## Project Design Matrix (PDM)

**The Kilimanjaro Agricultural Training Centre Phase II Project in Tanzania**

**In Tanzania**

<table>
<thead>
<tr>
<th>Narrative Summary</th>
<th>Objectively Verifiable Indicators</th>
<th>Means of Verification</th>
<th>Important Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Super Goal</strong></td>
<td>Living standards of rice farmers in the irrigation schemes are improved.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall Goal</strong></td>
<td>Productivity of rice increases in the place where KATC training has been conducted and surrounding area.</td>
<td>1. Average rice yield of sample farmers in the training conducted sites and surrounding area increase by 25% by 2010 compared to the national average of 2002 (2.5t/ha).</td>
<td>Income is used for better living standards.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. By 2010, the net return rate from rice to family farm in the training conducted sites and surrounding area increase compared to those of 2002. (for the formula of the net return rate.)</td>
<td></td>
</tr>
<tr>
<td><strong>Project purpose</strong></td>
<td>Productivity of rice increases in the model sites through the KATCs training.</td>
<td>1. Average rice yield per unit area of sample farmers in model sites increase by 12-43% by 2005 compared to 2002.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. By 2005, the net return rate from rice in all the model sites increase compared to those of 2002.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. By 2005, properly irrigated area increase in all the model sites compared to those of</td>
<td></td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>The concept of and approach to the model sites are established (based on the agreement of all the stakeholders).</td>
<td>1. By the end of August, 2002, six (6) model sites are selected on the basis of the criteria.</td>
<td>The ex-participants remain in the irrigation scheme.</td>
</tr>
<tr>
<td></td>
<td>The capability of KATC in identifying training needs is improved.</td>
<td>2-1. At the beginning of every training course, more than 90% of course participants agree with the course contents as relevant to their needs.</td>
<td>District levels recognise the importance of improved rice farming and implement extension.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-2. In more than 80% of training courses, more than 80% of training participants rank A or B in questionnaire. (Evaluation will be done by 5-graded form (A:Excellent, B:Very Good, C:Good, D:Fair or Satisfactory, E:Poor)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical training program are strengthened to meet local needs.</td>
<td>3-1. By 2005, 80% of Key Farmers adopt at least 80% of basic field techniques learnt and 80% of Intermediate Farmers adopt at least one basic field technique learnt. (for the items of basic field techniques.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3-2. By 2005, technical standards on rice cultivation are established in all model sites through field trial activities conducted by field personnel and key farmers. (for the items of technical standards.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3-3. By 2005, the final versions of technical manuals for each model site is prepared based on local needs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3-4. Modified field training programme(s), which encourage districts to adopt KATC trainings as an implementation tool of their DADP, are developed.</td>
<td></td>
</tr>
</tbody>
</table>

**Duration**: 2001.10.1 - 2006.9.30  
**Target Group**: Rice farmers in the irrigation schemes  
**Project Area**: Selected irrigation schemes  
**Date**: 18/11/2004
### Activities

<table>
<thead>
<tr>
<th>Japanese side</th>
<th>Tanzanian side</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1 Study the situation of selected 40 irrigation schemes in order to determine their potential for development.</td>
<td>1. Training report</td>
</tr>
<tr>
<td>1-2 Conduct the group training courses on irrigated rice production techniques for scheme managers, field personnel and key farmers of the selected 40 irrigation schemes.</td>
<td>2. Farm operation calendar</td>
</tr>
<tr>
<td>1-3 Select model sites based on the criteria to be agreed.</td>
<td>3. Evaluation report</td>
</tr>
<tr>
<td>1-4 Dispatch of Japanese Experts</td>
<td>4. Interview</td>
</tr>
<tr>
<td>(1) Long-term Experts (maximum 5 persons)</td>
<td>5. Seminar and workshop proceedings</td>
</tr>
<tr>
<td>Chief Advisor</td>
<td>6. Local consultant survey report</td>
</tr>
<tr>
<td>Coordinator</td>
<td>7. Field survey</td>
</tr>
<tr>
<td>Other Long-term experts</td>
<td>1. Assignment of Tanzanian Personnel</td>
</tr>
<tr>
<td>• Extension and farmers training</td>
<td>(1) Project Director</td>
</tr>
<tr>
<td>• Rice cultivation</td>
<td>(2) Project Manager</td>
</tr>
<tr>
<td>• Irrigation management</td>
<td>(3) Counterpart personnel in the field of</td>
</tr>
<tr>
<td>• Farming Management</td>
<td>• Extension and farmers training</td>
</tr>
<tr>
<td>(2) Short-term Experts</td>
<td>• Rice cultivation</td>
</tr>
<tr>
<td>2. Provision of Machinery and Equipment</td>
<td>• Irrigation Management</td>
</tr>
<tr>
<td>3. Training of Tanzanian Counterpart Personnel in Japan</td>
<td>• Farming Management</td>
</tr>
<tr>
<td>4. Dispatch of a Survey Team</td>
<td>(4) Counterpart personnel for short-term Experts</td>
</tr>
<tr>
<td></td>
<td>(5) Administrative personnel</td>
</tr>
<tr>
<td></td>
<td>(6) Other necessary personnel mutually agreed upon as necessary</td>
</tr>
<tr>
<td></td>
<td>2. Local Running Expenses</td>
</tr>
<tr>
<td></td>
<td>3. Provision of lands, buildings and other necessary facilities</td>
</tr>
</tbody>
</table>

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Inputs

- By 2006, four Kiswahili & two English newsletters in a year and annual technical progress reports are prepared, and web-site of KATC is established and revised on monthly basis.
- By 2006, at least one specialized subject training based on Gender needs is conducted for and the activity is adopted in each model site.
- By 2005, active membership of irrigators' association/cooperative societies in each model site increase compared to 2002. (*Active members* are paying membership fee and participating O&M activities.)
- By 2006, four Kiswahili & two English newsletters in a year and annual technical progress reports are prepared, and web-site of KATC is established and revised on monthly basis.
- By 2006, four Kiswahili & two English newsletters in a year and annual technical progress reports are prepared, and web-site of KATC is established and revised on monthly basis.
- By 2005, farm operation calendars and plans are prepared, carried out and evaluated by managing personnel, key farmers and intermediate farmers in each model site. (Farm operation calendars and plans include; farm operation, water distribution plan, canal maintenance and management plan, and organisational activity plan.)
- By 2005, farm operation calendars and plans are prepared, carried out and evaluated by managing personnel, key farmers and intermediate farmers in each model site. (Farm operation calendars and plans include; farm operation, water distribution plan, canal maintenance and management plan, and organisational activity plan.)
- By 2006, library database and classified information database are established.
- By 2005, implementation plan (IP) for each model site is prepared, implemented, and revised based on the implementation result jointly by district, scheme, zonal irrigation office and KATC, with the special emphasis on cost sharing.
- By 2006, farm operation calendars and plans are prepared, carried out and evaluated by managing personnel, key farmers and intermediate farmers in each model site. (Farm operation calendars and plans include; farm operation, water distribution plan, canal maintenance and management plan, and organisational activity plan.)
- By 2005, farm operation calendars and plans are prepared, carried out and evaluated by managing personnel, key farmers and intermediate farmers in each model site. (Farm operation calendars and plans include; farm operation, water distribution plan, canal maintenance and management plan, and organisational activity plan.)
- By 2005, farm operation calendars and plans are prepared, carried out and evaluated by managing personnel, key farmers and intermediate farmers in each model site. (Farm operation calendars and plans include; farm operation, water distribution plan, canal maintenance and management plan, and organisational activity plan.)
- By 2006, library database and classified information database are established.
- By 2006, library database and classified information database are established.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.

### Important Assumptions

- Weather conditions remain favorable to irrigated rice farming.
4-1 Prepare, implement and revise Implementation Plan (IP) for each model site with district, scheme, zonal irrigation office.
4-2 Improve the management of irrigators' associations/cooperative societies in model sites.

5-1 Establish information management system.
5-2 Collect and classify the information.
5-3 Supply the information to the concerned organisations and individuals.

[Gender related activities are reflected on above activities. They are not treated as the independent field.]

6-1 Identify Gender training needs of selected model sites and integrate them into Implementation plan.
6-2 Plan, conduct and monitor the technical training of irrigated rice production with gender consideration.
6-3 Organise gender related information on irrigated rice production.

<table>
<thead>
<tr>
<th>Pre-conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice farmers in the selected irrigation schemes agree with the objectives of the project.</td>
</tr>
<tr>
<td>Security situation of the country remains stable, and safety of property at KATC is assured.</td>
</tr>
</tbody>
</table>

*sample farmer: directly and indirectly contacted farmer*