

**FARMER FIELD SCHOOL  
FOR  
SUSTAINABLE DEVELOPMENT IN AGRICULTURE**



**TERMINAL REPORT ON THE PRIMARY INITIATIVE  
REPORTING PERIOD: JULY 2000 – JUNE 2001**

**METTA DEVELOPMENT FOUNDATION, MYANMAR**

## CONTENTS

<b>SUMMARY</b>	<b>2</b>
<b>A. BACKGROUND</b>	<b>3</b>
<b>B. GOALS AND OBJECTIVES</b>	<b>3</b>
<b>C. ACCOMPLISHMENT</b>	<b>4</b>
C.1. SEASON LONG TOT	4
C.2. FIELD DAY	5
C.3. PLANNING WORKSHOP	5
C.4. REVIEW WORKSHOP	5
C.5. DEVELOPED MECHANISMS OF COORDINATION	6
C.6. DEVELOPED MECHANISMS FOR FOLLOW UP, MONITORING AND REPORTING	7
<b>D. PROGRESS OF FFS</b>	<b>7</b>
D.1. GENERAL OBSERVATIONS	7
D.2. SUCCESSES/ENCOURAGEMENTS	7
D.3. CHALLENGES	8
D.4. ACTIONS TAKEN	8
<b>E. NEW INITIATIVE - EVOLUTION OF A THREE YEARS PROGRAM</b>	<b>9</b>
E.1. CENTRE FOR ACTION RESEARCH AND DEMONSTRATION	9
E.2. SEASON LONG TOT FOR ANOTHER BATCH	10
<b>F. PROGRESS TABLE OF FFS AS OF APRIL 2001</b>	<b>11</b>

## SUMMARY

Increased poverty, low yields of rice, and many other problems associated with soils, water and pest, has badly effected the rural communities in Kachin State.<sup>1</sup> A revolutionary approach widely known as Integrated Pest Management (IPM) has become highly successful in addressing similar problems faced by many Asian rural communities. The essence of the approach is to provide farmers with necessary skills and knowledge needed to improve their crops effectively and efficiently. Thus Metta Development Foundation (Metta) has taken initiative to introduce a similar approach in Myanmar, beginning with farmers in Kachin State and Shan State.

The primary strategy was to strengthen the capacity of existing local organisations, currently engaged in development work in the rural areas of Kachin State and Shan State, so as to enable them to implement Farmer Field School (FFS) in their regions. These organisations are Kachin Independence Organisation (KIO), Kachin Baptist Convention (KBC) and Catholic Diocese (Diocese). Started in July 2000 for one year duration, the programme intended to cover two important activities; to organise a season long TOT for staff and volunteers of these organisations, and to implement FFS with the alumni in their areas. Metta coordinated the programme with funding from MISEREOR and two international resource persons.<sup>2</sup>

A season long training of trainers course, organised from July to November 2000, at Alam-Ubyit, 20 Kilometers away from Myitkyina, Kachin State was accomplished. The output of the TOT is a group of 32 core trainers/facilitators: 12 from KIO, 9 from KBC, 5 from Diocese and the rest from neighbouring communities. Other accomplishments were: Field Days, Planning Workshops and Review Workshops. Field days provided opportunities to share the success of the TOT, and raised awareness among other communities and organisations, while the Workshops enabled the Facilitators to prepare action plans for establishing FFS. 54 FFS are currently being implemented by the above Facilitators in different parts of Kachin State and Shan State.

To assess the overall progress of these FFS, two follow up visits were conducted. The visits recorded lots of excitement, interests and enthusiasm of farmers participating in FFS. While this indicates a good success, a few FFS also encounter challenges to maintain the level of farmers' active participation. The challenges have been discussed and analysed with a concrete set of actions set down.

The initiative has produced a momentum among the farming communities, and many local, national and international organisations have shown interest and expressed desire to support IPM actively. To transform this momentum to wider areas, and at the same time to develop strategies more appropriate to the local situations, a new three year-programme has been designed and implemented since July 2001. The new programme along with the earlier initiative intends to establish around 180 FFS in different parts of Kachin State and Shan State and it is envisioned that this will be the base for future sustainable community development programmes.

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<sup>1</sup> PRA conducted in January 2000

<sup>2</sup> Background of the resource persons attached.

## **A. BACKGROUND**

In January 2000, a series of PRA exercises were conducted in the nearby three villages of Myitkyina, in Kachin State of Myanmar. During those exercises, information obtained from local farmers indicates that the trend of growing poverty in the rural areas is a serious concern. Being the staple food, rice is the main crop, and a major source of livelihood for farmers. However, for many, the amount of rice they produce is not enough for their own consumption. Generally, rice yields in the northern Myanmar are very low. Average rice yields range from one to two tons per hectare. The bigger portion of the harvest goes to cover the production costs and pay off the debts. The quota sales of paddy to the government, at below market prices, is also a great burden. Farmer's lack of capital forces them to borrow money at a high interest rate. Opportunities for other income are very limited. Cultivating other crops is highly constrained by limited or no irrigation facility at all. All these have badly contributed to low income.

As in other countries, declining production in the northern parts of Myanmar, are the results of many complex problems. The problems of soils, water, quality seeds and more interestingly, lack of appropriate knowledge and basic understanding of the rice ecosystem, are the main hindrance to increase or maintain production and productivity of the rice fields. Although pesticide is not an essential input for rice production, farmers' inadequate understanding often forces indiscriminate use of it. The ultimate consequence is the disruption of the naturally balanced ecosystem, and at the same time an increase in production cost. Furthermore, continuous flooding has made a big change in the physical, chemical and biological properties of rice soils, which has negatively affected the availability of many nutrients. As a result, rice yields started to decline in many parts of the world. Similarly, the growth of rice production in Myanmar declined from 4.5 percent in 1985 to 0.9 percent in 1993 (World rice statistics, 1995).

Due to the complex nature, addressing these problems requires deeper understanding about the entire rice system, specifically the agro-ecosystem. The results of IPM demonstrated significant improvement in farmers' skill and knowledge to tackle the common problems of rural farming. IPM farmers, in many countries in Asia, reduced pesticide use to zero or near zero, and increased rice yields from 10 – 20%. As a result, profit margin increased from 15-25%. Encouraged by those results, this initiative was undertaken broadly to introduce the approach in Myanmar, and establish FFS as a centre for learning and sharing for the rural farmers so that they can improve their management capacity and increase production and income.

## **B. GOALS AND OBJECTIVES**

### **GOAL**

To develop the capacity of local organisations and communities in designing, planning and implementing IPM programme to improve the livelihood, socioeconomic status, and overall decision making ability.

### **OBJECTIVE 1**

To develop a self-reliant core group of IPM trainers/facilitators within the three early local organisations, Kachin Independence Organisation (KIO), Kachin Baptist Convention (KBC), and Catholic Diocese that will independently facilitate and establish FFS within the rural communities of Kachin State and Shan State, Myanmar.

### *Indicator*

*Success criteria: by the end of the season-long training, each of these organisations will have at least five self-reliant capable trainers/facilitators to establish FFS.*

## OBJECTIVE 2

To establish Farmer Field School in the community as a centre for learning and sharing to enhance the management capacity of rural households over rice-based farming systems for sustainable improvement of rice yields and return.

### *Indicator*

*Success criteria: by the end of the project period, each organisation will have implemented 5-10 FFS and will continue efforts to establish more FFS.*

## OBJECTIVE 3

To enhance broader awareness among other local, national and international organisations as well as to generate interest and support in implementing IPM/FFS in other parts of Myanmar.

### *Indicator*

*Success criteria: by the end of the project as many development organisations and social workers as possible have been exposed to this project activities and other IPM related information.*

## **C. ACCOMPLISHMENT**

### **C.1. SEASON LONG TOT**

To acquire objective 1, a season long training of trainers course was organised from July – November 2000, at Alam-Ubyit, 20 Kilometers away from Myitkyina, the state Capital of Kachin State. 32 participants, 12 from KIO, 9 from KBC, 5 from Diocese and the rest from neighbouring communities attended the five months long training course.

The training was organised for the entire duration of rice and vegetable crops so that farmers and participants understand the whole production systems based on the actual situations in the fields. The course covered a wide range of subjects in sustainable agriculture starting from soil to water management, rice seeds to rice varieties, weed to pest management, agronomy, agro-ecology, economy, cost and return analysis, decision making, and management and leadership development.

Participants were divided into five small groups. Each group was distributed several rice and vegetable plots. In those plots they established a number of experiments, studies and action research. For them, these studies were the main arms of facilitating creativity and innovations. Using these studies, throughout the entire training, all the participants, in groups and individually continued to explore and generate new knowledge and learning. They produced rice in a sustainable manner achieving yields two times higher than those of farmers' normal yields.

The training methodologies intended to facilitate participation with a non-formal education approach. Debates, discussions, role-plays, presentations, brainstorming, group-works, workshops and seminars were the regular training activities. To strengthen group dynamics, lots of games, assignments, and energizers were used. All this brought an added attraction to the training. Over 7,000 visitors from the

nearby farming communities and government and non-government organisations across Kachin and other parts of Myanmar visited the training site and the TOT field, daily and weekly.

Participants, in general, demonstrated very impressive results in the training. Some of them were found to achieve quite outstanding performance, while the majority of them were proficient in crop production, group formation and mobilisation, which is crucially important to facilitate FFS. To cover all the events of the training, a detailed report was prepared at the end of the training. Copies of the training report were forwarded to MISEREOR and other interested national and international organisations.

## **C.2. FIELD DAY**

Two formal Field Days were organised during the season long training. At the first one on 14 August, the Northern Commander who is a senior government official, visited the training site. Along with him were a number of other officials from research and extension department. This visit produced encouraging result in drawing government attention, moral support and more importantly, good cooperation from departments concerned. The second field day was organised during the graduation ceremony. Participants in small groups presented and displayed all the study results. Representatives from MISEREOR, Metta, the three participating organisations (KIO, KBC and Diocese) and community leaders from nearby areas attended this ceremony. Aside from the field days, guest visitors including representatives from development agencies visited the training field.

The visits served as inspiration to the participants since managing and organising these visits enhanced participants' confidence and skills. In addition, this has raised the interest of a number of local, government, non-government and donor organisations for IPM. Such an example is National Democratic Army (NDA) Kachin, who pledged commitment to implement FFS in their areas. As a result, participants from NDA are attending this year's season long training. Besides MISEREOR, NOVIB, ACTIONAID and SWISSAID are funding the fairly larger new phase -a three years programme.

## **C.3. PLANNING WORKSHOP**

Planning Workshop was the primary preparation for establishing Farmer Field School. The outcome of the workshop was the development of FFS action plan by the graduate trainers. Towards the end of the season long training 32 alumni spent the entire last week developing individual plans and organisational plans to implementing 64 FFS in different parts of Kachin State and Shan State. Each participant prepared individual plan for two FFS. Participants from each organisation also prepared organisational plan. On the last day of the Planning Workshop both the individual and the organisational plans were shared and presented to the representatives of each participating organisation. At the end of the training, all these plans and feedback of the participating partner organisations were compiled. A bridging proposal was then prepared and submitted to MISEREOR to cover the running cost of these FFS.

## **C.4. REVIEW WORKSHOP**

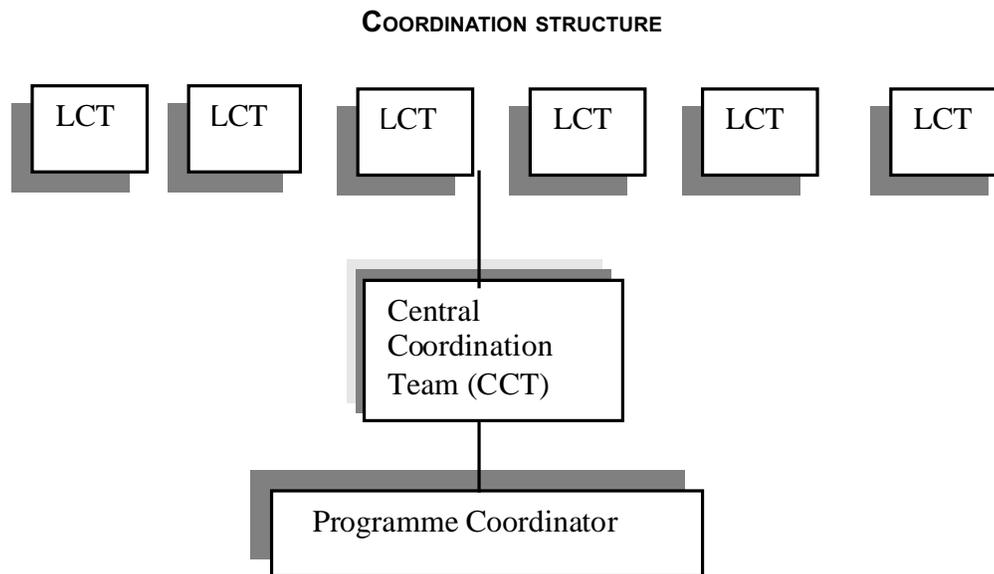
Review Workshop was organised in March 2001, after the Facilitators had organised series of discussion meetings with their village communities for establishing FFS. The three months period since the Planning Workshop in November 2000 provided them with opportunities to understand some basic issues and challenges of community organising, and facilitating FFS. The weeklong workshop discussed those issues and challenges and developed some guidelines for concrete actions. The FFS Facilitators accordingly revised their action plan prepared in the Planning Workshop.

The workshop also discussed and reoriented the Facilitators about the goals, objective and major strategies of the FFS programme. The workshop identified the major problems faced by the Facilitators to establish their FFS: long distance, and in some cases, nonexistent communication. To solve the problems, each Facilitator was equipped with a bicycle, but one with a motor cycle. In addition they were furnished with training materials. The workshop was participated by selected representatives of the Facilitators, and other members of the project team.

### C.5. DEVELOPED MECHANISMS OF COORDINATION

During the review workshop, the project team discussed the importance of developing and strengthening a better coordination system in the project. While stronger coordination system, can act as a driving force for the work of the FFS facilitators, on the other hand, it will serve as a channel to maintain smooth feedback system in the project. It is vital to maintain the programme quality and at the same time, to stimulate flexibility within the programme components to cater the emerging needs of farmers. The group discussed and designed the following coordination system.

**Local Coordination Team (LCT):** Local coordination team comprises a small group of FFS facilitators, headed by a Local Coordinator. Although, FFS facilitators in this team represent different organisations, they formed into a team largely because of closer geographical locations of their FFS sites. This local team will meet monthly, to discuss and exchange progress and challenges. The project identified six Local Coordinators: Gum Sha, Zaw Raw, Brang Mai, Yaw Ying, Hka Daw and Bawk La.



**Central Coordination Team (CCT):** Central coordination team has been composed of all the Local Coordinators, Programme Coordinator, representatives of each partner organisation, and international experts involved in the project. Central Coordinator will lead this team, and will be based in Myitkyina. This team will meet twice a year, mainly to discuss the project progress, review strategies, revise action plans, etc.

**Programme Coordinator (PC):** Programme coordinator will oversee the overall programme and maintain close communication with all coordination teams. At the moment, until a suitable Central Coordinator is identified or developed within the project staff, the Programme Coordinator will take the role of Central Coordinator.

## **C.6. DEVELOPED MECHANISMS FOR FOLLOW UP, MONITORING AND REPORTING**

Follow up field visits and regular reports are essential in overseeing the status of project implementation. The project team realised the need to develop a regular reporting system, and thus designed weekly and monthly reporting formats: FFS Register, Weekly Record of each FFS activities, FFS Facilitator's Monthly Progress Report to Local Coordination Team, and Local Coordination Team's monthly progress report to Central Coordination Team.

According to this follow up and monitoring system, Local Coordinators have been largely responsible to monitor the progress of FFS and provide necessary assistance to the FFS facilitators. Their visits are to be reported regularly to Central Coordination Team. Central Coordinator, Programme Coordinator, other Specialists and Experts involved in the project are also responsible for making frequent visits to different FFS sites. Hence, project progress is to be reviewed, recorded, and reported to partners concerned.

## **D. PROGRESS OF FFS**

The implementation of FFS began in January 2001 with the first three months being spent on pre FFS activities such as village immersion, discussion meetings with the villagers and village leaders, building meeting place, etc. Actual activities started from April. In April 2001, the LCT reported that 54 FFS are in the various levels of implementation at different parts of Kachin State and Shan State, an average of one to two FFS per Facilitator.

To assess the situation of those FFS, two follow up visits were made in March and June. The follow up team included of Programme Coordinator and experts. During the first follow up, the team visited three FFS sites in Myitkyina and Wa Shawng townships and two FFS sites in Bhamo area, and held discussions with different levels of stakeholders.

During the second follow up, the team covered another seven FFS in Gatsha Yang, 8 Miles, Jaw Masat, Wa Shawng, Awng Mye Thit, and Mading areas. The team also visited FFS that were established during last year's TOT. However, those FFS were more of learning centres for the TOT participants. Below are the highlights of all the visits.

### **D.1. GENERAL OBSERVATIONS**

- ❑ 10-15 farmers on average are attending each FFS regularly
- ❑ Each FFS has built a meeting place
- ❑ Most of the FFS have established a number of participatory experiments
- ❑ Majority of the FFS have already met 4-5 times

### **D.2. SUCCESS AND ENCOURAGEMENT**

- Farmers are enthusiastic and excited about the approach used in the FFS
- In most FFS, farmers' participation are encouraging
- Community Leaders and Church Leaders are very supportive of the programme
- Other NGOs and organisations have visited the FFS and are highly interested in the approach
- Some specific activities like, identification of quality seeds, production of quality seedling for rice, and SRI - a new system of rice cultivation have created huge attention for the farmers to learn and improve the existing levels of knowledge.

- Many farmers of last year's FFS that were established during the TOT are seen to apply many techniques/methods that they learnt from the FFS, in their fields. Examples – quality seeds and seedlings.

### **D.3. CHALLENGES**

- In a few FFS are lowered by decreasing interests of farmers as many of them are not clear about the goals and objectives of the FFS
- A very important reason of this low participation is the lack of clear understanding of the concept and approach of FFS by some Facilitators themselves
- Poor planning process, in many FFS, is a setback for generating enough actions to identify and address many major problems
- Lack of baseline information in majority of the FFS, due to poor planning, make it difficult to differentiate the achievements of FFS
- Irregular and poor reporting by both the FFS facilitators and the Local coordinators is a challenge to monitor the progress, and at the same time to provide adequate assistance to FFS Facilitators
- Existing follow up visits by the central team are not adequate enough to assess field problems and organise supports accordingly to address problems in time.

### **D.4. ACTIONS TAKEN**

- Organise a joint review workshop and CCT Meeting including all FFS facilitators in August. The workshop will further discuss the challenges with appropriate actions
- Organise a refresher course for all the FFS facilitators and Coordinators immediately after the review workshop and central coordination committee meeting. The refresher course will provide further orientation on the concept and approach of FFS as well as organise hands on exercise on community planning
- Central coordination committee will spend more time in fields to visit FFS sites for strengthening the monitoring and supporting the project; at least a coordinator or a technical specialist will engage in regular field visits. This would help identify and address field problems immediately.
- In addition, to speed up the flow of information between the Central and Local Coordination teams, Local Coordinators' communication skill will be further strengthened by conducting refresher courses
- Organise regular briefings and discussion meetings with all the partner organisations specifically, with the leaders of the participating organisations. Such meetings will encourage more support and active involvement of the partners in monitoring and feedback activities. This will also provide them a sense of ownership for the programme. One such meeting was already held with KBC in June 2001 and was very encouraging.

## **E. NEW INITIATIVE - EVOLUTION OF A THREE YEAR PROGRAMME**

The primary purpose of the early initiative, as mentioned was to develop local capacity specifically, trainers and facilitators to introduce the approach of FFS. This task was successfully done by organising a season long training in 2000. The alumni have started implementing FFS in their own communities. The process and approach of the FFS has already created positive interest in communities to develop self-initiatives for rural development. In addition, some special events like Field Days and Cross Visits, during the TOT also produced interest among the local, national and international organisations. To transform the momentum to wider areas, and simultaneously to develop strategies more appropriate to the local situations, the new three year programme has been designed and started implementing since July 2001. The new programme, along with the earlier initiative intends to establish around 180 FFSs in different parts of Kachin State and Shan State.

### **E.1. CENTRE FOR ACTION RESEARCH AND DEMONSTRATION**

The centre for action research is an important intervention of the new three year programme. Such a centre is highly essential to continue research and develop appropriate technologies for FFS. The action research centre has been established on over 20 hectares of land close to Metta's foremost "*Land for Life*" Integrated Farm.

The centre comprises permanent training facilities including a large field for training and action research. Based on some renewed focus of the new programme such as organic farming, vegetable and fruit cultivation, and sloping agriculture land technology, the centre will primarily engage in the following activities.

- Developing and demonstrating easy and appropriate technologies for compost and other organic manure preparation. An exciting method of preparing compost using Indigenous/ effective micro organisms (IMO/EMO) has already been developed and is being used to produce compost in a large scale.
- Developing the centre as a showcase of sustainable high-income generation project. This includes cultivating short duration high value cash crops such as banana, garlic, ginger and vegetables in an integrated fashion. For long-term permanent income, high value fruit and timber trees will be grown along side.
- Producing quality seeds for rice and vegetables. Both foundation and certified seeds will be produced. The seeds then would be distributed to FFS and other local communities. In addition, a nursery will be setup to produce and distribute seedlings and saplings of vegetables, fruits and trees.
- Developing in built appropriate technologies to improve soil fertility. This includes cultivation of green manure and development of appropriate cropping patterns.
- Demonstrating effective and appropriate sloping agriculture land technologies to prevent soil erosion and generate enough income.
- Moreover, the centre will serve as live venue for all training, refresher courses, workshops and meetings. The centre has already accommodated this year's season long TOT.

## **E.2. SEASON LONG TOT FOR ANOTHER BATCH**

To establish 180 FFSs, the new programme requires 25-30 additional Facilitators. With the view of developing this number of Facilitators, another season long TOT has already begun since July 2001, in the newly established action research centre as mentioned earlier. Participants of this training are from KIO, KBC, Diocese and another new partner NDA including some local leaders. The training will continue until the end of November 2001. Several important features mentioned below have made this year's training unique.

- The entire training is being coordinated by the newly developed training coordinators. They are the graduates of last year TOT.  
This indicates an example of success of last year TOT. International experts are assisting them in planning, designing, monitoring and evaluation, and facilitating some useful topics and sessions.
- Based on last year's feedback, with particular emphasis on organic farming, rice, as well as several other interventions has been incorporated in the TOT. These are vegetable cultivation, small-scale fish cultivation in ponds and sloping agriculture land technology. The TOT field covers around 3.5 acres of lands; 1.5 acres for rice, 1 acre for vegetable, 1 acre for sloping agriculture and a new fish pond.
- Training curriculum was prepared by the local coordinators together with the international IPM experts. Course contents, tentative weekly schedule, training coordination committee and their roles and responsibilities including other preparatory arrangement were prepared during a week long workshop in the last week of June 2001.

**F. PROGRESS TABLE OF FFS AS OF APRIL 2001**

LOCAL COORDINATORS, ORGANISATION, AREA	OWN FFS SITES	OTHER FACILITATORS, ORGANISATION	FFS SITES AND NO.	TOTAL FFS
Zaw Raw KIO, Lai Za	1. Lawa Yang 2. Lamai Yang	Bawk Tawng, KIO	1. Mai Ja Yang 2. Sut Ra Yang	4
Brang Mai Mung Ding Pa	1. Mung Ding Pa-I 2. MungDing Pa-II	Brang Nu,Diocese  Bawk San,Diocese Brang Lawn, KIO  Kum Ja, KIO	1. Mai Hkawng 2. Mung Lu 1. Mya Zedi 1. Markaw Yang 2. Nam Hpu 1. Kadaw Kawng 2. Yang Wu	9
Hka Dau Local, Nawng Hkying	1. Nawng Hkying-I. 2. Nawng Hkying-II	Lum Dau, Local  Naw Awn, Local  Sut Tang, Local  Lamasa, Local  Tang Gun, KBC  Htoi Naw, KIO	1. Jaw Msat 2. Lamayang 1.8 miles 2. Woi Rangpa 1. Dum gan 2. Alam 1. U Byit 2. Lamung Zup 1. Gatsha Yang 2. Shadau 1. N-Gan 2. Sut Ngai Yang	14
Yaw Ying KBC, Mading	1. Mading 2. Nam Wa	Yaw Htang, KIO  Hpaga Naw, KIO  Hawng Lum, Diocese	1. Wa Shawng 2. Woi Ba 1. Katsu 2. Saga Pa 1. Ang M Thit 2. Deng	8
Gum Sha Awng KBC, Lashio	1. Nawng Leng 2. Kawng Mu	Chang Ying, KBC  Yaw Bawm, Diocese	1. Tiri 2. Yaw Win 1. Nam Jarap 2. Kung Mu	6
Bawk La KBC, Mo Kawng	1. Kawa Yang 2. Sing Gat Yang	Tang Seng, KBC  M Dau Lum, Diocese	1. Lawng Hkang 2. Chyakrau 1.Labang Kahtawng 2. Nam Sheng	6
Seng Mai Local, Putao (Isolated case)	1. Lum Sha Yang 2. Gum Zai Yang			2
Isolated		Mung Wan, KBC, SumpraBUM Tu Ja, KIO  Gam Awng, KIO	1. Ja Ra Yang 2. Mali Yang 1. Awng Lat 2. Zup Mai Yang 1. Naw Nyeng 2. Zup Mai Yang	6
<b>Total</b>				<b>54</b>