td><strong>Underweight</strong> (% children 0-5 years)</td>
<td>66</td>
<td>42.7 (2004)</td>
<td>41.3 (2007)</td>
<td><strong>36.4</strong> (2011)</td>
<td>33</td>
</tr>
<tr>
<td><strong>Stunting</strong> (% children 0-5 years)</td>
<td>63.4</td>
<td>50.5 (2004)</td>
<td>43.2 (2007)</td>
<td><strong>41.3</strong> (2011)</td>
<td>38 (2016)</td>
</tr>
</tbody>
</table>
Trends for Global Hunger Index: selected countries

GHI = (PUN + CUW + CM)/3
Bangladesh food security: Maternal nutrition

[Cumulative line graph showing trends over time for CED (BMI < 18.5) and Overweight (BMI > 23.0) from 1996 to 2010. The graph illustrates a decrease in CED and an increase in overweight over the years.]
Potential risks in food: food safety loads.....

**Potential risks in food**

- Physical risk
- Chemical risks
- Biological risks
- Other specific risks
  - arsenic in wells;
  - Environmental/ethical risk(s) from GMO

**Burden of foodborne illness**

- Limited data available in Bangladesh.
- About 230,000 children die from diarrhoea each year in Bangladesh.
- Typically 25-30% population suffer an episode of foodborne illness/annum ........

**BANGLADESH**

40 million cases/annum
(110,000 cases/day)
Bangladesh food security: Challenges....

**Persistent**
- Population growth (1.3%) & Population density
- Poverty & extreme poverty;
- High rate of malnutrition
- Maintain support to small & marginal farmers

**Emerging**
- Declining land resources (quality & quantity)
- Food safety loads
- Climatic change impacts
- Global supply uncertainty and price volatility
  - Global economic crisis;
  - Bio-fuel issue- reduce availability; Export restrictions by countries
- Remittances growth is slowing down

**Given the facts**
- Reduction of food aid
- Limited flow of investment to employment generating sector
- Reduction of ODA to broad agriculture
- Reduction of ODA to family planning
Climate change impacts on Bangladesh Food security-empirical estimates

• Availability:
  – Yield reduction: IPCC, 2007: 32% wheat, 8% rice by 2015
  – Reduced rice production growth: WB, 2009: from 2.71% in 2005 to 2.5% by 2050

• Access:
  – Loss of Agri-GDP/economic loss (estimated to be 0.5 and 1.0% of GDP in last 10 yrs due to disasters);
  – Migration-climate refugees
  – Loss in farm revenue;
  – pressure on public resources to enhance safety nets

• Nutrition:
  – inferior food intake, low sanitation, increased vector borne diseases, etc.>>>malnutrition, morbidity, mortality
What Bangladesh has done so far............policies & plans

• GOB Vision 2021; Perspective Plan (2010-2021) Sixth Five Year Plan;

• NFP 2006; NFP Plan of Action (2008-2015); Prioritized Food Security Investment plan, BCIP, 2010 [revised in 2011-12]: 12 programmes-7.8 billion USD planned

• National Disaster Management Plan (2007-2015)-paradigm shift to risk reduction

• Bangladesh National Road Map for adaptation to Climate Change Impacts on Food Security, 2011 (Bhutan)

• Bangladesh Climate Change Strategy and Action Plan 2009 (BCCSAP) (Environment Ministry)

• Food Safety Act 2013 approved by the Cabinet, which is under promulgation

• Participated in ‘SAARC regional /sub-regional mechanism & global FS framework through CFS
Strategies for increasing/sustaining food production and supply

- Investing in research and extension: climate adaptive
- Efficient water use
- Ensure input availability
- Diversification, specialization and commercialization
- Cash subsidy to small and marginal farmers; incentive prices to producers through domestic procurement
- Efficient food markets-infrastructure, information, early warning, Innovative Marketing Systems
- Reinvigorating rural non-farm sector
Support to agriculture: subsidy well below WTO AMS limit….

- Reduction of price of non-urea fertilizers
- Diesel subsidy
- Discount to electricity charges etc.
- ~720 million USD
## GoB Support for inputs: fertilizer

### Reduction of price of non-urea fertilizers, 2009-2011

<table>
<thead>
<tr>
<th>Fertilizer</th>
<th>Tk Per kg before Jan’ 2009</th>
<th>Tk Per kg from Jan’ 2009</th>
<th>Tk Per kg from Nov 2009</th>
<th>Tk Per kg from Oct’ 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSP</td>
<td>80</td>
<td>40</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>MoP</td>
<td>70</td>
<td>35</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>DAP</td>
<td>90</td>
<td>45</td>
<td>30</td>
<td>27</td>
</tr>
</tbody>
</table>

*1 US dollar = ~83 Bangladesh taka*
Increasing agricultural outputs: Unharnessed potentials

- Reducing the yield gap - vertical expansion
- Technology adoption, mechanization & irrigation
- Reducing post harvest losses
- Improving milling technology
- Bringing fallow land to cultivation
- Addressing salinity, submergence, temperature stresses and drought
# Potential of Bangladesh Agriculture: yield gap between research and farm

<table>
<thead>
<tr>
<th>Levels of Potential</th>
<th>Rice (Tons/ha)</th>
<th>Wheat (Ton/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieved</td>
<td>4.08 (72%)</td>
<td>2.08 (68%)</td>
</tr>
<tr>
<td>Technical Potential</td>
<td>5.58 (100%)</td>
<td>3.08 (100%)</td>
</tr>
</tbody>
</table>

Note that Bangladesh’s rice yield per ha is low as compared to Egypt, China, USA, Australia, Turkey etc.
Strategies for improving access

- Disaster risk mitigation for agriculture
- Strengthening PFDS-increased modern storage capacity & food stocks; emergency distribution;
- Increased coverage and effectiveness of SSNPs-expenditure of safety nets as % to GDP increased from 2.25% in 2008 to 2.64% in 2011
- Support to poor consumers-expanded OMS/FPC
- Measures for increased supply through trade: In 2010-11, Bangladesh imported about 5.3 million MT of rice and wheat
- Employment-generating income growth

**Food Distribution**
- 2010-11: 2.29 MMT
- 2011-12: 2.2 MMT
- 2013-14: 2.7 MMT (budget)
Increasing domestic supply-Bangladesh imports

Total National Import (Rice and Wheat)

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount in '000' mton</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Rice</td>
</tr>
<tr>
<td></td>
<td>Wheat</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>2006-07</td>
<td>1000</td>
</tr>
<tr>
<td>2007-08</td>
<td>2000</td>
</tr>
<tr>
<td>2008-09</td>
<td>3000</td>
</tr>
<tr>
<td>2009-10</td>
<td>4000</td>
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<tr>
<td>2010-11</td>
<td>5000</td>
</tr>
<tr>
<td>2011-12</td>
<td>6000</td>
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</tbody>
</table>
Major food distribution channels

- **Monetized channels**
  - Open market sales
  - Fair Price Card (FPC)
  - Large employees
  - Essential & Other priorities

- **Non-monetized channels (nmc)**
  - Food for Works
  - Test Relief
  - Vulnerable Group Feeding
  - Vulnerable Group Development
  - Gratuitous relief
  - CHT & Others

Source: DG Food
Strategies for improving food security: Nutrition

- Establish standard **food intake norms**
- **Balanced food** at low cost
- Food and **diet diversification**
- Food **supplementation**
- Nutrition education
- Food safety and sanitation
- Enhance health care services

**Pure food Act 2013 is underway**
Roadmap for adapting Climate Change Impacts on Food Security

**Measures for**
- Reduction of sensitivity
- Reduction of exposure
- Community adaptation capacity
- Institutional capacity

**To improve resilience through**
- Technology Development
- Preparedness and awareness strengthening
- Livelihoods protection and development

8 programmes: 3 availability, 3 access, 2 nutrition
Conclusions…….

- Less alternative to domestic production for meeting crisis like global food crisis; resilience to global supply shocks

- Redesign Agriculture system to adapt climate change: intensification, diversification, sustainability & resilience through investing in research and development

- Strengthen public food management; expanded safety nets to assist the poor need to improve program effectiveness

- Concessional supports are needed to reduce the budget deficit based on domestic choices
Conclusion

- Govt. fully committed to ensuring food security: comprehensive policies, plans and increased allocation to FS programmes
- Govt. committed to forge partnerships in line with the principles set forth in
  - Paris Declaration on Aid Effectiveness in 2005
  - Accra Agenda for Action
  - L’Aquila G-8 summit in 2009
  - World Food Summit 2009
- Sectors to work together for agriculture, food security and nutrition
- Development partners to come forward with investment in the priority actions, programs and projects
- Initiatives for making regional reserves effective and building global emergency food reserve
Thank You
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