Third Training of Master Trainers in Agricultural Extension

March 20 to 22, 2003

Kongsedone District, Saravanh Province

Conducted with the support of
LBL, Swiss Center for Agriculture Extension
Third Training of Master Trainers in Agricultural Extension

March 20 to 22, 2003

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Laos Extension for Agriculture Project
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1. Summary

Topic: Third Training of Master Trainers on agricultural extension

Time: March 20 to 22, 2003

Place: District office, Muang Kongsedone, Saravanh Province

Haddu and Tamuang villages in Kongsedone District

Participants: 20 (3 female),
including 14 (3) from Vientiane and 6 (0) from Saravanh

Facilitators: Mr. Ueli Scheuermeier, LBL, Switzerland
Mr. Somxay Sisanonh, LEAP Project Director
Mrs. Andrea Schroeter, TA LEAP

Translator: Mrs. Somchay Soulitham, EDC Laos

Guests and Part-time participants: Mr. Somlith Vongvichit, Head of DAFO Kongsedone District
Mr. Karl Gerner, CTA LEAP

Objective:
- Enable Master Trainers to improve continuous performance in training and coaching of provincial and district extension staff
- Upgrade knowledge of MT in specification of indicators
- Test identification of indicators with the villagers
- Review and adjust TNA KISS module
- Develop a simple module for monitoring and coaching
- Introduce constraint analysis

Outputs:
- TNA Module KISS and its reporting format is adjusted in order to enable district extensionists identifying objectives of a learning project as well as skills and concrete results required by the villagers
- A tool SMART for checking appropriate indicators is introduced
- A format for coaching and monitoring (SIFT) of a learning project on village level is developed
- Constraint analysis, a tool for identifying the main problem concerning one learning project, is introduced

Assignments:
- CETDU/MT launch SMART indicators for skills and results during the next training and coaching visit and introduce the revised TNA KISS format as well as the constraint analysis to all pilot districts
- CETDU finalize the SIFT format and transfer it to all MT
- MT introduce the SIFT coaching and monitoring format to all pilot districts
- MT evaluate first experiences with SIFT and adjust the module
- Handbooks TNA KISS, SIFT and Constraint Analysis are published and distributed to any other province in Lao PDR by end of 2003
## 2. Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>EDC</td>
<td>Enterprise Development Consultants Co., Ltd.</td>
</tr>
<tr>
<td>CETDU</td>
<td>Central Extension Training and Development Unit (in NAFES)</td>
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<tr>
<td>DAFES</td>
<td>District Agriculture and Forestry Extension Service</td>
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<tr>
<td>DAFO</td>
<td>District Agriculture and Forestry Office</td>
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<tr>
<td>FSEW</td>
<td>Farming System Extension Workers (generalists at district level)</td>
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<tr>
<td>IPM</td>
<td>Integrated Pest Management</td>
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<tr>
<td>KISS</td>
<td>Keep It Short and Simple</td>
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<tr>
<td>LBL</td>
<td>Swiss Center for Agriculture Extension (Landwirtschaftliche Beratungsstelle Lindau)</td>
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<tr>
<td>LEAP</td>
<td>Laos Extension for Agriculture Project</td>
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<tr>
<td>MT</td>
<td>Master Trainers</td>
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<tr>
<td>NAFES</td>
<td>National Agriculture and Forestry Extension Service</td>
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<tr>
<td>NLPC</td>
<td>Nong Teng Livestock Production Center</td>
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<tr>
<td>PAFES</td>
<td>Provincial Agriculture and Forestry Extension Service</td>
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<tr>
<td>PTD</td>
<td>Participatory Technology Development</td>
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<tr>
<td>SIFT</td>
<td>Success, Implementation, Failure, Training needs - Tool</td>
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<tr>
<td>SCPC</td>
<td>Soil and Crop Production Center</td>
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<tr>
<td>SMS</td>
<td>Subject Matter Specialist (at province level)</td>
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<tr>
<td>T&amp;C</td>
<td>Training and Coaching</td>
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<tr>
<td>TAT</td>
<td>Technical Advisor Team (Swiss Counterpart)</td>
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<tr>
<td>TNA</td>
<td>Training Needs Assessment</td>
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<tr>
<td>VEW</td>
<td>Village Extension Worker</td>
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### 3. List of participants

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Organization</th>
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<tbody>
<tr>
<td></td>
<td><strong>Master Trainers</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Mr. Oudomsak Vilaylak</td>
<td>CETDU</td>
</tr>
<tr>
<td>2</td>
<td>Mr. Chitpasong Chalat</td>
<td>CETDU</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Bounthan Bouthala</td>
<td>CETDU</td>
</tr>
<tr>
<td>4</td>
<td>Mrs. Somchit Sengluangsouk</td>
<td>CETDU</td>
</tr>
<tr>
<td>5</td>
<td>Mr. Ketsana Saiyasen</td>
<td>CETDU</td>
</tr>
<tr>
<td>6</td>
<td>Mr. Tidpachan Inthilit</td>
<td>CETDU</td>
</tr>
<tr>
<td>7</td>
<td>Mr. Khampeui Chanthavong</td>
<td>CETDU</td>
</tr>
<tr>
<td>8</td>
<td>Mr. Sengthong Phouangkhamwang</td>
<td>Soil &amp; Crop Production Center (SCPC) / IPM</td>
</tr>
<tr>
<td>9</td>
<td>Mr. Saleumsak Hongsack</td>
<td>Planning and Cooperation, NAFES</td>
</tr>
<tr>
<td>10</td>
<td>Mr. Phonethong Thammavong</td>
<td>Nong Teng Livestock Production Center (NLPC) (Fish production unit)</td>
</tr>
<tr>
<td>11</td>
<td>Mrs. Pani Keobanya</td>
<td>Nong Teng Livestock Production Center (NLPC) (Deputy Pig production unit)</td>
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<tr>
<td>12</td>
<td>Mrs. Somkuang Ladankouang</td>
<td>Nong Teng Livestock Production Center (NLPC) (Fish production unit)</td>
</tr>
<tr>
<td>13</td>
<td>Mr. Bounseng Phombada</td>
<td>Nong Teng Livestock Production Center (NLPC) (Chicken production and statistic)</td>
</tr>
<tr>
<td>14</td>
<td>Mr. Anousak Mixaykham</td>
<td>Administration NAFES</td>
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<td></td>
<td><strong>Provincial and district staff</strong></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Mr. Giphachan Posali</td>
<td>PAFES Saravanh</td>
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<tr>
<td>16</td>
<td>Mr. Samnieng Dalahoug</td>
<td>PAFES Saravanh</td>
</tr>
<tr>
<td>17</td>
<td>Mr. Daoviang Philakane</td>
<td>PAFES Saravanh</td>
</tr>
<tr>
<td>18</td>
<td>Mr. Konglai Vorlavong</td>
<td>DAFO Khongsedone District, SRV</td>
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<tr>
<td>19</td>
<td>Mr. Thanousone Souenthal</td>
<td>DAFO Khongsedone District, SRV</td>
</tr>
<tr>
<td>20</td>
<td>Mr. Souphan Chansamoud</td>
<td>DAFO Khongsedone District, SRV</td>
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## 4. Timetable

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Content</th>
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<tbody>
<tr>
<td>Tuesday 18.03.03</td>
<td>8.00</td>
<td>Trainer team travel to Kongsedone</td>
</tr>
<tr>
<td>Wednesday 19.03.03</td>
<td>8.00</td>
<td>Village visits, meeting with district representatives and preparation (trainer team, PAFES, DAFES)</td>
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<tr>
<td></td>
<td>9.00</td>
<td>Participants travel to Kongsedone</td>
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</table>
| Thursday 20.03.03 | 08.30 to 12.00 | Welcome, introduction and objectives  
                             Introduction of the draft for a monitoring and coaching tool developed by CETDU  
                             Review on the training cycle  
                             Review on TNA KISS |
|                  | 12.00 to 13.30 | Lunch                                                                   |
|                  | 13.30 to 16.30 | Analyse definition and criteria for objective, skills and concrete results required by the villagers  
                             Prepare for meeting with the villagers |
| Friday 21.03.03  | 08.00 to 12.00 | Specify objectives, skills and results including their indicators in two villages (Ban Haddu and Ban Tamuang, Kongsedone District) |
|                  | 12.00 to 13.30 | Lunch                                                                   |
|                  | 13.30 to 16.30 | Reflection and analyse of field visit  
                             In-depth analysis of indicators |
| Saturday 22.03.03 | 08.30 to 12.00 | Continue analysis of indicators along SMART tool  
                             Finalizing the SIFT tool for monitoring and coaching on village level |
|                  | 12.00 to 13.30 | Lunch                                                                   |
|                  | 13.30 to 16.30 | Constraint analysis  
                             Wrap up |
|                  | 18.00         | Visit agricultural fair at Nabong village                               |
| Sunday 23.03.03  | 06.30         | Travel back to VTE                                                     |
5. Review of Results

This third training of Master Trainers in agricultural extension is a part of a continuous coaching and strengthening process in order to enable the MT to train and coach provincial and district extension staff and furthermore support the establishment of a countrywide extension service system.

During the first training different extension approaches had been introduced, a frame concept for curriculum development was set up and the position, duties and further cooperation of the master trainers had been clarified. This knowledge has been used during the training and coaching process of provincial and district teams. Following the implementation schedule agreed in the first MT training, the MT have trained pilot provincial and district staff\(^1\), introduced the projects objective and extension concepts and initiated a baseline data collection. Reviewing the status of coaching PAFES and DAFES during those activities the most urgent need was a simple module, which enabled the district extension staff to identify the most pressing training needs of the villagers. Consequently the second training of MT focused on the development and test of a simple TNA tool. The developed tool - namely TNA KISS: Keep It Short and Simple – comprises 12 implementation steps and a reporting format, and supports the district extension staff to identify villager’s needs. The complete handbook is ready for broad distribution by mid of 2003.

Based on these identified needs the district staffs were able to plan for training programs in the villages. During a second LEAP training for the pilot district and provincial extensionists a framework for curricula development has been established and three curricula including session plans have been developed. Furthermore the CETDU team trained the extension staff in farmer group and VEW development, combined with technical inputs concerning rice production and raising small livestock latter with the support of the external Master trainers.

\(^1\) Pilot provinces are so far Luang Prabang including Namback and Pak Ou district, Champask including Phonethong and Soukkoumma district and Saravanh including Nakhonepheng and Kongsedone district.
The district extension staffs were able to conduct those trainings and follow up the activities in the villages. This third training for the MT pursued the needs occurred during this villagers training and coaching process, namely the pressing questions how to measure the output of the villagers’ learning projects and how to facilitate further activities. Precondition is the identification of the skills and concrete results required by the villagers.

Accordingly during this third MT training two more modules have been identified: the SIFT, a coaching/monitoring tool for a learning project and the Constraint Analysis for identifying a main problem in one learning project. In addition the KISS training needs assessment module has been adjusted based on the experiences made and the requirements occurred.

Including those tools the products of the LEAP (TAT/CETDU) amount to 15 handbooks so far, those have been and will be provided to all pilot provincial and district extension staff, along with the required training and coaching. The handbooks comprise background manuals on agricultural extension methodology as well as practical tools in order to enable the extension staff to deliver a good service to the villagers. Further products – curricula, modules on extension methodology, modules on technical subjects and tool handbooks - are in preparation. All those handbooks reflect the local conditions of Lao farmers. Even though all products are stand-alone efforts, the combination of them summarizes the requirements of minimum basic skills a generalist district extension worker needs. This will lead to a comprised program for setting up a curriculum for educating those extensionists on district level.

Aiming at setting up the above-mentioned additional tools for extension workers the workshop chases the following procedures:
Day 1:

The first day started with the introduction of the objectives of the training. The main concentration was laid on reviewing the training and coaching cycle performed on all levels so far. This lead to a draft format for coaching and monitoring of training projects in the villages, the SIFT.

5.1 Objective
The objective of this training was to develop a tool in order to enable the district extension staff to access with the villagers how well they are proceeding within the launched learning project. The tool will help the district extension staff to coach the activities of a training project and develop possibilities with the farmers what and how they can monitor their success themselves.

5.2 Training and coaching cycle
The process the provincial and district teams followed so far can be summarized in a training, implementation and coaching cycle. After the first training basic data has been collected and needs have been identified. These data was the basis for the second training in order to plan for the trainings on village level and prepare all necessary material and curricula. Now the villagers trainings have been performed, coaching takes place and the need how to measure the training input occurs.
In this context it is necessary to be clear about the wording used. There is a clear difference between training and coaching inputs. It is necessary that the extension staffs are aware of the periods when they are giving training inputs and those when they are coaching the villagers. The question how to differentiate training and coaching became clear along the following definitions:

**Training**
- Aiming for the brain
- Knowledge transfer
- Exchange knowledge
- New insights / new content

**Coaching**
- Aiming in being able to actually convert the knowledge
- Skill transfer
- Assessment of implementation of knowledge
- Adjustments

Internalising this differentiation between training and coaching will help to identify the stage of performance of the respective extension worker on district, provincial and central level. The training cycle already identified with the participants during the first training is described as follows:
5.3 SIFT: Coaching and monitoring tool

Based on these considerations a model for coaching and monitoring was jointly developed. The module can be used for the coaching and monitoring on all levels: farmers’, district, provincial and central level. However as the most pressing need it was agreed to specify the module for the village level first. The structure for the other levels will remain the same, but the questions to be tackled and the content will differ. The tool is called SIFT and stands for Success, Implementation, Failure and Training needs. The SIFT is especially set up for coaching and monitoring a learning project. Important is the correlation and interaction between the 4 quadrants of the cross. During the coaching process the left side indicates the past while the right side points out the future activities. Relying on the evaluation of the successes and failures, future activities and/or trainings and other activities can be identified and planned. The outcomes of using the tool will furthermore serve as an input for the project’s overall monitoring system.
The tool will help the extensionists to avoid providing wrong or inappropriate trainings and will help to indicate which lessons have been probably understood and which activities should be continued and how. In order to measure what the villagers have learnt and how they are able to implement the knowledge the extension staff must be capable to answer the following questions:

- How do I know that the villagers are really capable to do it?
- How can I measure real practical results?

5.4 Definition and criteria for results and skills

Two working groups have been set up to find solution for answering those questions and to analyse the definition and criteria along the following four questions:

1. Is the objective clear?
2. What is the skill the villagers require to achieve? How will they measure if they can do it?
3. What is the concrete result of the skill?
4. How do they measure the achievement of result?
The two working groups tackled the issue along the two respective three - during TNA KISS - identified training needs for one learning project. The exercise is seen as a preparation for the field visit. The groups consists of the following participants:

<table>
<thead>
<tr>
<th>Group Haddu</th>
<th>Group Tamuang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical training done on 12.03.03</td>
<td>Technical training done on 3.3.03</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mr. Giphachan Posali</th>
<th>Mr. Samnieng Dalahoug</th>
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<td>Mr. Konglae Vorlavong</td>
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<td>Mrs. Panikeo Banya</td>
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<td>Mr. Tidpachan Inthilith</td>
</tr>
<tr>
<td>Mr. Ueli Scheuermeier</td>
<td>Mr. Somxay Sisanonh</td>
</tr>
<tr>
<td>Mrs. Somchai</td>
<td>Mrs. Andrea Schroeter</td>
</tr>
</tbody>
</table>

Each group leader has presented the results of the group:

Mr. Konglae for the Haddu group     and Mr. Samnieng for the Tamuang group
Analysis of the definition and criteria for rice learning group in Ban Haddu:

I. Objective:
- Expected result from a second rice production training is to increase the rice productivity from 4 t/ha to 4.5 t/ha

II. Learning needs of the participating farmers:

1. Growing rice seedlings
- Preparation of seedbeds
- Preparation of seedbed in a farm plot
- Soil compaction
- Proportion of seeds per seedbed

Indicators:
- Grow well & healthy, easy to pull up
- Enough seedlings for transplantation

2. Transplantation
- Ploughing 7-15 days before transplanting
- Levelling using rake so that the soil is well prepared and platen
- Age of seedlings
- Level of water during transplantation
- Number of seedlings / hill, space between hills
- Depth

Indicators:
- Even distribution
- Few transplanting shocks
- Even growth

3. Method of using fertilizer
- Types of fertilizer, which are appropriate for soil condition (type of soil)
- Time when to use what kind of fertilizer
- Proposition of fertilizer and calculation techniques
- Fertilizer broadcasting method
- Level of water at the time using the fertilizer

Indicators:
- Changing colour of the rice plant
- Even growth
5.5 Revised KISS format with SMART indicators

Based on these group results and the following discussion it became obvious that it is necessary to identify a clear objective for the learning project. Furthermore skills and results including indicators for assessing the skills and results are essential to be recognized. They will lead to achieve the intended objective. This identification has to be done during the training needs assessment. It was therefore agreed that the TNA KISS format has to be revised in order to be more specific and the extension staff is able to get a clear idea of the knowledge and skills required by the villagers.

Consequently the formulation and definition of skills and concrete results including their indicators was planned to be tested in the field-visits.

Two crucial questions have been discussed during the further preparation for the following field day:

**Analysis of the definition and criteria for rice learning group in Ban Tamuang**

I. Training topic: Method of rice planting

Which steps are required in rice planting?
- Soil preparation
- Preparation of seedbed
- Transplantation
- Taking care rice plants
- Harvesting
- Storage

II. Training content:

Selection of rice seeds:
1. Which rice varieties
2. The selection of what: for planting? For sale? Selection time?
   Does the rice variety fit to the soil condition?

Method of using fertilizer:
1. What kind of fertilizer they want to use?
2. Preparation of fertilizer/ha and calculation method
3. Appropriate time for using fertilizer
4. Method of practical use

| Soil preparation | raise seedlings | transplant | take care | harvest storage |

**Expected results of the training:**
Want to increase rice productivity
Want to improve family economics

**Questions to be asked:**
How many tons/ha?
How many tons of rice they want to be able to sell during the next season?
Why do we need these indicators?
Indicators should be established for most monitoring activities. An indicator can be defined as a quantitative or qualitative characteristic of a process or activity about which changes are to be measured.

With those indicators the extension staff will be able to evaluate their training and coaching efforts easily. Based on the indicators the impact of the activities can be proved and changes initiated through the training can be made obvious.

Who needs to evaluate?
The question arose who has the greatest interest to evaluate the learning project? Is it the farmer, the district, the province, the master trainer, the project or the donor level? In fact all levels have an interest to perform an evaluation on their respective level, which is related to their specific activities. Nevertheless the main focus of evaluating these learning projects should be laid on the farmer’s level, because the whole set up of the learning project is based on the farmers’ criteria and their interests. Evaluation on the other levels will have different criteria and may use the villagers’ evaluation as their basis.

**Day 2:**
*The morning of the second day was used to discuss objectives as well as skills and achievements envisaged by the villagers along specific and measurable indicators. The experiences made in the two villages were reviewed in the afternoon.*

During the meeting with the rice learning group of Ban Tamuang

After the meeting the rice fields have been visited and problems have been observed.
In the afternoon the two groups summarized and presented their outcomes based on the preliminary formats that have been discussed in the two villages.

**Summary of discussion with rice learning group in Tamuang village**

Objective to be achieved:
- Every participant will be able to sell more rice than last year.

Skills every participant wants to attain:
1. Be able to identify certified/pure seed varieties
2. Be able to identify and use fertilizer properly

Indicator for measure achievements:
1. All participants of the training have planted certified rice seeds on all their fields during the next planting season (by June/July 2003)
2. All participants will harvest more than 8 t/ha during the next planting season.
3. All participating families will sell more rice than last year.

**Summary of discussion with rice learning group in Haddu village**

Objective to be achieved:
- Every participant will increase the yield compared to last year (increase calculated according to an individual plan)

Skills every participant wants to attain:
1. Be able to produce enough, high quality and strong seedlings sufficient for the whole land
2. Be able to improve the way of transplanting rice
3. Be able to improve the efficiency of chemical fertilizer use

Indicator for measure achievements:
1. Seeds have a high germination ability, whole area is planted with well selected, high quality seeds considered big by the farmers
2. Transplant 1-3 plants/hill, average tiller/plant is 10, spacing is 20 x 15 cm
3. By November 2003 the leaves are light green, panicles consist each of about 200 grains and the farmers consider the average grain size big.
**Day 3:**

*During the third day the SMART - an instrument for assessing formulations of objectives and indicators - was introduced. The experiences in the field led to an improved format for the TNA KISS and its reporting format. Finally the constraint analysis an additional tool for identifying the main problem concerning one production issue has been presented.*

During the evaluation of the field-visit it became obvious that the formulation of the indicators was found difficult and not clear to some of the participants. Like mentioned above an indicators is defined to be a quantitative and qualitative factor or variable that provides a simple and reliable means to measure achievement, results and to reflect processes as well as changes in the context, which is the learning project in our particular case. Useful indicators should be short and precise, and refer to relevant information. It is not an easy task to define such indicators and it will take some time and practise until the staff will be familiar with an easy and useful definition. There are several methods to verify if a definition is appropriate. One well-known and simple tool for assessing formulations is the SMART.

SMART stands for

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Explanation</th>
<th>Question to be asked</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>specific</td>
<td>Is the definition exact, precise and detailed?</td>
</tr>
<tr>
<td>M</td>
<td>measurable</td>
<td>Does the definition includes dimensions like numbers or %?</td>
</tr>
<tr>
<td>A</td>
<td>attractive</td>
<td>Includes the definition what the villagers are truly aiming for?</td>
</tr>
<tr>
<td>R</td>
<td>realistic / relevant</td>
<td>Is the definition significant for the objective?</td>
</tr>
<tr>
<td>T</td>
<td>time bound</td>
<td>Is a timeframe mentioned?</td>
</tr>
</tbody>
</table>

The extension staffs can test with the villagers if indicators are appropriate for monitoring the training and coaching efforts by using the SMART. This will be the case if the description reflects each of the five smart components respectively all above-mentioned questions can be answered positively.

The previous discussion - analyse definition and criteria - on the first day, the experiences made in the field combined with the SMART practice of formulating objectives and indicators led to the agreement to revise the TNA KISS format.

As a result the last step of the TNA KISS was précised as follows:

.....

*Step 12. Discuss the detailed procedures of the training and follow up with the contact farmers and the village representatives*

- Detailed skills the villagers expect to attain (incl. indicators)
- Concrete results to be achieved (incl. indicators)
- Fix time schedule of the training and follow ups
- Preparation to be done by farmers
- Preparation to be done by extension staff
Accordingly the reporting format has been adjusted as well:

....

2. Objective of learning project

3. Definition of skills

<table>
<thead>
<tr>
<th>Skills the villagers like to achieve</th>
<th>Indicators for assessing skills</th>
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4. Definition of concrete results

<table>
<thead>
<tr>
<th>Concrete results of skills</th>
<th>Indicators</th>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

....

The agreed specific definition for skills and expected achievements including indicators is the precondition for a proper monitoring and evaluation\(^2\) of each learning project. It leads the plenary consequently to the coaching and monitoring format SIFT, which has been developed during the first day.

The SIFT has again been discussed on the base of the experiences made in the two pilot villages. It was agreed that the developed format including a reporting sheet would be adjusted and finalized by the project after the training. Furthermore all participants agreed on a structure for the next coaching and monitoring visit in the pilot villages:

- Clarify skills and results (using the SMART indicators)
- Discuss achievements and constraints along the SIFT
- Report on the findings (4 copies: village, DAFO, PAFES, CETDU)

---

\(^2\) Evaluation is defined as: The assessment, as systematic and objective, of an ongoing or completed project, program or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of development objectives, efficiency, effectiveness, impact and sustainability.
5.6 Constraint Analysis

During the identification of the training needs and pressing problems on village level, a further obstacle was recognised by the district extensionists: The definition for the objective of setting up a learning project tend to be very broad and it occurred difficult for the staff to identify the real bottleneck. Without a clear defined objective it is not possible to agree on precise skills the villagers would like to achieve. In order to have an additional instrument for identifying THE main problem concerning a specific production issue, the constraint analysis has been introduced. So after the identification of the main learning issue through a TNA KISS, e.g. improve the production of wet season rice, this simple tool will help to identify the concrete results and specific skills the villagers like to realise, based on the main bottleneck in the rice production process (e.g. land preparation).

Wet rice production has been chosen as an example, where the participants have played the farmers role, with the following outcome:

![Constraint Analysis Diagram]
Example for Constraint Analysis on wet rice production:

<table>
<thead>
<tr>
<th>Production progress</th>
<th>Ranking</th>
<th>Labour-intensity</th>
<th>Man / Women</th>
<th>Material needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed bed preparation</td>
<td>++</td>
<td></td>
<td>x</td>
<td>Fertilizer</td>
</tr>
<tr>
<td>Sowing and taking care of seedlings</td>
<td>+</td>
<td>x x</td>
<td></td>
<td>Pesticides</td>
</tr>
<tr>
<td>Land preparation</td>
<td>1</td>
<td>++++</td>
<td>x</td>
<td>Fertilizer, tractors, water</td>
</tr>
<tr>
<td>Transplantation</td>
<td>++</td>
<td></td>
<td>x</td>
<td>Labour, water</td>
</tr>
<tr>
<td>Taking care of rice plants &amp; water-level</td>
<td>+++</td>
<td></td>
<td>x x</td>
<td>pesticides, fertilizer, water</td>
</tr>
<tr>
<td>Seed selection</td>
<td>+ (but important)</td>
<td>x x</td>
<td>(old women)</td>
<td></td>
</tr>
<tr>
<td>Harvest</td>
<td>2</td>
<td>++++</td>
<td>x</td>
<td>labour, tracing machine</td>
</tr>
<tr>
<td>Storage</td>
<td>+</td>
<td></td>
<td>x</td>
<td>bags</td>
</tr>
<tr>
<td>Selling</td>
<td>+</td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

The application of the tool follows the subsequent procedures:

1. Identification of the various steps in one production process. It is important to involve the villagers from this very first step in order to assure their participation and attention. The collection of this information can already be an indication for a constraint. District extension staff should add production steps, which are not mentioned by the farmers. The steps should be prepared on cards using drawings or pictures in case of a high illiteracy rate among the villagers.

2. The farmers identify and value the labour intensity and gender specification of every step. The findings should be mentioned above the cards with the production issues. Symbols used, e.g. ♂ or ♀ should be checked for understanding with the villagers. It is also possible to divide this step into two stages (valuing labour intensity and later identifying gender specification).

3. The villagers identify material needed from outside. It is important to consider own material as well, e.g. own tracing machines or tractors, as they need maintenance, repair or petrol. The issues should be noted under the production cards.

4. Assessing this collection of information the most pressing problem becomes obvious to the villagers. Based on this valuing the district extension staff is now capable to set up the further training and coaching program. If problems occur beyond the influence of an extension worker, it is his/her duty to look for solutions by coordinating and cooperating with political authorities, researchers or other organisations (e.g. water supply is identified as a main constraint, not because the water is not enough but the pump is under the supervision of a neighbouring village. Arranging a meeting, involving district and provincial authorities or developing user arrangements, etc could help to solve the problem.)

In our role-play example the main constraint identified from the farmers point of view in terms of labour was “preparation of soil” with the first and “harvesting” with the second
priority. Following the lower line and analysing the material input needed the biggest constrain occurred in terms of fertilizer and water, which is also related to the preparation of soil. Consequently the crucial issue, which an extensionist should concentrate on during the training and coaching input, is the land preparation. If not the villagers will not be interested.

The participants found the constraint analysis very useful. The tool will help to identify a bottleneck in case the TNA is not precise enough. It will furthermore be useful during the monitoring of a learning project. In case of failure of achieving agreed results the constraint analysis can help to identify the reason and further action to be undertaken.

Finally the four main outputs of this training have been summarised:

1. Adjusted tool TNA KISS
2. Adjust reporting format TNA KISS
3. Developed new tool for coaching and monitoring at village level (SIFT)
4. Developed new tool for identifying main bottlenecks (Constraint Analysis for a production process)

The whole effort will be introduced by the MT teams to the district and provincial teams.

Mr. Somxay is summarizing the training content
6. Attachments

6.1. Framework for KISS Training Needs Assessment

for agricultural extension staff

*Keep It Short and Simple*

(Revised version)

I. Preparation:
1. Analyse all available data of the village and summarize on a flipchart paper
2. Prepare the village meeting
3. Send an information letter to the village, including the objective of the visit

II. Implementation in the village:

<table>
<thead>
<tr>
<th>Time in minutes</th>
<th>Pictures</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td>1. Introduction of staff</td>
</tr>
<tr>
<td>10</td>
<td><img src="image1.png" alt="Picture" /></td>
<td>2. Explain the objective of the visit</td>
</tr>
<tr>
<td>15</td>
<td><img src="image2.png" alt="Picture" /></td>
<td>3. Extension staff explain their understanding of the prevailing occupation in the village (use visual presentation based on prevailing literacy status) and check with the reality in the village</td>
</tr>
<tr>
<td>10</td>
<td><img src="image3.png" alt="Picture" /></td>
<td>4. Define 1 to 3 topics for exploring training needs based on the occupations and main problems all over the year</td>
</tr>
<tr>
<td>30</td>
<td><img src="image4.png" alt="Picture" /></td>
<td>5. Form a group (by raising hands) on each topic and discuss training needs on this topic. (Each extensionist facilitates one group discussion. Involve those people who do not join a group by themselves.)</td>
</tr>
<tr>
<td>15</td>
<td><img src="image5.png" alt="Picture" /></td>
<td>6. One villager out of each group presents a learning project in the plenary</td>
</tr>
<tr>
<td>Time in minutes</td>
<td>Steps</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>7. Each farmer can pick his/her priority interest by marking on the whiteboard or paper (male and female use different colours). Consider an appropriate location, which is easily accessible for the women.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>8. Decide which learning project to start first (consider seasonality)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>9. Note down the names of interested participants in the learning project</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>10. Extension staff facilitates the selection of maximum 10 families and max 3 contact farmers for the first training (in order to be able to transfer knowledge consider a) motivation b) financial ability c) knowledge and d) experience of participants as well as gender aspect)</td>
<td></td>
</tr>
<tr>
<td>flexible</td>
<td>11. Field visit to the identified production site and families ¹</td>
<td></td>
</tr>
</tbody>
</table>
| 45              | 12. Discuss the detailed procedures of the training and follow up with the contact farmers and the village representatives  
  • Detailed skills the villagers expect to attain (incl. indicators)  
  • Concrete results achieved (incl. indicators)  
  • Fix time schedule of the training and follow ups  
  • Preparation to be done by farmers  
  • Preparation to be done by extension staff |

¹ Step 11 and 12 might be exchanged based on the local conditions (e.g. distance to the production area, monks praying hours).
Reporting of a Training Needs Assessment (revised)

KISS (Keep It Short and Simple)

1. Village____________________Date______Participants:____ Total ( ______ Women)

2. Objective of learning project________________________________________________________

3. Definition of skills

<table>
<thead>
<tr>
<th>Skills the villagers like to achieve</th>
<th>Indicators for assessing skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Definition of concrete results

<table>
<thead>
<tr>
<th>Concrete results of skills</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Time-schedule

First training (date, time, training place): ________________________________

Follow up (date, time, meeting place): ________________________________

6. Participating Farmer Families (max. 10 farmers)

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 

7. Name of contact farmer (and deputy): ________________________________

8. Preparation to be done by farmers:

• ______________________________________________________

• ______________________________________________________

• ______________________________________________________

9. Preparation to be done by DAFES:

• ______________________________________________________

• ______________________________________________________

• ______________________________________________________

10. Remarks

_____________________________________________________________________

_____________________________________________________________________

10.a Other learning projects

Second Priority____________________Total interested farmers  (______ Women)

Third Priority____________________Total interested farmers  (______ Women)
6.2 SIFT: Format for coaching and monitoring

a learning project on village level

Success

This we know and are able to implement

Implementation

continue

Try again without further support

Adjust and try again with support of DAFO (in terms of logistics, material inputs, others)

TNA KISS:
Definition by villagers which skills and concrete results they would like to achieve

past

Future

Farmer group

This we failed to implement according to our expectations

Reason for failure: villagers know, but have not yet implemented

Lack of understanding

Training needs

Training Program
# Reporting of SIFT

Coaching and monitoring a learning project on village level

1. **Place, date and participants:**

   Village: .................................................. District: ........................................ Province: ...................................................

   Learning group: ........................................ Date: ........................................ No of participants: ........ Female: ........

2. **Skills the farmers liked to achieve (identified during TNA KISS)**

   ........................................................................................................................................................................

   ........................................................................................................................................................................

   ........................................................................................................................................................................

3. **Results:** (please use the back side if the space is not enough)

<table>
<thead>
<tr>
<th>Achievement</th>
<th>Which condition was particularly favourable</th>
<th>How to continue</th>
<th>Time</th>
<th>Responsible person</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Failure</td>
<td>Reason for failure</td>
<td>Corrective action</td>
<td>Time</td>
<td>Responsible person</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Certified by

Village authority          District Trainer Team          Head of farmer group

---

3rd Training of Master Trainers in agricultural extension, March 20 - 22, 2003, LEAP
### 6.3 Constraint Analysis for a production process
(Example on wet rice production)

<table>
<thead>
<tr>
<th>Production progress</th>
<th>Ranking</th>
<th>Labour-intensity</th>
<th>Men / Women</th>
<th>Material needed (from outside)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed bed preparation</td>
<td>+++</td>
<td>x</td>
<td></td>
<td>Fertilizer</td>
</tr>
<tr>
<td>Sewing and taking care of seedlings</td>
<td>+</td>
<td>x</td>
<td>x</td>
<td>Pesticides</td>
</tr>
<tr>
<td>Land preparation</td>
<td>--------</td>
<td>+++++</td>
<td>x</td>
<td>Fertilizers, tractors, water</td>
</tr>
<tr>
<td>Transplantation</td>
<td>+++</td>
<td>x</td>
<td>x (25 labour-day/ha)</td>
<td>Paid labour, water</td>
</tr>
<tr>
<td>Taking care of rice plants &amp; water-level</td>
<td>+++</td>
<td>x</td>
<td>x</td>
<td>pesticides, fertilizer, water</td>
</tr>
<tr>
<td>Seed selection</td>
<td>+</td>
<td>(but important)</td>
<td>x (old women)</td>
<td></td>
</tr>
<tr>
<td>Harvest</td>
<td>--------</td>
<td>+++++</td>
<td>x</td>
<td>Paid labour, threshing machine</td>
</tr>
<tr>
<td>Storage</td>
<td>+</td>
<td>x</td>
<td>x</td>
<td>bags</td>
</tr>
<tr>
<td>Selling</td>
<td>+</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
Constraint Analysis for a production process
(example on wet rice production)

- Panel painting -