Impact Assessment
Zambia Fertilizer Support Program (FSP)

Briefing on Main Results
World Bank Country Office, Lusaka
23 March 2009

This Assessment

Key Questions
- Has the FSP achieved its stated objectives?
- How could the program be improved?

Origins and Background
- Study requested by MoFNP, launched in co-operation with MACO.
- Consultative process involving GRZ and other stakeholders at all stages (kick-off, survey design, data collection, analysis and reporting).
- Public Expenditure Tracking Survey (PETS) covering 2007/08 FSP season.
Recent concerns over the FSP

- CSO/MACO data raise important questions.
  - 13% – 70% apparent annual deficit between inputs allocated and inputs received.
  - Major gaps between farmers targeted and farmers reached.
  - Farmer yields with FSP 5% lower than smallholders who use commercial inputs.
  - No improvement in national average yields.
- ZNFU and others have also voiced concern.
  - Late delivery of inputs, farmer resources tied up during the wait.
  - Extension work and other types of investment being neglected.
  - Opaque selection process, various examples of malfeasance and misrepresentation.

Main Findings

- Total FSP costs were at least K183.7 bn (i.e. 22% more than stated at the start of the season).
- Pack for pack, FSP inputs cost Zambia an average of K245,000 more than private sector benchmark.
- Overall leakage from the system was around 30% (i.e. K55.1 bn or USD 14.3 million).
- Beneficiary selection has been arbitrary and non-transparent.
- At least 70% of inputs received too late.
- FSP produced 70% less maize than predicted by MACO.
- Estimate that FSP has displaced 7-10% of private sector customers.
Program Costs

- Analysis shows that FSP costs were K183.7 billion (i.e. 22% more than MACO’s original estimate)

<table>
<thead>
<tr>
<th>ZMK bn</th>
<th>USD m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core spending by MACO</td>
<td></td>
</tr>
<tr>
<td>Fertilizer</td>
<td>122.21</td>
</tr>
<tr>
<td>Seed</td>
<td>21.74</td>
</tr>
<tr>
<td>Logistics</td>
<td>20.02</td>
</tr>
<tr>
<td>Administration</td>
<td>3.97</td>
</tr>
<tr>
<td>Other direct costs</td>
<td>1.06</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>169.00</strong></td>
</tr>
<tr>
<td>Other FSP costs</td>
<td></td>
</tr>
<tr>
<td>Staff salaries, benefits &amp; costs</td>
<td>4.89</td>
</tr>
<tr>
<td>DAC meetings</td>
<td>0.04</td>
</tr>
<tr>
<td>Extras paid by farmers</td>
<td>9.75</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>14.67</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>183.67</strong></td>
</tr>
</tbody>
</table>

- Original budget was K150bn.
- Core spending by MACO at least K169bn (13% overrun)
- Total costs including extras paid by farmers at least K183.7bn (22% more than stated)
- PCO says overruns “always” happen.

Cost per Pack

- FSP inputs were more expensive to Zambia than private sector benchmarks in 4 out of 5 provinces.

<table>
<thead>
<tr>
<th>Province</th>
<th>Commercial price of 4x4 pack</th>
<th>Cost of FSP pack at farm gate</th>
<th>Extra cost of one FSP pack for Zambia*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>1,166,486</td>
<td>1,469,372</td>
<td>302,886</td>
</tr>
<tr>
<td>Copperbelt</td>
<td>1,331,306</td>
<td>331,025</td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td>1,138,347</td>
<td>138,066</td>
<td></td>
</tr>
<tr>
<td>Northern</td>
<td>1,211,926</td>
<td>257,446</td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td>1,837,400</td>
<td>(368,028)</td>
<td></td>
</tr>
</tbody>
</table>

* Excluding transport of commercial pack to farm gate.

- Based on the allocation to sampled provinces, the average extra cost was about K245,000 per 1ha pack.
Leakage from the System

- Estimate total leakage around 30% (equal to K55.1 billion or USD 14.3 million).
  - On average, individual recipients got 72% of the total seed and 69% of the total fertilizer allocation promised.

- Moreover...
  - In 20% of sampled districts, number of packs received by co-ops was barely half of what DACOs said they sent.
  - 24 of 40 private shops said they had either heard of or seen FSP inputs being bought and sold by private dealers (usually in large quantities).
  - Backstopping fund of 3,750 packs (worth K5.5bn) unaccounted for.
  - K9.75 billion in extra fees charged to farmers.
  - Deposits not reconciled at national level.
  - Significant delays in paying vendors.

Targeting and Selection

- Beneficiary selection has been arbitrary and non-transparent.
  - Vague and all-encompassing selection criteria.
  - Little understanding of what the FSP is meant to achieve or who is to benefit.
  - Much talk about “undeserving” beneficiaries, but no definition of who these people are.

- As a result, strategic focus of FSP is lost.
  - 45% did not use fertilizer on maize before FSP.
  - 10% produced at full 4x4 before FSP.
  - 28% planted less than 1ha maize with FSP.
What did the farmers get and when did they get it?

- 55% of farmers received less than a full 4x4 input pack.
  - In many cases, this was because they could not afford the subsidized price so decided to share.
  - In other cases, it was because the co-op subscribed too many beneficiaries (after charging K100,000 average for co-op fees).
  - In still other cases, it was because FSP inputs went missing (“leaked out”) before they reached the co-op.

- Around 70% of inputs arrived too late.
  - 63% of inputs reached farmers in November.
  - 32% of inputs reached farmers in December.
  - 68% of inputs received after the start of the rains.

Causes of the Delay

- Timeline for FSP tendering is inherently flawed and inconsistent with timely supply.
  - MoFNP announces ceiling in October/November and the figures almost never change.
  - MACO waits for parliament to approve the national budget before working on FSP tender documents.
  - Tender documents issued in June, but could be ready in April (…if PCO wasn’t overstretched).

- DACOs only informed of FSP rules in October and November.

- Limited and over-stretched capacities at all levels of MACO.
Impact on Production

- FSP produced 70% less maize than predicted by MACO.
  - MACO has claimed 3.0 MT per 1ha pack (375,000 MT in 2007/08).
  - This “best case” scenario overlooks timeliness of delivery, regional variations, sharing of inputs, actual levels of fertilizer use, what farmers were doing before FSP, impact on area cultivated, etc. etc.
  - Need to look at incremental production instead.
  - Our estimates suggest 82,000 – 146,000 MT incremental maize only (61-78% less than MACO).

Cost per MT

- Each ton of FSP maize cost Zambia about $326 to $580 at the farm gate.

<table>
<thead>
<tr>
<th>Budget Allocation (K169 bn)</th>
<th>No area increase</th>
<th>With area increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampled provinces</td>
<td>2,026,417</td>
<td>1,141,009</td>
</tr>
<tr>
<td>Rest of Zambia</td>
<td>2,127,321</td>
<td>1,188,880</td>
</tr>
<tr>
<td>Total Zambiaia</td>
<td>2,062,317</td>
<td>1,158,124</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Total FSP Costs (K183.7 bn)</th>
<th>No area increase</th>
<th>With area increase</th>
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- Compare with June 2008 import parity = $385 into mill.
  - FSP probably reasonable value for food security in outlying areas.
  - Generally uncompetitive with imports for urban markets.
Impact on Private Sales

- FSP appears to have displaced 7-10% of customers at the district level.
  - 50% of farmers reported buying commercial inputs before FSP (including 10% who were already at 4x4).
  - With FSP, only 43% reported buying commercial inputs.

- Private networks are available and expanding in many locations.
  - Most beneficiaries said there were reliable private shops within the district they could reasonably get to.
  - Private sales appear to be growing based on number of shops and turnover.
  - Inputs usually available before start of season.

Recommendations for Program Design

- Start with a clear definition of what the FSP aims for.
- Choose selection criteria that are meaningful, easy to apply, and verifiable.
- Recognize that “graduation” after two years is impractical.
  - Even with FSP, the income from maize is not sufficient to afford the inputs needed for next year.
  - Cannot expect sustainable growth from a short-term injection of cheap inputs.
  - Enforcement is bound to be difficult and controversial.
- Consider moving away from direct procurement.
- Consider multiyear programming to send clear signals and avoid pressure for change.
- Keep the design simple.
Recommendations for Program Implementation

- Consider if MACO has the capacity to manage such a program.
- Install a dedicated accounting and M&E system to track the flow of funds, distribution of inputs, and total costs.
- Avoid continuous change in rules to reduce burden on administration at national and district levels.

Potential of Vouchers

- What could vouchers do?
  - One big advantage would be to solve the problem of late delivery by avoiding lengthy tendering process.
  - Could also contribute to much greater and more competitive private sector involvement at the national and district levels.
  - Could reduce leakage if the rules are workable and robust.
- But...
  - Important to get the implementation plan right (risk is to create new / different opportunities for leakage or time spent fighting fires with complex technical solutions).
  - Must address other important weaknesses related to beneficiary selection and strategic targeting (choice of subsidy level, years of participation, etc).
Final Thoughts

- Also important for GRZ to consider how input and output subsidies could work together in more strategic ways.
  - FRA and FSP subsidies together account for 83% of government spending on poverty reduction programs in agriculture.

- Whatever the solution, GRZ spending on subsidies must be supported by other types of investment to achieve Zambia’s strategic growth targets.