

The Final Evaluation Report
For the Sustainable Livelihood Project in Longchuan County
(2012-2016)

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Executive Summary

The Longchuan Sustainable livelihood project (2012-2016) is made up of four components, namely promotion of more natural agricultural practices, development of other agricultural income channels, development of non-agricultural income channels (in some project documents also named as “women’s development”), and awareness and knowledge promotion of sustainability. By the time of this evaluation, some of the expected outcomes have been realized, some have not though they are moving positively towards the destination. For those unrealized outcome targets such as changing of the production and income structures, the evaluation team think that though it has something to do with project activity design (some activities not directly or effectively contribute to the outcome), they are too ambitious for a 4 year project of this scale, especially under the context that the sugarcane planting is the leading industry in the communities. At the same time, the project also has the practice of developing annual plan and targets. From this angle, most of the expected outputs for these annual plans and targets have been achieved. Specifically:

1. The Expected outcomes for sustainability awareness raising, cross planting, skill training, and green fertilizer utilization have been achieved.
2. The Expected outcomes for improving the fertilizer structure, establishing diversified income structure, women’s development and income generation etc. have not been achieved, though they are moving positively towards the targets.
3. Project activities were not specified in the project designing document, though annual targets were set in the “strategic plan” part after the logic framework. At the same time, baseline data were not collected and established against the indicators set to measure the outcomes and outputs. These two gaps led to the result that the activities decided at a later stage in the annual plan are sometimes not effectively in line with the set outputs and outcomes. At the same time, without a base line data, the M&E may easily become blind and inconsistent.
4. The operation and management model of the seed fund need improvement. We suggest consulting the “village mutual help fund model” initiated by the poverty alleviation office under the state council.
5. The self-management and development capacity of the women’s group need to be consolidated.
6. The experiences gained in sustainability awareness raising, cross planting, green fertilizer utilization etc. deserve to be promoted to other areas.
7. To maximize project sustainability and impact, some components of the project, such as the seed fund and women’s group, need to be consolidated before handing over to the local community. And it is reasonable to leave about one year for this

purpose.

A. Introduction

In 2007, NMA (Norwegian Mission Alliance; hereinafter referred to as Buer) funded a 5-year project aiming at poverty reduction in Longchuan county (2007-2011). In 2011, Buer completed the final evaluation and a new 5-year project was proposed on the base of this evaluation.

The focus of the new project (2012-2016) shifted to sustainable livelihood, as it was found out that the project communities mainly depends on sugarcane planting for their livelihood. The monoculture of sugarcane on the one hand were causing increasing deterioration of the soil and environment, due to application of increasing quantity of chemical fertilizers and pesticide; on the other hand, were limiting fodder sources to develop animal husbandry which is the source of green fertilizer. At the same time, the mono-income structure is putting the villagers in a very vulnerable position, as the sugarcane price is not stable. Another issue faced by the community was marginalization of women, especially the Myanmar wives, in the social life. Due to various reasons like language, citizenship, and traditions, women, especially the Myanmar wives, were excluded in major social life, and did not have the opportunity to demonstrate their potential to gain respect in their families and in the communities.

At the end of 2016, the 5-year project comes to the end. To learn the project effect and the actual realization of the expected project outcomes and outputs while collecting lessons and experiences for future improvement, Buer engaged two external evaluation specialists to conduct the final evaluation in early December.

Goal and objectives of the project

Long term goal:

To 2016, in the project communities, pilot farmers have established the model of multiple livelihoods that gradually reduces their dependence on sugarcane monoculture. In the meantime, local government and farmers have raised their environmental-home awareness based upon the environment value, so that they can change the use of local natural resources in agriculture to become more sustainable with the improved participation as well as the advocacy from local government, finally, the project will supply a model of sustainable livelihood to local government and farmers for reference.

Sub-objectives:

- 1. In 5 years, more natural agricultural practices are utilized to reduce the impact of sugarcane monoculture.
- 2. In 5 years, farmers take less risk of monoculture by the development of other agricultural income channels.

- 3. In 5 years, farmers take less risk of monoculture by the development of non-agricultural income channels.
- 4. In 5 years, local people have rational awareness and knowledge of sustainability.

Intervention strategies

In local communities, the farmers use quantities of chemicals for sugarcane planting, which is their major income channel. Local farmers also lack alternative income channels. They have to take high risk of sugar price variation. Therefore, the unsustainable livelihood is the focal problem in this project.

Accordingly, the project designs 4 aspects to solve that problem. Namely:

1. Through the development of natural agricultural practices, for example, cross planting, and green fertilizer supplying from husbandry development, the overuse of chemical is expected to be reduced.
2. Through the development of husbandry and forestry, farmers will receive more agricultural income channels so that they will take less risk of monoculture.
3. Through the development of non-agricultural income channels, engage local women more in the community development, especially for those most vulnerable people, like Myanmar wives.
4. Through sustainability awareness rising, local farmers promote the attitude and knowledge about the sustainable development, and through environment value education, young generations receive the knowledge about homeland environment caring and protection.

B. Evaluation Purpose and Questions to Be Answered

The main purpose of the final evaluation is to have an overall review of the performance and lessons of the project within the five-year project period and to bring out valuable information/recommendations for local partner to continue the project when project is finished.

Objectives of the final evaluation:

- To assess the achievement of project objectives at an outcome and output level as defined in the Log-Frame of the project. Baseline data should be used.

- To identify lessons which can be learnt from the project. In particular, to conclude the model of sustainable development based on the project experience in the communities.
- To analyze relevance, effect, impact sustainability, efficiency and coherence of the project
- To provide recommendations to Buer and local partner to continue the project in a sustainable way.

Evaluation questions

Project relevance

- Are project objectives relevant to needs of target people? How?
- Are the project approaches, strategies, and activities relevant/appropriate/helpful to the project objectives? How?
- How has local context been taken into consideration when planning the project?
- Is the project experience applicable to other villages of Long Chuan County?

Project effect:

- In which level, the sub-goals and outputs are achieved, or not achieved?
- How are target groups benefited by the project? Has the project solved their problem defined by the project analysis?
- In general, does this project solve the problem of unsustainable livelihood in local communities? How?

Project impact:

- What impact has the project had to farmers including women?
- How did the project impact to community development and relevant government?
- Which aspects could be strengthened to reach better impact? How?
- How does the project make impact towards the local education system about environment education? How does the project make impact on target farmers' mind about sustainable development?

Project effectiveness:

- Is the scale of beneficiary reasonable regarding the project input? If not, how to promote the project result to more beneficiaries?

- Comparing with achievements, Has the project input (including local and fund from MA) been used effectively?

Project efficiency:

- How many stakeholders are involved in the project? How does the project make them function?
- Do project strategies lead to sustainable and inclusive development in terms of environment education, empowerment to women, and sustainable livelihood?

Project management:

- In the whole project cycle, which part is the strongest, and which is the weakest? Why?
- Who participated in the process of plan making and management, and How?
- Is the monitor system including tools functioning and practical?
- Does the local project team have sufficient capacity and tools to carry over the project? How?
- Is the financial management in accordance with law and regulation, as well as the requirements of donors' organization?

Project implementation:

- What kinds of factors have made obstacles for the project implementation? What have been done to extinguish/reduce the difficulties?
- What kinds of resources and capacity building are provided by the project to the partners and target people for the smooth implementation?
- What kinds of risks have the project come across? What have been done to anticipate and reduce the risk?

Project sustainability:

- Has the project reached sustainability in terms of funding, human resource, management and technique? If not, how to reach it?

Besides the above, the evaluation team is also expected to make recommendations on the followings:

- In the organizational level, what kind of experience about the project shall be concluded and shared by both country office and head quarter?

- Experience and knowledge/tools about revolving fund management.
- Other external experience about sustainable development in the rural area.
- How to pass over the project experience to the local government.

C. Evaluation Methodology and Process

1. Evaluation plan and guideline for interview

Before developing the evaluation plan and guideline for interview, we studied all important project documents ranging from the base line study report (actually it is a need assessment report), project document/proposal, project annual plans and reports, and analyzed the logic relation between the need of and major issue faced by the villagers in their livelihood, the project strategy and approach, and the project objective and outputs as well as their measuring indicators. Based on this understanding and analysis, we followed the evaluation TOR requirement to base our plan and guideline on the outcome and output and their measuring indicators specified in the logic framework.

2. Target group interviewed in the evaluation

Following the evaluation TOR requirement and our interview guideline, we interviewed the following groups :

- ☞ Villagers representatives in Lvliang and Mushui villages.
- ☞ Women representatives in Lvliang and Mushui villages, especially the Myanmar wives.
- ☞ Representatives from the county educational bureau, and the primary school teachers and students.
- ☞ Representatives from the county agriculture bureau.
- ☞ Representatives from the VDC and the seed fund management group.
- ☞ Project officers from FAO and Buer Kunming office.

3. Evaluation methodology and process

Project file study: we studied all important project documents ranging from the base line study report(actually it is a need assessment report), project document/proposal, project annual plans and reports, and analyzed the logic relation between the need of and major issue faced by the villagers in their livelihood, the project strategy and approach, and the project objective and outputs as well as their measuring indicators. The purpose of this study is to collect understanding and information of the project design, implementation, and achievement so that we can have cross check during the field interview.

Field evaluation process and methodology

Following the requirement of evaluation TOR, and considering the time availability, we adopted the methodology of participatory focal group discussion in the field interview. Questions were asked in line with the interview guideline, and the focal groups discussed and agreed on their responses. These methodology, though require experiences and skills from the evaluators, and is kind of time consuming, has the advantage of covering more participants, and promoting mutual sharing and learning , and cross checking among the participants to achieve a more objective and representative result.

4. Evaluation strategy

In line with the evaluation objective, questions, and methodology specified in the TOR, the following strategies were used in the evaluation :

1.The evaluation on project relevance was conducted through analysis of the logic relations between the major development issues faced by the community, the project objective, the project strategy and approaches, and the supporting activities.

2.The evaluation on project effect was conducted through checking the results, changes, and outputs after the project implementation in line with the set targets and measuring indicators specified in the project document. Considering that the project has just come to the completion, impact evaluation was not a focus.

3.The evaluation on project management was conducted through checking the monitoring system, the communication/supporting/and decision making process and mechanism, and ways of learning and reflection etc.

4.The concept of participation was integrated into the whole evaluation process. Meaning the groups were at the center for reflecting, sharing, analyzing, and summarizing; and the role of evaluators is to facilitate the effect discussion in line with the interview guideline.

5.Based on the above-mentioned ideas, in-depth discussions were conducted with the project personnel and the villagers respectively.

Discussions with the villagers mainly focus on realization of the outcomes and outputs specified in the project design document. Based on the measuring indicators, the evaluation team checked the change of the knowledge, attitude, behavior, and capacity of the target group, as well as the relevant result before and after the project implementation. But considering that different aspects need to be examined from different groups, we re-organized the indicators in line characteristics of the different target groups, rather than mechanically following the order in the logic framework.

The participants were put in 5 different groups according to the project activities they

involved. Namely a general group, a seed fund group, and women’s business group, a group for Myanmar wives, and an environment education group. We also tried to strike a balance in terms of age, gender, economic and social status when grouping.

Discussions with project personnel were mainly from the macro perspective to examine the achievements, lesions, and experiences in realizing the outcomes and outputs; And to self-assess in answering the evaluation questions. Project personnel from Buer Kunming office, FAO, the county education bureau and agriculture bureau participated in the discussion.

Evaluation conclusions and suggestions were reached on the base of these discussions, project file studies, and the evaluators’ own observation and experience.

The whole evaluation was in 3 phases, namely:

Phase No.1: from November 11 to 24. The task in this phase was to study the project files and prepare the evaluation plan and interview guideline.

Phase No.2: from November 27 to December 2. This was the field evaluation phase. Specific schedule is reflected in the following table:

Date	task	venue	Participants
Nov 27	travel to Kunming from Beijing	Kunming	Peter Liu
Nov 28	1, Kunming to Longchuan 2, In-depth discussion with the project personnel	Longchuan county town	Project personnel from Buer, FAO, and relevant government agencies, evaluation team
Nov 29	Community interview	Lvliang	Project personnel from Buer, FAO, and education bureau, schools, students, VDC members and villagers, evaluation team
Nov 30	Community interview	Mushui	Project personnel from Buer, FAO, villagers, VDC members, Myanmar wives, evaluation team
Dec 1	Community interview	Mushui	Later changed to project management discussion due to availability of the villagers.
Dec 2	1, Feedback of the initial evaluation result	Kunming	Project personnel from Buer, FAO, evaluation team

	2, Back to Kunming		
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Phase No.3: from December 3 to 16.evlaution report writing and submission.

D. Evaluation Findings

The Longchuan Sustainable livelihood project(2012-2016) is made up of four components, namely promotion of more natural agricultural practices, development of other agricultural income channels, development of non-agricultural income channels (in some project documents also named as “women’s development”), and awareness and knowledge promotion of sustainability.Through evaluation, we found the following results about the outputs of the activities :

1. Promotion of more natural agricultural practices:

This component is made up of 4 activities,namely animal husbandry seed fund activity,forestry seed fund activity, animal husbandry related training, and forestry related training. Findings of the result from these activities

1.1 Animal husbandry seed fund

The expected output of this activity is to increase the income from animal husbandry to 30%-35% in the total family income structure for the involved households. The actual result is only 10%-20%. One of the reasons for the lower income is that the market price of goat went down; another reason is that some deaths occurred due to improperness in fodder provision and epidemic prevention.

At the same time, the repayment rate of the seed fund loan is low. Some villagers cannot understand why they have to repay the loan in cash while they got it in kind(goat). The low repayment rate is causing the low efficiency of the loan in its rotation to cover more households.

Thus, this activity failed to achieve the expected output. However, the evaluation team think that the idea and strategy is correct to include a revolving fund activity in the project; and the experience gained is also valuable. Another benefit of the animal husbandry seed fund is that it is promoting the green fertilizer which is one of the crucial element to improve the deteriorating soil.

Therefore, the project team should not give up, but rather to continue to strengthen this activity to win long term gain.

1.2 Forestry seed fund

The expected output of this activity is to increase the income from fruit tree planting to about 10%-20% in the total family income structure for the involved households. The actual result is that by the time of this evaluation, no income has been gained from this activity, as the fruit trees have not started to bear fruit yet. The expected fruit bearing time is 3 years after planting. But it did not happen because the villagers did not carefully look after their trees as required in fertilizer providing, and pruning etc. Hopefully some harvest can be available in 2017.

The repayment rate of this seed fund loan is also low. One of the reasons is late harvest as described as above; another reason is that the local government delivered the same kind of fruit tree saplings for free to the project community in 2014. Thus those involved households think it unfair for them to pay for the sapling from this project.

Another finding about the seed fund is that it covers only a small number of households. The inclusiveness and justice of the activity is of a concern.

1.3 Animal husbandry related training

The expected output of this activity is to build up knowledge and skills of the villagers in animal husbandry to promote this industry. By the time of this evaluation, the villagers have been trained in breed selection, sheepfold construction, fodder matching, epidemic prevention etc. After the training, large scale of epidemic disappeared, and the villagers have got the capacity to assess themselves the suitability to join the activity. At the same time, some of the villagers could not shift from their traditional way of animal husbandry. And the training effect to them is not ideal. But on the whole, all the planned trainings have been conducted and the expected output has basically been achieved.

1.4 Forestry related training

The expected output of this activity is to build up knowledge and skills of the villagers in fruit tree planting. After the training, the villagers involved have upgraded their understanding and capacity, and basically are able to apply the knowledge and skills to their practice. However, some of them could not strictly follow the requirement in looking after their fruit trees. And this neglect results in late fruit bearing. But on the whole, all the planned trainings have been conducted and the expected output has basically been achieved.

2. Development of other agricultural income channels:

This component is made up 3 activities, namely rational application of fertilizers, cross planting promotion, and training on soil improvement. If carefully examining the logic

relation between the planned outcome (promoting other agriculture income channels) and the above 3 actual activities as well as their expected output, you will find that they are not strictly in line with each other. This is an issue in project design, and we will discuss it at a later stage.

2.1 Rational fertilizer application

The expected output of this activity is to build up understanding and skills of the villagers in using green fertilizer to reduce the excess chemical fertilization by rational fertilizer application in line with need of the soil. After the training, the participants understand the harm of over chemical fertilization and are willing to adopt rational way of fertilizer application. Almost 100% of the participants confirmed they can understand the importance of using green fertilizer and will reduce using chemical fertilizer whenever possible. So, from the aspect of awareness and willingness, this activity has got the expected output.

However, the yet small scale of animal husbandry limited the green fertilizer supply; and the inconvenience of green fertilizer application also prevented some people from making full use of it.

2.2 Cross planting promotion

The expected output of this activity is to make about 50% of the households adopt cross planting. The actual result is much better. Almost all the households applied, and the total land area for cross planting is consistently increasing.

Maize, potatoes, red pepper, peanuts, and soy beans were cross planted in the sugarcane field and fruit tree field. While providing fodders and green fertilizers, the cross planting also increase income of the villagers. This activity is very successful, and it will sustain after the project as it is both feasible and well accepted.

2.3 Training on soil improvement

The expected output of this activity is to improve the soil by increasing green fertilizer. The actual result is that 2 sessions of training were conducted in the two project villages respectively, and 4 session were conducted in other neighboring villagers. After the trainings, the villagers got to know how to improve the soil. Some even bought the residual of sugarcane from the sugar factory to put to their land. Thus, we can say that the expected output has been achieved.

This activity has a huge room to expand. On the one hand, leaves and tops of the sugarcane can be better handled to enrich the soil than the current practice of burning which also adds to pollution. On the other hand, the sugarcane planting land area is very huge in Longchuan and its neighboring counties, the successful experiences should be greatly promoted to benefit a much wider population.

3. Development of non-agricultural income channels:

This component is made up 2 activities, namely Chinese training for Myanmar wives, and community banquet service. When looking at the outcome and output targets in the logic framework, this component should be one of the priorities. However, the two activities planned for this outcome is too weak to support an effective result, and the Chinese training activity did not have a direct logic relation with the set outcome, neither did it directly contribute to changing the non-agriculture income channels.

3.1 Chinese training for Myanmar wives

The expected output of this activity is to provide opportunity for the Myanmar wives to be better integrated into the mainstream community by improving their language skill. The result is that basically all Myanmar wives participated in the Chinese training classes. And with better language skill, they can more actively engage in community affairs such as dancing, banquet service, skill trainings etc. During the evaluation, we found that 1/4 of the 8-member dancing team are Myanmar wives. They told us that they are better recognized by both their families and in the community; and their relation and interaction with other community members are improving, though some of them still need further upgrading in their Chinese. They said that they feel happier and more confident after these activities. The calmness and confidence in their faces also verified what they said. Thus, we think that the expected output of this activity has been achieved.

In the cross-border marriage, the Myanmar wives usually did not get the legal immigration status, thus they cannot enjoy state benefit as their Chinese counterpart. This is a long-existing issue for many counties, and it is unrealistic for a project to change the situation.

3.2 Community banquet service

The expected output of this activity is to promote women's income generation, making the income about 5% in the total family income structure. The evaluation found out that women's groups were formed to provide service to the community banquets (such as wedding, funeral, festivals etc.) by dancing and table & benches leasing. Women increased their opportunities and skills to engage in community affairs through the process, but the income is only enough for operating the activities. Not meaningful income contribution is made to their families. Therefore, the evaluation team think that its social effect is much bigger than the economic one.

Through this activity, the women got more opportunity to participate in community affairs, and their communication skill and confidence has been upgraded. At the same time, they got more recognition in both their families and from the community. For example, some women we interviewed said that their husband become more supportive to them to engage in public affairs, and their family relation become more harmonious.

4. Awareness and knowledge promotion of sustainability:

This component is made up 6 activities, namely TOT training on environment education, environment education textbook development, environment education summer camp, students' activities on environment education, teachers' activities on environment education, and sustainability awareness raising training for the villagers.

The evaluation team think that this component is the most successful part of the project and almost all the outputs were achieved or even overachieved.

4.1 TOT training on environment education

The expected output for this activity is to upgrade knowledge and skills of the local teachers in environment education in order that they can do their job in this area more effectively. The actual result is that 3 sessions of TOT were conducted to cover all the central primary schools in the county. 1-2 trainers from each central primary school participated in the training. They were trained in knowledge and concept about environment and sustainability, and in interactive teaching skills in environment education etc. Through the trainings, the teachers got much deeper understanding about environment and sustainability; and their environment education become much more effective. They also become more proactive to integrate environment education in their daily teaching activities. In 2016, the two central primary schools in Longba township and Husa township organized summary camp on environment education subject by themselves. This initiative was highly praised by the county educational bureau, and quite a few schools want to follow their ways.

4.2 Environment education textbook development

The expected output for this activity is to develop and publish environment education textbooks and deliver them to the educational system. 500 copies were planned. In 2014, this activity was completed, and 950 copies of environment education textbooks were delivered to the local educational system, 50 more copies were delivered to other relevant agencies.

4.3, Environment education summer camp

The expected output for this activity is to promote social atmosphere of environment protection through summer camp. The activity was very successfully. Both the students and teachers were impressed by this style of environment education. And some of them tried to organize follow up summer camps by themselves. And some of the parents also participated the activities. Video records were developed and shared with their friends and the idea of environment protection was widely and effectively disseminated.

4.4 Students' activities on environment education

The expected output for this activity is to encourage students to think about relation between themselves and their hometown, and about their responsibilities in environment protection. A series of activities were conducted in and out of the schools. While out of school activities ranged from summer camps to environment education to parents by their kids, etc. in-school activities included situational plays, blackboard newspaper, sharing between students and teachers etc. These activities got a wide coverage and almost all students participated. The evaluation team think that the activities were very successful and effective.

4.5 Teachers' activities on environment education

The expected output for this activity is to cause attention of the teachers in environment education in order that they can integrate environment education into their daily teaching. The activity was implemented in the form of knowledge contest on environment education. The activity helped the teachers to have in-depth study on knowledge, theories, and approached on environment education and share what they learned with their peers. The result is very impactful and recognized by the county educational bureau. And the award has become a reference indicator in the performance assessment of the teachers. The evaluation team think that the outputs of the activity are also overachieved.

4.6 Sustainability awareness raising training for the villagers

The expected output for this activity is to increase the awareness and understanding of the Villagers in sustainability and diversified production, so that they can proactively change their unsustainable production model. After the training, the villagers understand the reason why their current production model is not sustainable and why to adopt diversified production and to improve the soil. The training have laid a solid base for the villagers to understand project concept and implement the project activities such as cross planting, rational fertilizer application, animal husbandry development, and fruit tree planting etc. The expected outputs were achieved.

5. Project planning and design

The evaluation team did not find activity plan and their implementation time table in the approved project proposal (or project document); Neither did we find a complete base line data which was established against the measuring indicators of the outcomes and output specified in the project proposal (logic framework part). The document titled "base line report" though has some data relevant to base line, it is more a need assessment report.

At the same time, the evaluation team learnt that the project activities were developed in the annual plans in different years. So, we assume that project activities were not specified at the time of project design; and the outcomes and outputs as well as their measuring indicators were decided after the need assessment was completed, and without a base or support of project activities.

This way of project design though can leave room and power for the project implementation stakeholders to decide specific project activities in line with the changing environment during the project implementation process. However, project activities decided at a later stage may not be strict in line with the set outcomes and their indicators; and outcomes and their measuring indicators may not be realistic if they are not based on project activities. At the same time, without specific activities and their implementing time tables, it is almost impossible to establish a sound monitoring and evaluation system.

All the above-mentioned phenomena occurred in this project. The Evaluation team strictly follow the evaluation TOR to design the evaluation discussions in line with the measuring indicators of the outcomes and outputs specified in the approved project logic framework. But later we found out that some of the actual activities are not very relevant to these indicators. For example, some actual activities for outcome 2 and 3 are actually not so relevant to income; and it is hard to find very relevant measuring indicators for some of the activities actually carried out. So, it is hard to say that change of these measuring indicators is caused by this project. We had to adjust the evaluation framework to continue the evaluation.

However, the evaluation team realized that even agencies specialized in development work are having challenges to ensure professional project design. For an agency like Buer, whose project staff did not have enough technical training and support before designing the project, it is understandable that the above-mentioned shortcomings appeared.

On the other hand, the design of the project need to serve the purpose the project want to achieve. If the major purpose of the project is to empower the community to decide what to do, and not so interested in measuring its result and effect, the current practice also make sense.

Except for the above-mentioned issues. The project design is very professional and rigorous. For example, the baseline study did an excellent job in analyzing the issues and their causes, the setting of the project objective on promoting sustainable livelihood is very correct and accurate, and the strategy and approaches also make good sense.

6. Limitations of the evaluation

We think that this evaluation has basically met the requirement of the TOR. However, some limitations still exist. For example:

1) The required scope of evaluation is very wide. The evaluation questions need to be answered range from implementation, management, output, outcome to impact, covering almost all aspects. However, the time arranged for field evaluation is very short. So, the evaluation could only focus on output and outcome level, and did not have time to examine

the project in a wider and deeper way; neither could we have time to conduct some in-depth individual interview.

2) As no base line data was collected and established against the measuring indicators of the outputs and outcome, we had to ask the participants to recall the situations of the indicators in 2012 and compare those with the current ones in 2016. Due to fact that it is a long past, the accuracy of the recalled numbers maybe a problem. And the recalling process was very time consuming.

However, this regret does not affect us to make trend judgement of the change brought about by the project; neither can it affect us in making suggestions for future project practice.

E. Evaluation Conclusion

1. Project relevance

Through project documents review and field dialogue with the relevant stakeholders, the evaluation team concluded that there is good relevance between the project objectives and the needs of as well as the development issues faced by the project communities. Same relevance is also obvious between project objectives and its strategies and approaches.

At the time of designing this project, the project communities mainly depend on sugarcane planting for their livelihood. The monoculture of sugarcane on the one hand were causing increasing deterioration of the soil and environment, due to application of increasing quantity of chemical fertilizers and pesticide; on the other hand, were limiting fodder sources to develop animal husbandry which is the source of green fertilizer. At the same time, the mono-income structure is putting the villagers in a very vulnerable position, as the sugarcane price is not stable. Thus, the monoculture of sugarcane is the leading cause of the unsustainable livelihood of the project communities. Another issue faced by the community was marginalization of women, especially the Myanmar wives, in the social life. Due to various reasons like language, citizenship, and traditions, women, especially the Myanmar wives, were excluded in major social life, and did not have the opportunity to demonstrate their potential to gain respect in their families and in the communities.

To change this situation, the project aimed to establish sustainable livelihood for the community by promoting diversified agricultural production and income structure, while creating opportunities for women to participate in social life and income generation. Along with this objective and strategy, the project took the approaches of raising sustainability awareness, encouraging cross planting and fruit tree planting, supporting animal husbandry, forming and supporting women's groups, and training the farmers in in green fertilizer utilization and soil improvement etc.

The evaluation found out that these objective, strategy and approaches are in good logic among themselves, and are very relevant to the need of and issue faced by the local villagers.

The two selected villages can also represent majority of the communities in the county in terms of production and income structure, culture, and development level. Therefore, the experiences, strategy and approaches of this project can also be introduced to the neighboring communities.

2. Project effect

From perspective of project effect, the evaluation result shows that Basically, the project is very effective, and many of the outcome targets have been achieved. The valuation team think that these unrealized outcome targets such as changing of the production and income structures are too ambitious for a 4-year project of this scale, especially under the context that the sugarcane planting is both traditionally and currently the leading industry in the local communities.

According to the project document, there are four expected sub-goals or outcomes for this project namely:

- 1, In 5 years, more natural agricultural practices are utilized to reduce the impact of sugarcane monoculture
- 2, In 5 years, farmers take less risk of monoculture by the development of other agricultural income channels.
- 3, In 5 years, farmers take less risk of monoculture by the development of non-agricultural income channels.
- 4, In 5 years, local people have rational awareness and knowledge of sustainability.

To the first sub-goal or outcome. Evaluation of the measuring indicators before and after the project indicates that:

1) Change of the fertilizer structure : The average number of pigs raised by each household increases by 100%. Though per unit land utilization of green fertilizer does not change meaningfully, the total area of land covered by green fertilizer, or total quantity of green fertilizers utilized doubles. However, though 100% of the villagers interviewed expressed recognition and understanding on the importance of using green fertilizer, the use of chemical fertilizer per unit land also doubles. The reason behind this is that the land fertility decreased and the sugar factory increases the supply of chemical fertilizer.

2) Change of household percentage practicing cross planting : The evaluation found that almost all households adopt cross planting at some degree. Far above the target of 50%. From perspective of land area, cross planting in flat land increased from about 5% in 2012 to about 20% in 2016, while cross planting in upland increase from about 5% in 2012 to about 85% in 2016.

While increasing income, the cross planting also generates much straw to enrich the soil, and especially, the soybean root has the function of collecting and keeping nitrogen, which is very helpful for the soil improvement.

3) Change of household percentage practicing crop rotation : The situation is: each cycle of sugar cane planting will last 3-4years, and only in the interval between two planting cycles can rotation be available; meanwhile, rotation in the intervals was already commonly practiced before the project. Therefore, there is not much room for change for this indicator.

To the second and third sub-goal or outcome. Evaluation of the measuring indicators before and after the project indicates that:

1) Change of income structure :

The project has meaningfully promoted animal husbandry and fruit tree planting in the project communities. And a more diversified production and income structure is on the way to change the mono ones.

However, due to lack of effective care, the fruit trees take longer time than expected to bear fruit and thus have not generated any income by the time of this evaluation. Hopefully they can bear fruit next year. At the same time, income from the animal husbandry is not stable, as they are affected by market price and epidemic situation. Moreover, the seed fund supported animal husbandry by now only covers a small percentage of the households and its income contribution to the community level is not meaningful.

The project also intended to promote women's development and women's income generation in the non-agriculture sector through the women's business group. This is a good idea. However, the evaluation did not find meaningful income contribution by the groups while their social effect is obvious.

Therefore, the evaluation team can only say that the project has not achieved this target. But we believe that with income from the fruit tree and animal husbandry improved, the income structure in the project community will change positively toward the objective.

2) The change of local governmental resources invested on diversified agricultures:

Promoted by this project, relevant country government agencies such as the forestry bureau, and agriculture bureau, and the county poverty alleviation office proactively contributed their technology and resources in promoting the diversified agriculture in the project communities. For example, the forestry bureau has provided technical support in the fruit tree planting; The agriculture bureau has provided training in rational fertilizer application, cross planting in sugarcane field, soil improvement, and animal epidemic prevention training; The country poverty alleviation office provided free fruit tree seed to the community though causing some negative effect to the repayment of the seed fund of this project.

Therefore, the evaluation can conclude that this target has been achieved, though we think that more work can be done to ensure support from these agencies coming in a more coordinated and sustainable way.

3) The change of technique resources and channels to which farmers can access.

Through trainings, both the villagers and the existing technical persons such as the vet, have enriched their knowledge and skills in animal husbandry and planting. While the local technical persons can provide better service, the training also provided connection between these people and the trainers.

So, the evaluation team can say that local technical support has been improved though we are not clear about the degree of the improvement.

4) People's recognition change about women and men's contribution and value for the family income :

The evaluation found that women's contribution in pig raising and cross planting is well recognized. But due to physical requirement, men are still taking the major role in goat raising and sugarcane planting.

The outcome, output, and their measuring indicators in the logic framework demonstrate that women's development and income generation was one of the priority focus of this project, especially in the non-agriculture income sector. However, the evaluation found that project activities arranged for this area were marginalized, and mostly limited to language

training and banquet dancing and table and bench providing. While these activities, especially the dancing, had gained good recognition to women's value from the social aspect, the income contribution is not meaningful. And we are not sure whether the women's group has got enough capacity to sustain their operation or not after the project.

So, the evaluation conclude that this target has been achieved at some degree, but it is still hard to say a full achievement.

To the forth sub-goal or outcome. Evaluation of the measuring indicators before and after the project indicates that:

1) The awareness change of people's recognition about nature and environment; and the young generation's awareness change about the hometown and environment:

Through the project, all the stakeholders, including relevant government agencies, schools, teachers, students, and villagers have improved their understanding and recognition about nature and environment, as well as about the relation between environment and their livelihood. And they are more willing to apply sustainable approaches to their livelihood when possible. More discussions and analysis is reflected in part F and point No.4.

Therefore, the evaluation conclude that this target has been fully achieved or even over achieved.

2) The application of sustainable approaches; and the change of farmers' own plan, as well as the governmental plan:

Just as comment and analysis in part F and point No.4, green fertilizer utilization and cross planting have been commonly accepted and adopted by the villagers. And understanding, recognition, and practices from the schools and relevant government agencies are also changing positively.

In addition to the positive involvement from the county agriculture bureau and forestry bureau as previously stated, the county educational bureau also work positively to make the change. For Example, in their environment education project, they compiled and published reference book on interactive environment education and shared them with all schools in the county; they also organized county-wide knowledge contest among the teachers on hometown and homeland; and environment education was included in the routine teaching plan and performance assessment of teachers. These initiatives are very helpful build up the awareness of the young generation on environment and sustainability.

Therefore, the evaluation conclude that this target has been achieved.

3. Project Impact

Sugarcane planting is the leading industry in LongChuan county, covering more than half of the total farmland. Just as the situation in the two project villages, the increasing use of chemical fertilizer and pesticide are reducing the fertility of the land and causing environment pollution. In the face of reducing soil fertility, more chemical fertilizer is used to ensure the yield, putting the production into a vicious circle while making the environment pollution more and more serious. This practice is leading the livelihood to an unsustainable and vulnerable model.

In the context, the project which aims to change to the mono-livelihood model by building a diversified production and income structure is very meaningful and important. Success of the project will have very important and positive impact to the county as well as its neighboring counties.

Though it is unrealistic for a project of this scale to have meaningful change within just 4 years, and it is too early to make rational judgement on the impact soon after the project completion, the evaluation team can conclude that the project effect is very positive towards its goals. The project has built solid understanding and recognition of both the villagers and other stakeholders such as schools and relevant government agencies on a diversified and sustainable production and income structure, and they are trying what they can to change the current mono-model by environment education, green fertilizer application, cross planting, rational application of fertilizers, fruit tree planting, developing animal husbandry etc. Though the effect from animal husbandry and fruit tree planting is not obvious at current stage, it leaves room for change in the future. We hope that income from the animal husbandry and fruit tree will increase to a meaningful level in a few years to help the villagers to move from depending on the monoculture of sugarcane. And the increasing green fertilizer brought about by the increasing animal husbandry will reduce the dependency of the villagers on chemical fertilizer. If this happens, a virtuous circle will begin to form.

At the same time, the project has laid the good base for community women's group and financial cooperative. After some consolidation, these two organizations can play a big role in social and economic development in the community in the future.

4. Project Effectiveness and Efficiency

Direct project input to the two villages is about CNY 3 million. If divided by the number of the population in these two villages, the per capita input to the community is about CNY 1200. So we can say that with the input of about CNY 1200 per capita and in 4 years' time, the project has raised a villager's awareness of sustainable livelihood, built up the capacity in planting and animal husbandry, taught and convinced the villager to practice cross planting and green fertilizer application, helped a Myanmar wife to integrate into the

mainstream, and left a seed fund for future development. From this angle, the project is very effective and efficient.

At the same time, the project also promoted communication and interaction among different players including the villagers, the women's group, the villager committee, the schools and the relevant government agencies. These communication and interaction is very helpful to build the sense of diversity and inclusiveness in the community, while promoting multi-sectoral cooperation for its benefit.

The project also helped to promote women's development. With the project, and male dominated social model in the community is changing, and women are more and more accepted in the decision making both at family level and in community affairs. And women are having more and more opportunity to demonstrate their value and capacity.

However, only a few people are involving in making the rules and can benefit from the seed fund. And the repayment rate is low. Therefore, the efficiency, effectiveness, and inclusiveness of the seed fund need to improve. At the same time, activity of the women's group is limited to community banquet service, and activity for the Myanmar wives is limited to language teaching. Therefore, more work need to be done to make the women's group more effective and efficient in both women's development and income generation.

5. Project Management

Just as discussed in Part E and point No.5, the establishment of the outcome and output targets and their measuring indicators were not based on project activities. This practice has caused some challenges to keep the project activities decided at a later stage fully in line with the previously set targets and measuring indicators. This weakness when put together with the lack of a base line data, is making the project monitoring and evaluation sometimes blind and confused in consistency and direction.

Except for this weakness, the project management is quite normative, well organized, and effective. It is really unusual for an organization like Buer which does not fully focus on development work, and whose project staff could not get enough technical training and support before and during the project implementation, to have achieved this.

For example, the project design was based on a sound need assessment; annual planning and review were going on well; and all the important stakeholders, including the FAO staff, village leaders, and villagers' representatives, were participatorily involved in the discussion and decision making; these involvement not only ensured local ownership and feasibility of the plans for implementation, but also provided opportunities for the stakeholders to build up their capacity by learning from and sharing with each other during the review and reflection.

From the angle of monitoring and support, field visits were going on regularly, and progress

reports on project implementation and expenditure were timely prepared by the county office, and received and reviewed by Buer Kunming office. Daily communication between project communities and project offices at both county and provincial level, and between FAO and Buer Kunming office are smooth and effective. For example, during our evaluation, we found that intimacy was obvious between Buer Kunming office and the FAO, and between project staff and the communities. We are kind of surprised that the Buer project manager Mr Liu is quite clear about all the details of the project and familiar with almost all the villagers we met. He and his counterpart at FAO are regarded as trustful old friends by the project communities.

6. Project implementation

The project implementation in environment education, green fertilizer utilization, and cross planting is quite successful. However, project implementation in the following areas experienced challenges and difficulties.

1) , The sugar cane has been the leading industry in the communities for many years, and it has formed a tradition for the villagers to depend on this monoculture for livelihood. In this context, it is very challengeable to change the current mono-model and promote diversified production and income structure in a few years. Though through the sustainability awareness raising, the villagers understand and recognize the importance to shift to a sustainable livelihood model, and are active in cross planting and green fertilizer application, it is hard for some of the villagers to apply the trained new approaches to their animal husbandry and fruit tree planting. And this reluctance has ended in slow growth of the fruit trees and death of some of the goats supported by the seed fund. At the same time, it will take time for meaningful income growth from the animal husbandry, fruit tree planting etc. Before the replacing income source is fully formed, it is not realistic to meaningfully change the current mono-model.

2) , The seed fund operation and management is also experiencing difficulties.

Queensland nut planting: After the project Queensland nut planting, the county poverty alleviation office delivered Queensland nut saplings for free to the project communities. This free delivery has caused very negative impact to the repayment of the seed fund loan used to by Queensland nut saplings. Those households think it unfair for them to pay for the saplings while other households got free ones from the government, and thus reluctant to repay the loan. This lesson indicates the importance of learning government plans when designing project activities, and keeping close coordination and communication with the relevant government agencies.

At the same time, some of the households failed to follow the trained new approaches to take care of their Queensland trees. And this failure ends in late fruit bearing time than expected.

Waxberry planting: Due to lack of timely technical training, the survival rate of waxberry sapling after planting is low.

Animal husbandry: Due to traditional impact, some of the households are reluctant to adopt the new approaches trained to their practice. And this reluctance cause death of the goat raised by some households.

The above-mentioned reasons and phenomena end in low repayment rate of the seed fund loans.

After finding out the problems, the county project office (FAO), together with the village development committee (VDC) conducted series of discussions with relevant households, making them understand the impact to other villagers if their loans are not repaid. After this effort, the seed fund loan repayment began to change positively.

However, the evaluation team thinks that in addition to the abovementioned reasons, the immature operation and management model is another cause, maybe the major cause of the low repayment rate. This is especially true when only a few people were involved in discussing and deciding the operational rules, and only a few households were covered by or benefiting from seed fund.

7. Project sustainability

Villagers' awareness and practice: The Villagers have reached common understanding and recognition on the importance of sustainability, application of green fertilizer, animal husbandry development, and cross planting etc. The evaluation team believe that these understanding and practice will continue after the project.

Awareness and practice at the schools: The teachers and school leaders we visited have got enough understanding and skills to continue the environment education in the schools. They also have got enough understanding on the importance of environment to their livelihood and thus have got the passion to continue the environment education. Some of them even expressed that after this project, they will try to look for fund to continue some of the activities such as summer camp, environment knowledge contests etc. Therefore, we believe that environment education will at some degree continue in the schools after the project.

Management capacity: Both the two village-project management group and the county project office (FAO) have got enough knowledge and skills to management the project. However, the FAO may be closed after this project; and the operational model of the villager project management group is vulnerable. Leaving of a key member may end in collapse of the group. This is already happening in Moshui village when the leader left.

At the same time, as suggested previously, the women's group and the seed fund management group are also weak in their self-management and development capacity.

Funding resource: The village can ask for help from their linking government agency. Therefore, to ensure project sustainability, building the self-management capacity and mechanism at the village level is needed and important. For this purpose, the women's group, and the seed fund management group should be prioritized.

F. Follow up Suggestions and Comments

1. Suggestions and comments on project planning and design

1) , Project activity specification is the base for developing other steps in the designing framework.

Project objectives and outcomes need to base on outputs from the activities; and project activities need to be in line with the root causes of the issue identified. Only following this logic flow, can the logic link between issue and project activities, between issue and project objectives, and between objectives and activities be clear and convincing. At the same time, only after the project activities are specified can implementation plan and time table be developed and M&E system be established

Of course, the activities can be adjusted when the need base changes. Many projects include a mid-term evaluation, and one major purpose of this evaluation is to review whether it is necessary to do some adjustment to the activities, output, and objectives if the base for designing the project changed. However, usually no big change will occur if the design is based on solid need assessment and consultation.

2) Base line data is the base to rigid measurement of project result

After the project document or proposal is approved, if the project wants to have rigid assessment of its result and impact, the base line data against the measuring indicators need to be collected before project implementation. Some project even set up a reference group and the same base line data is collected in the reference group. However, the practice of reference group is very complicated and expensive, and generally it is only for large scale project.

Nonetheless, if a project designer does not intend to have rigid measurement of the result but only want to have a judgement on the trend or direction, it is not necessary to establish the baseline data. And actually, project implementation without a base line data is the general practice for quite a few NGOs. But the measuring indicators need to be simplified in this case.

2. Suggestions and comments on the seed fund

Actually, in addition to the previously mentioned narrow coverage of beneficiaries and low repayment rate, there is risk of loss of the fund if the current mechanism is not improved.

To solve the problem and avoid the risk, the evaluation team make suggestions for both governance level and operation level.

1) Governance level: Make all the households shareholders of this fund, and then form a shareholders' cooperative in each village. On this base, all shareholders jointly discuss and agree on mechanism, policies and rules in operating and managing the fund, including loan delivery, repayment, interest etc.. It is also suggested consulting the "village mutual help fund model" initiated by the poverty alleviation office under the state council when deciding the policies and mechanism. At the same time, external technical person on finance and cooperative management need to be invited to facilitate and guide the model and policy establishment; and representatives from the villages need to have the opportunity to visit one or two mature and successful cases to build up their experience and confidence. And there are already quite a few very successful cases in Sichuan, Congqing, Hebei and Guangxi.

At the same time, to continue promoting women's development in the communities, there should be reasonable number of women members in the management team, and women's income generation should be among the priorities supported by the fund.

2) Operational level: We suggest that the following areas need to be carefully considered for sustainability reasons:

(1) There should be interest to the loan: while ensuring that the operational cost can be covered, the remaining interest income can also help to expand the scale of the loan to benefit more households. At the same time, paying interest can present misuse of the loan by the powerful group in the communities.

(2) Strengthen the self-management and development capacity of the management team. Currently the team is mainly driven by a crucial member. In case this member leaves, the management and operation cannot sustain. The management goal is to ensure that operation can sustain even when the most crucial member leaves.

(3) There should be flexibility in the way of loan delivery and repayment. For example, the present-passing model from Heifer international sometimes is very effective, especially for animal husbandry project.

At the same time, when delivering the loan, the production cycle and local production tradition should be considered. E.g. long-term loan will make the repayment more risky and the rotation less effective to cover more needy people.

(4) Participatory decision making and operation transparency should be ensured. If all the villagers participate in discussing and deciding the rules and mechanisms and are aware of the rules of loan delivery and repayment, their sense of ownership and belonging can be assured, and the risk of loan misuse will be greatly reduced.

3. Suggestions and comments on experience promotion

Sugarcane planting is the leading industry as well as leading income source for most villagers in Longchuan, as well as in its neighboring counties. And increasing quantity of chemical fertilizer and pesticide are used to promote the yield in the face of the declining land fertility caused by the chemical elements. Thus, sustainability of the land become quite crucial for the future of the local agriculture and livelihood.

Under this context, it is quite meaningful to promote experiences gained from this project to its neighboring communities to promote change in a wider range. Therefore, the evaluation team suggest conducting some advocacy and experience promotion activity at policy making level before the project handover, to consolidate effect and impact of this project.

4. Suggestions and comments on the women's group

The women's groups established in this project has generated quite positive social result and even impact at some degree. However, the self-management and development capacity of the groups are not mature enough to sustain after the project. At the same time, the income generation function of the group need further support before it can generate meaningful result.

Therefore, the evaluation team suggest that before the handover, some more work need to be done to consolidate the groups; and it is helpful to link the income generation function as well as women's development with the seed fund.

5. Suggestions on the handover

To maximize project sustainability and impact, the evaluation team suggest that Buer leave another year to consolidate some components of the project before the handover. For example, effective operation and management model and rules of the seed fund need to be established; the self-management and development capacity of the women's group need to be strengthened; some experiences gained in the project such as in sustainability awareness raising, green fertilizer utilization, cross planting, and rational application of fertilizers etc. are worthwhile to be shared with the neighboring communities and advocated to the local policy makers.

G. Annex (only for Chinese version)

- 1, The evaluation plan
- 2, Project output self assessment form (for project staff)
- 3, Self assessment form on the evaluation questions (for project staff)