Thai German Programme for Enterprise Competitiveness

DCED Seminar on Trends and Results in PSD
Session 2, Thursday 19 January 2012
Outline

- Overview of the Programme
- Programme Design and Implementation
- Result Measurement
TG-PEC Overview

- Objective: To improve competitiveness, eco-efficiency and utilisation of renewable energies of Thai SMEs in the agro-industry
- Timeframe: 2 phases from 2004-2011
- Funding: Funded by BMZ 17.6 Mil. Euro
- 2 Components: A) Business and Financial Services  
B) Resource Efficiency and Energy
- Target Sectors: Palm Oil, FFV, Shrimp, Tapioca and Saa Paper
- No. of Project: 22 Projects
Basic Approach

Result Measurement

Value Chain Selection

Value Chain Analysis

Formulation of Sub-sector Strategy

Intervention Design & Implementation
Programme Design and Implementation
Sub-Sector Strategy

- The Relevance of the Sector
- Competitive Position
- Overall Strategy
- Programme Focus
- Summary of Interventions
Programme Focus and Issue Diagram

- % OER
  - Energy Costs Reduction from Eco-Efficiency
  - Additional Income from Power Sold to Grid
  - FFB Yields

- Mill Productivity
  - Overall Competitiveness

- Plantation Productivity
Programme for Enterprise Competitiveness

Interventions and Issue Diagram

- Energy Policy Proposal (E³Agro)
- Seminar On Biomass Energy for Thai Palm Oil Industry (E³Agro)
- Eco-Efficiency Benchmarking Services in the Palm Oil Industry (E³Agro)
- MIS for Industrial Pollution Prevention and Control (MIS)
- Promotion of Embedded Extension Service (POVC)
- Univanich Palm Oil Field Day (POVC)
- Leaf Analysis and Nutrient Recommendation Service (POVC)

Additional Income from Power Sold to Grid

Energy Costs Reduction from Eco-Efficiency

Mill Productivity

Higher Oil Extraction Rate

Overall Competitiveness

Higher FFB Yields

Plantation Productivity
Intervention Design & Implementation

1. Understanding of causes and constraints of the issue
2. Raw Intervention Ideas
3. Valid Intervention Ideas
4. Intervention Agreements
5. Impact Assessment Plan
6. Implementation
7. Result Measurement
Intervention Design: Symptom to Causes

- Low FFB Yields
  - Quality of Plating Materials
  - Improper Use of Fertilisers
  - Climate

  - No access to suitable usage information
  - No access to analysis service
Leaf Analysis Service

Constraints

- Very low awareness and understanding on leaf analysis and nutrient recommendation service and its benefit.
- The service is not widely available and no commercial laboratory in the area.

- Services from government laboratories are too slow. They have no incentive to provide it on a commercial basis.
- Demands is too low for commercial laboratory to add this new service
- There is a crushing mill in the area that has already invested in the laboratory and willing to offer this service to their regular suppliers.

Raw ideas

- Fee based service from public laboratories
- Fee based service from private laboratories
- Embedded service from crushing mills
Programme for Enterprise Competitiveness

Intervention Design

- Social Marketing (GTZ)
- Direct Communication (Partner)

Training for Participants (Partner)

Usage of the Service & Recommendation

Delivering Accurate Recommendation (Partner)

- Capability Assessment & Recommendation (GTZ)
- Additional Investment and Implementation of Measures

Demand Creation

Capacity Building
Programme for Enterprise Competitiveness

Intervention Agreement

- Background of the Project and its Strategy
- Background to the Intervention
- Competitiveness Issue
- Solution and Intervention Strategy
- Impact Assessment Method
- Budget & Responsibility

<table>
<thead>
<tr>
<th>Item</th>
<th>GTZ</th>
<th>Vichitbhan</th>
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</thead>
<tbody>
<tr>
<td>10.1 Additional analysis lamps</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>10.2 Calibration with DOA</td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td>10.3 Calibration with Malaysian laboratory</td>
<td></td>
<td>50,000</td>
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<tr>
<td>10.4 Laboratory Staff Training</td>
<td>25,000</td>
<td>50,000</td>
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<td>10.5 Fertilizer recommendation staff training</td>
<td>25,000</td>
<td>50,000</td>
</tr>
<tr>
<td>10.6 Development of information sheets</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>10.7 Professional Marketer, including development and implementation of marketing plan</td>
<td></td>
<td>900,000</td>
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<tr>
<td>10.8 Training supply chain partners in sample collection and handling</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>10.9 Vichitbhan laboratory construction and development*</td>
<td></td>
<td>7,000,000*</td>
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<tr>
<td><strong>10.9 Total</strong></td>
<td><strong>1,000,000</strong></td>
<td><strong>8,000,000</strong></td>
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All expenses are expressed in Thai baht
Result Measurement
The Existing Measurement System Before Pilot Testing DCED Standard

- Overall Goal: Improve Competitiveness of Agro Industries
  Component: Business, Financial and Eco-efficiency Services
- Strategy paper for each sector
- RBM & Impact Assessment Guideline
- Intervention Report and Impact Assessment Plan for each Intervention
- No M&E Department
Implementation of DECD Standard

- Conducted pre audit of existing system compared to the standard in order to identify the gaps
- Major items missing were:
  - explicit result chain at the intervention level for some interventions and analysis supporting the causal logic at the intervention level
  - universal impact indicator: net additional income
  - attribution methodology
  - scale and projection
  - direct and indirect impact
  - costs allocation and aggregation
- Revised the impact assessment guideline and related documents (strategy paper, intervention report and impact assessment plan) in order to deal with the above issues
- Conducted staff training on the new system
- Started to implement the new system
Impact Logic & Indicators

| Required Sample size | 30 for treatment  
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<td></td>
<td>10 for control</td>
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Surveyed

| Surveyed | 60 for treatment  
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<tbody>
<tr>
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<td>20 for control</td>
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</table>

Selection

| Selection | Treatment: Sampling from users of the service  
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<tbody>
<tr>
<td></td>
<td>Control: Sampling from non-users in the same area</td>
</tr>
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</table>

- Farmers’ income increase
  - Increase in income
  - Increase in FFB Yields
  - No of farmers use the recommendation
  - Reason for using or not using
- Farmers use the fertiliser recommendation
  - No of farmers use the services
  - Reason for using or not using
- Farmers use the analysis service
  - Lab. provide quality service to the farmers
    - Farmer’s satisfaction
    - MF’s motivation
    - Personal and System
    - Budget
  - Comparing results with other certified lab.
    - ISO 17025
- Farmers participate in the introductory training
  - No of farmers participate in training
  - Understanding of the benefits of the service
- Lab. improve its capacity up to the international standard
- Lab. Capacity Building
- Demand Creating Activities
Assessing Attribution

Using Before and After Respondent Opinions up to Enterprise Performance Level to check Causality

At the Enterprise Level:
- Do we need the counterfactual?
  - New Practices/Technologies or Innovation?
  - External Influences?

No
Using Before and After and Respondent Opinions

Yes
Quasi-Experimental Survey
Secondary Source
Intervention Impact Assessment Plan

- Competitiveness Issue and Goal Level Indicators
- Intervention Logic and Component Level Indicators
- Exit/Sustainability Strategy
- Impact Assessment Methodology: For each group,
  - What indicators will be measured?
  - What attribution methodology will be used?
  - How will this data be gathered?
  - When will this data be gathered?
  - Who will collect this data?
  - What interim indicator will be monitored, how, when and by whom?
- Key milestones
# Reporting Format

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Definition</th>
<th>Calculation</th>
<th>Assumptions</th>
<th>Status Before Intervention</th>
<th>Status After Intervention</th>
<th>Change Attributed to T-G PEC*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement of FFB yield</td>
<td>Increase of average FFB yield (rai 18 – 20 months after applying recommended fertilizer)</td>
<td><strong>Baseline</strong>&lt;br&gt;Average yield of participated group : 2.468 ton/rai/year&lt;br&gt;Average yield of control group: 2.237 ton/rai/year&lt;br&gt;18-20 months&lt;br&gt;<strong>Final Follow up</strong>&lt;br&gt;Average yield of participated group : (A)&lt;br&gt;Average yield of control group : (B)&lt;br&gt;(A - 2.468) – (B - 2.237)</td>
<td>Recommended fertilizer available in the market</td>
<td><strong>Baseline</strong>&lt;br&gt;1. Average yield of participated group: 2.468 ton/rai/year&lt;br&gt;2. Average yield of control group: 2.237 ton/rai/year</td>
<td><strong>Final Follow-up</strong>&lt;br&gt;(A) 4.123 ton/rai/year (participated group)&lt;br&gt;(B) 2.883 ton/rai/year (control group)</td>
<td>Difference in output (yield) between treatment group and control group were recorded before leaf analysis service be delivered. End of 2008, the second difference of yield between treatment group and control group will be worked out again. Impact of this intervention is the follow-up difference less the difference at the baseline. 1.008 ton per Rai/Year</td>
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</table>
Aggregation

- Start measuring results for each intervention
- Adjusting for the overlapping
- Summing up the results for each target

<table>
<thead>
<tr>
<th>Target Beneficiary</th>
<th>Intervention</th>
<th>No. of smallholders/mills benefited</th>
<th>Additional Income Generated (THB/Annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Direct</td>
<td>Indirect</td>
</tr>
<tr>
<td>1) Smallholders</td>
<td>1.1 Training Service</td>
<td>2,425.25</td>
<td>216.56</td>
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<tr>
<td></td>
<td>1.2 Leaf Analysis</td>
<td>426</td>
<td>450</td>
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<tr>
<td>2) Crushing Mills</td>
<td>2.1 Resource Efficiency</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>2.2 Power generation from Biogas</td>
<td>5</td>
<td>20</td>
</tr>
</tbody>
</table>

Total: 292,818,877.72

Total: 1,351,236,877.72
Benefits of the Standard

- Time and costs saving when setting up M&E system (Do not need to reinvent the wheel)
- Know what is the acceptable minimum requirements
- Improve intervention design and implementation
- Measurable indicators also improve the transparency and objectivity of performance assessment system
- Input for portfolio management and resource allocation
- Facilitate learning and knowledge sharing
Thank You