Major Activities and Achievements of Project for Improving Research and Technology Transfer Capacity for Nacala Corridor Agriculture Development (ProSAVANA-PI)

1. **Project Purpose**  Appropriate agricultural technology is developed and transferred in Nacala Corridor.
2. **Project Period**  May, 2011 to November, 2017 (Six and a half (6.5) years)

### Implemented Activities

**< Strengthening research capacity >**

**Target:** Northeast research center (Nampula) and Northwest research center (Lichinga)

**Facility improvement**
- Repair of existing facilities and equipment, introduction of new research equipment
- Construction of soil and plant analysis laboratory at Nampula Center
- Training for research center staff on usage and maintenance of Facilities and equipment

**Advice on the improvement of method about managing the agricultural testing site**
- Development of Management Guidelines of research centers

**Capacity building of researchers**
- Training on soil and plant analysis, seminar on production and research of cassava (250 researchers participated in total)
- Seminars and trainings for extension officers, Internal Annual Meeting for Research Achievements and Planning, presentation of achievement at Agricultural Research Meetings in Nacala Corridor, etc

**< Evaluation of Natural resources and socio-economic conditions in target area >**
- Evaluation of soil and vegetation, collection and analysis of data on meteorology, water resource, and terrain
- Survey and analysis of socio-economic situation of small scale farmers
- Evaluation of agricultural production potential, proposal of land use based on the above

**< Development of soil improvement technology and appropriate crop cultivation technology >**
- Selection of appropriate crops (maize, potato, beans)
- Verification of soil conservation Technology (minimum tillage, mulching with residue, contour cropping, etc)
- Verification of fertilization technology
- Development of manuals

**< Transfer of newly developed Technology to sites >**
- Information sharing and training for Extension officers and farmers
- Development of “Decision Support System” for selection of appropriate cropping system
**Major activities and achievements**

1. **Strengthening of research capacity**
   - Extension officers and farmers were invited to Internal Annual Meeting for Research Achievements and Planning, and their opinions and requests regarding agricultural research were collected. As a result, it became possible to prepare research plans which consider/reflect on-site needs.
   - Proposal-based researches were conducted. Researches which are based on farmers’ benefits, such as “Nutrition improvement of small scale farmers through vitamin A fortification sweet potato” and “Good varieties selection test of kidney bean with farmers participation” were conducted. Through these researches, yield of the crops increased.

2. **Knowledge sharing with extension officers and farmers**
   - Total 1,397 people (393 extension officers and 1,004 farmers) participated in the trainings for extension officers and farmers.

3. **Effect of developed technologies**
   - Technologies which were developed in the Project had positive effect as indicated below.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Effect</th>
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<tbody>
<tr>
<td>Crop residue incorporation and mulching</td>
<td>Maize yield 2.4t/ha → 4.5t/ha (Nampula research center) 1.0t/ha → 1.7t/ha (Muriaze branch)</td>
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<td>Soy bean yield 0.6t/ha → 0.8t/ha (Nampula research center) 0.3t/ha → 0.45t/ha (Muriaze branch)</td>
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<td>Minimum tillage</td>
<td>40-91% decrease of soil erosion</td>
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<td>Reduction of production cost and labor</td>
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<td>Increase of net income by 500-3,000MZN/ha</td>
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<tr>
<td>Mulching with crop residue</td>
<td>50-95% decrease of soil erosion</td>
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<td>Mitigation of drought effect</td>
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<td>Increase of net income by 1,500-4,000MZN/ha</td>
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<tr>
<td>Maize- Soybean Intercropping</td>
<td>Increase of Maize yield</td>
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<td></td>
<td>Mitigation of drought effect</td>
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<td>20-50% increase of Land Equivalent Ratio (LER) (Higher yield compared with mono-cropping)</td>
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<tr>
<td>Maize-Soybean crop rotation</td>
<td>54-49% increase of Maize yield</td>
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(MZN: Mozambican currency)