Thailand FPAR Progress Report

Regional Review and Planning Workshop 2017

SUSTAINING AND ENHANCING THE MOMENTUM FOR INNOVATION AND LEARNING AROUND THE SYSTEM OF RICE INTENSIFICATION (SRI) IN THE LOWER MEKONG RIVER BASIN (SRI-LMB)

Organized by the ACISAI, AIT
Hosted by the Plant Protection Department, Vietnam

(24-25 April 2017)

Partners
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1. **Background**

In 2013-14, the project started its consultation process with the Ministry of Agriculture and Cooperatives (MoAC) and its many departments working towards sustainable agriculture goals, like the Rice Department, the Land Development Department, the Policy Division and others. As a result, a joint status paper and work plan was presented by the group during the project’s inception and planning workshop in April 2013 [see at: http://www.sri-lmb.ait.asia/downloads/NIPW-Report-Thailand.pdf]. Subsequently, the engagement with the MoAC and Ministry of Education (MoE), and with provincial offices, were deepened. Provincial offices of the MoE in Uttaradit and Surin provinces were selected to act as as local implementation partners of the project, owing to their already established non-formal education training personnel.

Engagement in Thailand continued to the Regional Training-of-Trainers, baseline surveys, Participatory Rural Appraisal (PRA) studies (sub-contracted to Rajabhat University, Ubon) and the National Inception and Planning Workshop.

Follow-up from the National Workshop and as a part of overall work plan, a series of pre Central Farmers Participatory Action Research (CFPAR) activities were undertaken. These are: a scoping visit to the provinces to meet the local ministry officials, trainers and farmers, visit of the rice fields and discussion with farmers on the challenges and opportunities. These initial activities provided inputs for carrying out detailed baseline surveys. In addition, a consultant was recruited to carry out the PRAs in the selected districts to gain more understanding on rice production systems and the farming communities. The outputs from PRAs and baseline surveys were analyzed, and focus group discussion was initiated with the farmers and important constraints were listed and prioritized at farmer’s level (see Table 1 on prioritized list of problems). These activities led to the establishment of the Central Farmers Participatory Action Research (CFPAR), one each in Uttradit and Surin in 2014 providing capacity building training to the 60 Smart Farmers (SFs) from six districts.

Upon successful completion of the CFPAR, the SFs, based on the local issues, designed and conducted 44 follow-up experiments (FPARs) in six selected districts during wet season 2014-15. The results and information from FPAR 2014-15 were re-validated and re-confirmed in provincial workshops in both districts. The lessons learnt form the FPAR 2014-15 were taken into account for the implementation of the second cycle of FPAR.

In the second cycle of FPAR 2015-16, a set of 14 new farmer’s experiments was set up in Sisaket province. This involved farmers from the Big Plot Project of MoAC, who integrated SRI demonstrations in their plots. In all, a total of 50 experiments were set up in three provinces of Surin, Sisaket, and Uttaradit.

The third cycle of FPAR were initiated in wet season 2016-17. A total of 89 experiments were carried out in nine districts of Surin, Uttaradit and Sisaket.
2. Project implementing consortium for SRI-LMB

Figure 1: Institutional structure of SRI-LMB project implementation

Figure 1 provides structural information on project implementing consortium for implementing the SRI-LMB project in Thailand. The ACISAI Center, which is the regional coordination unit of SRI-LMB, also acts as the country office for Thailand’s SRI-LMB programme, i.e., Programme Management Unit (PMU), Thailand.
The field sites and farmers for the FPAR were selected by the Local Management Unit (LMU), hosted and led by the provincial NFE department of the MoE. In Uttaradit, Uttaradit Vocational Training and Development Center (VTDC) for Thai people and in Surin Provincial Office of Non-Formal and Informal Education (NFE) and Surin Rice Seed Center, function as LMUs.

![Map of FPAR implementation districts in SRI-LMB project provinces](image)

**Figure 2: FPAR implementation districts in SRI-LMB project provinces**

Figure 2 details the districts where FPARs were implemented in the SRI-LMB provinces. FPARs were implemented in six, three and four districts of Uttaradit, Surin and Sisaket provinces, respectively. The LMUs selected the District Trainers (DT) and Smart Farmers (SF’s). The PMU first trained the DTs, who in turn trained the SFs. SFs were responsible to train farmer networks, each of which consisted of about 30 farmers at each FPAR site.

**3. Experimental sites and number of experiments**

Table 2 provides information on the number of experiments conducted in 13 districts of the three provinces.
Table 2: Number of FPAR experiments conducted by Smart farmers

<table>
<thead>
<tr>
<th>Province</th>
<th>Uttradit</th>
<th>Surin</th>
<th>Sisaket</th>
<th>Total successful experiments</th>
<th>Failed experiments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Districts</td>
<td>FPAR’s field experiments in selected districts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bankok</td>
<td>Tron</td>
<td>Phichai</td>
<td>Faktha</td>
<td>Nampat</td>
</tr>
<tr>
<td>2014</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2016</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>9</td>
<td>21</td>
</tr>
</tbody>
</table>

In total, 192 experiments were conducted across all three provinces, Surin had the highest FPAR sites (81) followed by Uttaradit (57) and Sisaket (42). Twelve field experiments could not be completed due to flooding and drought.

4. **Number of FPAR sessions conducted**

Four training sessions were conducted at each FPAR/season. The trainings were organized during critical growth stages of the crop cycle, i.e., transplanting/sowing, tillering, flowering, and harvesting. The first session was usually of four to five days in length, while the following three sessions were conducted for two days. These sessions provided farmers with an opportunity to learn about SRI and observe important factors, such as the differences in crop growth with alternative practices and productivity achieved.

5. **Farmer involvement in FPARs**

In 2014, each Smart Farmers (SF) engaged 30 farmers in their FPAR activities. This continued in 2015 and 2016 in most cases, though 25 farmers / FPAR were involved in some places. Table 3 provides details on the number of farmers involved in FPARs. Besides the 170 SFs, a total of 5065 farmers were directly involved in the three cycles of FPAR. The highest number of farmer involvement was in Surin province (2445) followed by Uttaradit (1488) and Sisaket (1302), respectively. The highest number of farmers were reached out in 2016 followed by 2015 and 2014, respectively.
Table 3: Number of Farmers engaged in FPAR

<table>
<thead>
<tr>
<th>Province</th>
<th>Uttradit</th>
<th>Surin</th>
<th>Sisaket</th>
<th>Total Smart Farmers</th>
<th>Total Farmers Reached directly</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 SF</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2015 SF</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2016 SF</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>18</td>
<td>-</td>
</tr>
</tbody>
</table>

Total Farmers Engaged in each Province: 93 186 155 310 651 93 589 1112 744 279 713 155 155 170 5065

6. Trainings and workshops conducted

The basic details on the trainings and workshops conducted are provided in Table 4.

Table 4: Workshop carried out in Thailand.

<table>
<thead>
<tr>
<th>SN</th>
<th>Workshop</th>
<th>Venue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>National Review and Planning Workshop in Surin Province</td>
<td>Suanpa Resort, Surin</td>
<td>24 June 2016</td>
</tr>
<tr>
<td>2</td>
<td>Farmers Congress in Surin Province</td>
<td>Suanpa Resort, Surin</td>
<td>23 June 2016</td>
</tr>
<tr>
<td>3</td>
<td>National Review &amp; Planning Workshop</td>
<td>AIT Conference Center, Pathumthani, Thailand</td>
<td>28-29 Apr 2015</td>
</tr>
<tr>
<td>4</td>
<td>Provincial Workshop in Uttaradit</td>
<td>VTDC office, Tron district, Uttaradit</td>
<td>16-17 Mar 2015</td>
</tr>
<tr>
<td>5</td>
<td>Provincial Workshop in Surin</td>
<td>NFE Surin office, Tha Tum district, Surin</td>
<td>13-14 Mar 2015</td>
</tr>
<tr>
<td>6</td>
<td>CFPAR activities in Surin province</td>
<td>Surin Province</td>
<td>24 March - 27 June 2014</td>
</tr>
<tr>
<td>7</td>
<td>CFPAR activities in Uttaradit province</td>
<td>Uttaradit Province</td>
<td>3 Mar - 27 June 2014</td>
</tr>
<tr>
<td>8</td>
<td>National Inception and Planning Workshop</td>
<td>AIT Conference Center, Pathumthani, Thailand</td>
<td>29-30 Jan 2014</td>
</tr>
<tr>
<td>9</td>
<td>Regional Training of Trainers</td>
<td>AIT Conference Center, Pathumthani, Thailand</td>
<td>28 Aug-7 Sep 2013</td>
</tr>
<tr>
<td>10</td>
<td>Regional Inception &amp; Planning Workshop</td>
<td>AIT Conference Center, Pathumthani, Thailand</td>
<td>09 - 12 April 2013</td>
</tr>
</tbody>
</table>
7. FPAR experiments

7.1 FPAR 2014

In 2014, a total of 48 field experiments were conducted in 6 districts of Uttaradit and Surin provinces. Due to lack of rainfall in Surin during the panicle initiation stage and also due to heavy bacterial blight at later growth stage at some sites, only 41 experiments were completed. The 2014 FPAR focused on one or two factors learning experiments, which included varying seedling age, fertilization (amount and method), spacing, and number of seedlings/hill. Based on the practices applied, the experiments were clustered into three categories namely:

a) SRI-Demonstration: This category included experiments where all SRI practices were adopted.

b) SRI-Innovation (SRI-I): It included plots with modified practices evolved by the farmers because of the SRI-related discussion; while being distinct from both, the SRI and conventional practices, these however represented a move towards SRI practices.

c) SRI-Locally Adapted Practices (SRI-LAP): This category was used when the farmers integrated a few practices of SRI with their conventional practices.

Data analysis showed that SRI demonstrations, where most of the recommended practices were followed (like using younger, single seedlings/hill with wider spacing and maintenance of aerobic soil at least for a week during vegetative stage) outperformed all other tested combinations. The potential of SRI practices was reflected in the maximum yield of 8.21 tons/ha achieved, which was more than double the yield reported by MoAC and Baseline survey (3.35-3.44 tons/ha).

On an average, a yield of 5.63 tons/ha was reported in rainfed areas of the project spanning Surin and Uttaradit provinces (n = 23); a net return of USD 2,121/ha was achieved at the prevailing farm gate price. In areas where supplementary irrigation was available, a higher average yield of 6.24 tons/ha (n = 13) was achieved. Both SRI-I and SRI-LAP performed better compared to the MoAC and/or baseline survey reported yields and net returns. Most of the farmers sold the crops at a higher price (17-18 Baht/kilo, equivalent to USD 0.58-0.6, compared to 13-14 Baht/kilo, or USD 0.42-0.46) as seed and hence additional incomes were achieved.

7.2 FPAR 2015

In 2015, a total of 54 field experiments under the guiding principles of SRI were conducted in Surin, Uttaradit and Sisaket. Sisaket province was included based on the local government recommendation with the aim of integrating SRI practices with the MoAC’s Big Plot Project, which supported activities for improving the quality and value addition of rice. Out of 54 experiments, 50 were successfully completed while four were lost because of low rainfall, and pest and disease infestation. Drought conditions in 2015 resulted in lower yields compared to the yield reported in 2014.

Transplanting (n=31) and row direct seeding (n=19) were the major crop establishment methods followed in the FPARs in all three provinces. All transplanting experiments followed one seedlings per hill with wider spacing based on the SRI principles. All other crop
management practices were similar to the local farmers practices (FP). SRI practices were observed in comparison with the conventional FP in 2015.

Overall performance of SRI was satisfactory considering the serious drought condition in 2015. An average yield of 4.01 tons/ha was achieved from rainfed and partially irrigated areas of the project spanning in three provinces, i.e., Surin (n = 27), Uttaradit (n = 9) and Sisaket (n =14); an average net return of USD 1002.32 /ha was achieved at the prevailing farm gate price. The results showed that SRI practices increased yield by 20% despite the occurrence of drought. Overall, the SRI transplanted rice had higher yield ( 4.02 tons/ha) compared to Row Direct Seeding (RDS) method (3.43 tons/ha). Similarly, in general, transplanting method also had higher net return (1041.4 USD/ha) compared to the row direct seeding method (759.5 USD/ha). Comparison of these data with the FP has been detailed in the later section of this report.

Overall, the FPAR farmers were satisfied with the performance of SRI techniques. Many farmers were impressed that SRI practices reduced costs, and made the crop, to an extent, resistant to drought and weed infestation. Most of the farmers said they would like to continue with SRI practices during the next season and spread the knowledge of the SRI practices to farmers in nearby region.

7.3 FPAR 2016

In 2016, a total of 90 experiments were set up in nine districts of the three provinces. Out of them, 89 experiments were completed; one of them was lost due to flood. Unlike 2014 and 2015, when farmers conducted experiments in only one rai of land area (1600 m²), in 2016, farmers’ experimental plot size increased to two rai, because the farmers gained confidence.

The experiments were carried out considering SRI practices and conventional farmer practices (FP). One of the major objectives was to demonstrate the benefits of SRI practices over FP in terms of resource use, net return, and productivity.

In general, transplanting and RDS with low seed rate (RDS SRI) were the crop establishment methods adopted in the FPARs. RDS SRI method was only adopted in the Sisaket and Surin provinces. It resulted into slight increase in yields, though not significant, compared to the transplanting method in both the provinces. In Sisaket, it produced 3.7 tons/ha compared to 3.5 tons/ha from transplanting; in Surin, with RDS SRI, the average yield was 3 tons/ha, which was almost similar to the yield level, i.e., 2.9 tons/ha acheived with transplanting method. However, transplanting method provided better net returns in both the provinces. In Sisaket, the net return from transplanted SRI crop was USD 671.2 /ha compared to USD 485.7 /ha from RDS SRI. Similararly, in Surin, farmers reported net return of USD 509.4/ha with transplanted SRI compared to the RDS SRI (USD 355.6 /ha). This was probably because farmers who transplanted rice sold produce as seeds at a higher market price and also they grew a variety that fetched comparatively better price in the market.

The overall performance of SRI was better than the farmer practices. An average yield of 3.94 tons/ha was achieved from rainfed and partially irrigated areas of all provinces, i.e., Surin (n= 38) and Uttaradit (n =24) and Sisaket (n=28); an average net return of USD 557 /ha (1 USD = 35.36 Baht) was achieved at the prevailing farm gate price. The results of 2016
show that SRI practices increased the yield by about 19% when compared to the baseline survey data.

All experiments that followed transplanting as the plant establishment method, used one seedling per hill at a wider spacing; three variations with spacing, at 25x25 cm, 30x30 cm, & 40x40 cm were tried. In Surin, adoption of 40x40 cm spacing yielded 4.3 tons/ha, which was significantly higher than that obtained with 25x25 cm (2.9 tons/ha) and 30x30 cm (2.8 tons/ha) spacings. In Uttaradit, with 30x30 cm spacing, slightly higher yield than Surin was observed. In case of Sisaket province, spacing did not have significant impact on yield levels, but 30x30 cm and 40x40 cm spacings produced higher net returns.

8. Key Trends

8.1 Yield

Comparative analysis shows that the yield obtained from the adoption of SRI practices was higher than those reported in the SRI-LMB baseline report (2014) and MOAC report\(^1\). This shows that SRI practices produced better yields than the conventional practices. An SRI demonstration (SRI-D) in 2014, which applied all the principles of SRI, recorded highest yield of 8.21 tons/ha, confirming the potential SRI practices when applied together compared to the practices that applied partial SRI. Analysis of data for 2014 from SRI-Transition (SRI-T) experiments, a term used to compile the results from SRI-Innovation (SRI-I) and SRI-locally adapted practices (SRI-LAP) experiments (from section 7.1, page 5), reported lower yield than the SRI-D experiments but better than the conventional practices. This implies that the best yield advantage is obtained when all the principles of SRI are applied. SRI-T practices though are suggestive of the transitioning from conventional practices towards SRI practice adoption.

The following graph compares the yields recorded during the three cycles of FPARs against the yield reported by the MOAC report and baseline survey.

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\(^1\) MoAC Report (2013). A status paper on rice production system was presented by Ministry of Agriculture and Cooperatives, Royal Government of Thailand during SRI LMB Projects Regional Inception and Planning workshop, April 2013 (http://www.sri-lmb.ait.asia/country/doc/background-thailand.pdf)
SRI-T: SRI-Transition; SRI-D: SRI demonstration; FP: Farmer Practice

Figure 3: FPAR yield (tons/ha) in different years compared to the baseline survey and MOAC reports

SRI-T experiments carried out across the three provinces in 2015 yielded lower yield compared to the 2014 experiments. One of the reasons was the drought condition in Thailand. In 2015, the annual average amount of rainfall was 1,419.6 mm, which was 11% below the 1981-2010 normal\(^2\). In 2014, it was 1520.4 millimeters, only 4% below normal\(^3\). In 2016, the average yield of SRI-T experiments improved slightly to 3.94 tons/ha, which was more than those reported in the baseline survey and MoAC report.

The following graph compares the average yields from SRI-T experiments from the FPARs with those obtained from conventional practices in all three provinces. The former were higher than the latter in all provinces.

Figure 4: Comparison of FPAR yields obtained in various provinces

\(^3\) https://www.tmd.go.th/programs%5Cuploads%5CyearlySummary%5CAnnual2014.pdf
8.2 Net returns

Figure 5 provides information on the net returns from FPARs for various years. The net returns were highest in 2014, from FPARs with SRI-demonstration; more yields obtained from SRI-D was one of the key contributing factors. Returns for SRI-T declined from 2124.9 /ha in 2014 to USD 1002.3 /ha in 2015 and USD 557.2 /ha in 2016. This could be associated with the lower yields due to reduced rainfall and lower farm gate prices (price of rice excluding marketing and transportation costs). However, the net returns for the conventional farmers plots was lower than the SRI practices in all the years.

![Figure 5: Net returns from SRI and farmer practice plots in various FPARs](image)

One of the likely reasons for the lower net returns in 2015 and 2016 in comparison to 2014 was the lower market prices. The following Figure 6 provides price details for Thai rice in the global market from 2014 to 2016. It was highest in mid-2014. While the cycle of decline and increase continued over the next two years, it can be seen that the price at the time of harvest in Thailand, from September to December, was lower in 2015 and 2016, compared to 2014. It is likely that this influenced the local procurement prices and lowered them to an extent. Data on farm gate prices collected shows that at least in 2016, they were lower than that in 2014 (Figure 8).
Source: GEM Commodities, World Bank Group

**Figure 6: Price of Thai rice in the global market from 2014 to 2016**

Figure 7 compares the net returns from FPARs across provinces. In 2014, those in Surin with SRI-demonstrations provided the best net returns. Net returns from FPARs with SRI-T in both Uttaradit and Surin were almost similar.

**Figure 7: Net returns from FPARs in various provinces**

In 2015, Sisaket province reported significantly higher net returns compared to the other provinces. The higher farmgate price for rice in this province (Figure 8) probably strongly influenced this. In 2016, FPARs from Uttaradit reported comparatively better net returns than those in the other two provinces. With no significant variation in rice prices (Figure 8), it is possible that the higher yields obtained in Uttaradit FPARs (Figure 4) are closely linked to the observed higher net returns. The graph also shows a clear trend that the net returns from FPARS in all provinces during all the three years were more compared to those obtained from fields under conventional farming practices.

It can be seen in **Figure 8** that the Sisaket average farmgate price was significantly higher than that in the other two provinces in 2015. It was 22.1 Baht/kg, much higher than that in Uttaradit (13.9 Baht/kg) and Surin (13.0 Baht/kg) provinces.

The farmgate price for the year 2016 was lower compared to 2014 and 2015. In 2014, for Uttaradit province, it was 13.7 Bhat/kg, which slightly increased in 2015 to 13.9 Baht/kg, but drastically dropped down to 10.5 Baht/kg in 2016. Similarly, for Surin, the average farmgate price in 2014 was 14.2 Baht/kg which dropped down to 13 Baht/kg in 2015 and further plunged to 11.7 Baht/kg in 2016. The most significant drop was however seen for the Sisaket province where the average farmgate price dropped down to **12.02** Baht/kg (year 2016) from 22.1 Baht/kg. The paddy price reported from Sisaket province ranged from 25 THB/kg to 8 THB/kg. One of the reasons for such fluctuation and lower price of rice in 2016 could be the new government policy which encourage farmers to switch to other economically attractive crops such as sugarcane, maize and cassava. The policy also encourages production of

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4URL: http://databank.worldbank.org/data/reports.aspx?source=global-economic-monitor-(gem)-commodities&Type=TABLE&preview=on#
fragrant and glutinous rice and discourages other types. Farmers who have reported higher farmgate price for their paddy have basically grown organic Riceberry. Overall, the government paddy price was lower than the open market price in 2016-17 and hence resulted in relatively lower net return compared to 2014 and 2015.

![Figure 8: Province-wise farm gate prices for various years](image)

9. **Productivity of SRI**

The results from 2014 FPAR highlights that when all the principles of SRI are applied, the yield drastically improved by 100% when compared to the conventional practices. Similarly, when the SRI principles were applied partially (SRI-T), 60% increment in the yield was observed. Adoption of full (SRI-D) or partial (SRI-T) also resulted in increased fertilizer use efficiency. FPAR results from 2014 further highlighted that the fertilizer use efficiency was 46 and 36% higher than the conventional practices with SRI-D and SRI-T practices, respectively. Thus, from the perspective of improving the yield and obtaining better fertilizer use efficiency, SRI has demonstrated promising results in Thailand.

Results from the 2014 FPAR further highlighted the economic productivity gains. The productivity gain was 339% (SRI-D) and 284% (SRI-T) compared to the conventional practices.

These advantages are also reflected in the observations by farmers and those working with them. For instance, in 2014, Mr. Kanungnit Namwong, VTDC staff from Uttaradit, in the National Review and Planning Workshop held in Thailand, shared his experience about reducing resource usage while getting better produce by adoption of SRI practices. They included:

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5 The ratio of kg grain produced per kg inorganic fertilizer applied
6 The ratio of net return in dollar per dollar spent on a unit of land
13

- Reduced seed rate (from 40 kg in conventional practice to 02-03 kg/ rai in SRI)
- Less usage of chemical pesticides (about 1000 Baht/ rai less in SRI plots)
- Less water usage (from 5-6 cycles per crop season to 2-3 cycles, in irrigated districts)
- Getting high quality produce which fetched a higher price as seed.

Better productivity and profitability of SRI, even partially applied/or locally adapted, were seen in 2015 and 2016 as well.

10. Supplimentary irrigation and SRI

Uttaradit is the only irrigated province within the project sites of SRI-LMB in Thailand. Availability of irrigation has significant positive impact on yield (refer Figure 4). In 2016, the experiments were done in Nampat and Fakta districts of Uttaradit. All the FPAR fields were irrigated two to three times during the season, depending on the rainfall and availability of water in the canal. This resulted into better yields compared to other districts, as seen in Table 5.

Table 5: Yield and net returns for various districts in 2016

<table>
<thead>
<tr>
<th>Province</th>
<th>Districts</th>
<th>Yield (tons/ha)</th>
<th>Net Return (USD/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uttaradit</td>
<td>Faktha</td>
<td>5.4</td>
<td>583.8</td>
</tr>
<tr>
<td></td>
<td>Nam Pat</td>
<td>5.3</td>
<td>781.8</td>
</tr>
<tr>
<td>Surin</td>
<td>Chumpolburi</td>
<td>2.9</td>
<td>409.1</td>
</tr>
<tr>
<td></td>
<td>Srikrhoraphum</td>
<td>3.4</td>
<td>330.3</td>
</tr>
<tr>
<td></td>
<td>Thatum</td>
<td>2.7</td>
<td>302.0</td>
</tr>
<tr>
<td>Sisaket</td>
<td>Kantharalak</td>
<td>4.4</td>
<td>506.7</td>
</tr>
<tr>
<td></td>
<td>Kukan</td>
<td>4.5</td>
<td>449.9</td>
</tr>
<tr>
<td></td>
<td>PosriSuwan</td>
<td>2.9</td>
<td>566.3</td>
</tr>
<tr>
<td></td>
<td>Uthumponpisai</td>
<td>3.5</td>
<td>750.2</td>
</tr>
</tbody>
</table>

11. Participation of women farmers and landless

About 70 percent of participating farmers in the project were women. Women reported 10-12% more economic returns compared to men farmers. This was mainly due to reduction in labour cost.

There were no landless farmers reported from our working areas.

12. Sharing of project outputs with others and linkage developed with other project/programmes

The project extended its activity and collaborated with the Big Plot (BP) project. The BP project is an initiative of the Ministry of Agriculture and Cooperatives (MoAC), aiming to produce high quality rice both for seed and organic export market, by consolidating small
farms, and developing and/or strengthening farmer’s network. The rice grown with SRI and with organic fertilizer is receiving premium price, as reported by farmers. Therefore, market policy, especially price policy, significantly influence the net return.

**Local media informed on project work and output**

The following are the links to the media coverage about the SRI-LMB project implementation in Thailand.


http://www.thairath.co.th/content/edu/342931

**13. Future activities and work plan**

A workshop will be organized in near future with the following objectives:
- Share key achievements and learnings of the project
- Consult with national stakeholders to develop way forward to
  - Continue facilitating the productive use of on-farm assets for generating higher and more consistent quality produce for household consumption and market, through training on production methods which conserve natural resources, enhance ecosystem services and environmental sustainability
  - Improve farmer connectivity to markets
  - Work on farmer compliance with market standards (by providing information and organizational resources, technical support, and and some critical costs)