



Livestock Groups: Lessons from Phonethong, Phonexay District, Luang Prabang Province

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1. Introduction

Phonexay district, just north of Luang Prabang city, has identified the production of meat as the highest priority in its development plans. With ever increasing numbers of tourists drawn by the World Heritage city, Phonexay district envisions its self as a main provider of meat for that urban market. In 2004 the URDP started activities to support the formation of livestock management groups in Phonethong village, Phonexay district. Phonethong village is located near the Luang Prabang border with Xieng Khouang province, at the end of a difficult mountain road that is accessible only during the dry season. The landscape is favorable to livestock activities, and the villagers have kept a wide range of animals as part of their livelihood strategies for many years.

The objective of the URDP activities is to increase livestock holdings by improving the management capacity and techniques of the local people. To do this, management groups were set up for cattle and goats. Breed stock for the group was provided as a revolving fund. Grasslands were planted for fodder. After four years of working with the Phonethong livestock groups, the project has recognized a number of important successful outcomes. There are lessons to be learned, both of the successes and failures of the groups. The knowledge gained from analyzing the full range of experiences is a crucial element for improving the livestock management model.

Phonethong village was established in 1975, when a group of Tai Phuan moved to the the current site from their old village. In 2000, small Khmu villages began to settle in Phonethong as part of the government's village consolidation program. Gradually, the population dynamics in this Phuan village shifted so that currently 90 out the total 144 households are Khmu. The two ethnic groups live in one large settlement and seem to be a fairly well integrated community. The village's economy is composed of several market-oriented production activities – pigs and other livestock, stick lac, sesame and pineapples.

The Phonethong case is one of two URDP livestock group support activities, the other located in Oudomxay district. Of the two URDP livestock villages, Phonethong has been understood to be the 'relatively successful' example. The working assumption has been that the group has functioned reasonably well, as witnessed by an increase in herd size, redistribution of capital to expand membership and the development of grassland planting. This field trip sought to

explore the experiences in Phonethong to learn what has happened since since 2004.

2. Data: What has happened in the Phonethong livestock groups, and why?

URDP researchers from NAFRI and NAFReC have made periodic trips to Phonethong to provide support to the livestock groups since their establishment. District staff supported by URDP are based in Phonethong to provide daily inputs and advice. The general observations have been that the groups are functioning well. What has happened in Phonethong? Why do we observe these things? We want to not only learn the lessons of the livestock groups, but we also want to understand the conditions under which these lessons have emerged. From our trip, we have seen that the local dynamics are rather complex, with a combination of both success stories and also difficult challenges.

Our working assumption for the Phonethong fieldwork was that livestock numbers have increased since the group formation. It was also believed that the group has been functioning relatively well. In practice, the cattle and goat groups have had rather different experiences. The data gathered in Phonethong show that in terms of herd size, member expansion and grassland area, the cattle groups have been relatively successful. Economic benefits have not yet been fully realized, as most members have sold grass seed but are still waiting to sell cattle. The goat situation has been more volatile.

A look at the governance of both groups found that the management and decision-making arrangements are weak. Meeting labor requirements is a significant challenge for members. In the cattle group, differentiation among the first generation "mother group" (Group 1) and second generation "calf group" (Group 2) is evident, and discussions revealed some tension between the Khmu and Phuan members in both groups.

Economic benefits have begun to flow. The bulk of these are not from the sale of animals, but rather from the sale of grass seed. Producing seed for sale emerged as a supplementary income generating opportunity which might help farmers as they built up their herds. Production has grown quickly but the marketing side of the equation is still poorly understood. These issues are explored further below.



2.1 Cattle group findings

The Phonethong cattle group has grown since its establishment in 2005, both in terms of members and herd population. The economic benefits of the activities are for the most part to be realized in the future. In the meantime, the group has focused on returning the capital and expanding grassland planting. In addition to the communal grassland activities, the group has begun individual grassland planting on a significant scale. There exist some small holes in the data on animal numbers. The groups themselves do not keep accurate and up-to-date records, so the current data tries to reconstruct the history of the group based on members' narratives.

Changes in herd size

The first indicator of group performance is the increase in herd size. The Phonethong cattle groups have seen impressive results in the growth of herd size. The incidence of death is very low, and birth rates are reasonable. Importantly, the group has returned all the animals borrowed from the project. With 14 members in Group 1, the average cattle holdings per member is slightly over 4 animals, over which they have full ownership.

Table 1: Status of cattle population in mother and calf groups

Livestock	Number at start			Current number	Born	Died	Lost	Consumed	Sold	Returned
	2005	2006	2007							
Cattle 1	28			60	63	2	0	0	3	28
Cattle 2		26		32	3	0	0	0	0	0

Expansion of group membership

The growth in cattle herd size has enabled the group to expand its membership, as the first generation group was successful in returning the capital – i.e. 28 offspring from the original animals. Twenty-six of the cattle were redistributed to new members of the group. The social composition of the expanded group is shown below, illustrated by two indicators: ethnicity and economic status.

Table 2: Membership of the cattle groups

	Total Members	Phuan		Khmu	
		Total	Poor	Total	Poor
Cattle group 1	14	6	0	8	6
Cattle group 2	13	8	1	5	0

The main criteria for joining the group is the availability of labor. Of the initial 13 group members assembled, seven families dropped out and were replaced because of the high demand for labor in collective grass planting activities. Once new members were accepted, the cattle were allocated by drawing straws. At the beginning, a large number of families volunteered to participate. The village leadership was in charge of deciding who would be accepted, based on some basic criteria. Reportedly a large number of Khmu families

were not able to participate because of lack of household labor. Cattle in the second generation group were allocated by drawing straws.

A total of 27 people are participating now in the URDP supported livestock groups. The group has basically doubled its membership in four years. Representation of Tai Phuan (6) and Khmu (8) members was balanced in the initial membership configuration in 2005. Slightly less than half of the members were classified as coming from poor households, but all of these were Khmu. It is reasonable to conclude that both the overall ethnic composition of the village and also the higher incidence of poverty among the Khmu are well reflected in this group. With the expansion of the group, the ethnic composition remained similar, but the number of poor households joining was notably low. Based on narrative from the groups, it is likely that the labor requirements were a major barrier to new Khmu membership in the expansion group.

Planting of grasslands

The communal grassland area of the group was originally 7.5 hectares, planted at the start of the project in 2004. The grassland area has expanded since then to a total of 11 hectares, an indicator that the group has been successful in sustaining and scaling up a key group activity. However,

members consistently raised a number of problems with the communal grassland areas. The two main comments include discontent with the unequal labor burden and inability to provide sufficient fodder in the communal grassland area alone. These are discussed in more detail below.

One of the key innovations of the group is the planting of individual grasslands. This development is partially the members' response to the problems mentioned above, and partially the result of URDP technical staff recommendation. The project demonstrated how grass can be transplanted from the communal grassland. There was also a demand for grass seed in the project, as there were plans for more livestock activities in the new phase of URDP.

After two years, the total area of individual grassland planted is almost 19 hectares. The individual grasslands are a mixture of rusa and guinea grasses. Group 1 has planted approximately twice as much grassland, which can be explained by the fact that Group 1 has been functioning twice as long as Group 2. The average per capita area is slightly higher in Group 1. In both groups, Phuan members plant significantly more than Khmu members.

Table 3: Comparison of grass planting

	Group 1	Group 2
Total area	12.3	6.6
Area per cap	0.9	0.5
Area per planter	1.2	0.7
Total area Phuan	9.7	5.1
Total area Khmu	2.6	1.5

The data, further disaggregated, shows more of the diversity within the group. The Khmu are clearly participating in individual planting less than the Phuan. Labor constraints were mentioned frequently, but there may also be land availability problems.

Table 4: Comparison of groups by ethnic group

Phuan						
	Members	Area	Planters	Average	Low	High
Group 1	6	9.7	6	1.6	0.2	4.6
Group 2	8	5.1	7	0.7	0.2	2.1
Total	14	14.8	13	1.1		
Khmu						
	Members	Area	Planters	Average	Low	High
Group 1	8	2.6	4	0.7	0.2	1
Group 2	5	1.5	3	0.5	0.2	0.8
Total	13	4.1	7	0.6		

Distribution of benefits

If it functions well, the group should be able to provide economic benefits to its members. This study did not conduct a full survey of household economic change. As members are just now preparing to sell cattle in the upcoming season, this section just presents a snapshot of some of the issues involved with equitable sharing of benefits within the group. The above data indicates that the Khmu members are generally of a lower household economic status, and have not developed individual grasslands as much as the Phuan. The Khmu, recent arrivals in the village, have experienced rice shortage on a fairly large scale. Although this research did not do a comprehensive study on this, it seems that some farmers have been able to gradually establish themselves.

Eight of the Group 2 households received male animals, while five households received 2 females. Needless to say, male animals do not provide the expansion potential for the household herd, but there were not enough females born to provide everyone. The group did its best to reallocate animals within the group to improve equity, but they are still searching for a way to replace the males with females. If the males are sold to buy females, the members that were originally allocated females will get calves earlier. There are still two calves in Group 1, which weren't born at the time of re-allocation, which Group 2 has requested as a loan.

The low number of cattle sold reflects the long-term vision group members are taking on the economic benefits. The members were in general agreement that they would prefer to wait until the cattle are sufficiently large to bring a large

cash infusion. Most economic benefits from the project seem to have come from the sale of grass seed. Last year the project bought 7 tonnes of seed from the village (seed production is discussed below).

Cooperation and conflict

Group discussions uncovered some differences of opinion between the first and second generation of livestock group members. Farmers' opinions on the strengths and weaknesses of the group were analyzed separately.

Cash income and rice sufficiency

The project aims to increase food security by raising cash income and improving rice availability. Mr Sivanh, a member of Group 1, experienced five months of rice shortage in the first year of the project. This was reduced to three months in the second year, and he had sufficient rice in the third year. The weather this past year, the fourth year, was bad and he had enough rice for only two months. Currently, his portfolio consists of upland rice, wage labor and grass seed. He exchanges labor with relatives to cover for the rice shortage, and is able to borrow against future harvests. His main concern is that this year he is not sure who is going to buy the seed to provide the cash that was so important for him last year. He has decided not to sell any cattle yet, because they are too small. So, although it seems that his situation has gradually gotten better since having joined the group, he is still vulnerable to climate and market fluctuations. In the past year, all but three households in Group 2 had to borrow rice from the rice bank. The other three were able to rely on their kinship networks to borrow rice. In Group 2, where people are required to invest a significant amount of labor before receiving animals, rice shortages cannot be met by the village rice bank.

Table 5: Group 1 reflections

<i>Strengths of the group</i>	Responses
Are able to learn a new technique	6
Received breed stock from the project	4
There is solidarity within the group	4
No one misses labor requirements	3
Income has increased	2
The group allows children to participate in labor requirements as representative of member	1
It is easier to treat sick animals	1
Livestock raising is easier because of availability of fodder	1
<i>Weaknesses of the group</i>	
Some families still do not give full importance to labor requirement	5
Grassland area has not expanded to its potential and fodder does not meet the feeding demands	3
Household labor shortage is a problem	2
There is coercion because missing group activities results in fines	1

Clearly the technical inputs to the project have been highly appreciated by the members, and the provision of breed stock seems to be a part of this. Some farmers mention that the group has been successful in establishing a cohesive membership that conforms to the input requirements. At the same time, the most frequent comment on group weaknesses has to do with families' reluctance or inability to meet the labour requirements. This may also be reflected in the seemingly contradictory statements about the participation of children in group labor. People who consider it a positive thing are most likely in need of labor and without the children would have to default on their labor contribution. People who are not pleased with this arrangement believe that it is another way for families who cannot or will not contribute labor to get around their obligations.

The fine for missing group labor is 10,000 kip per day, for any task. Given the difficulties in meeting labor requirements, the group has developed an informal system whereby people can hire other members of the group to make labor inputs for 8,000 kip per day. According to the members, this mechanism is utilized quite frequently within the group, particularly for when people have to tend to the flocks in the fields. However, the management of labor inputs continues to be a problem, and the district has been called in twice to help handle related disputes.

Despite the high level of dissatisfaction with the labor arrangements, the group leadership still believes that equal labor contributions are important in order to maintain a sense of solidarity. Some members clearly stated that they think the communal grazing areas should be discontinued. At the very least, the broad dissatisfaction with the inequity of labor contributions suggests that the group solidarity

would be increased by a system in which the benefits from the communal area are linked to the amount of labor contributed.

Table 6: Group 2 Reflections

<i>Strengths of the group</i>	Responses
There is solidarity within the group	5
Are able to learn a new technique	3
Received breed stock from the project	3
Members are able to follow the technical recommendations	2
Income has increased	2
It is easier to treat sick animals	2
There is exchange of opinions among members	2
No one misses labor requirements	1
<i>Weaknesses of the group</i>	
Some families still do not give full importance to labor requirement	8
Many people have to involve children to meet labor requirement	1
The amount of animals provided by the project is too few	1
Some families do not plant according to the recommendations of the group head	1
There is not enough learning within the group and problems remain unsolved	1

Group 2 echoed the positive sentiment of Group 1. Similar negative comments about the difficulty in making labor contributions dominate the list. The head of the group explained that it is very difficult to have meaningful discussions about the labor problems within the group. The regular meetings of the group are held according to the demands of the seasonal activities, but the group has not evolved into a forum for discussion or problem solving. In individual discussion, there are clear statements in favor of expelling members who do not meet the labor requirements. The group, however, is very hesitant to take any such action out of fear that the group will lose solidarity. On one hand, if the group has regulations, the leadership should be robust enough to apply the necessary sanctions. On the other hand, in this case, it is likely that the universal labor requirements are not equitable and should be re-examined before any actions are taken.

Management of the group and its activities

Having achieved the basic objectives of the group – expansion of herd, reallocation of capital and planting of fodder – the Phonethong experience offers some helpful lessons with potential for application in other areas. At the same time this study found some unexpected promising innovations, and some serious areas of deficiency.

The technical issues have been discussed above, but it is helpful to look at the functioning of the groups themselves, as a formalized mechanism for interaction among the groups, as well. The group has three leaders, a head and two vice heads. Leadership has changed several times. In Group

1 the general approach is to have each of the three leaders responsible for one area of activity – grassland planting and management, pens and grazing/rotation and vaccination. Group 2 reported that it did not divide its responsibilities in this way.

Selectin of members was based on three basic criteria. These are generally understood and agreed by the groups:

- ◆ must volunteer and be committed to participating
- ◆ there must be at least 2 people in the family who can contribute labour
- ◆ the family must be poor, but active

In reality, it seems that the first criteria is the most important. There as described above, there is frequent mention of labor shortage and low performance of group tasks. As introduced above, these factors have already been shown to influence farmers’ ability to participate in the project.

Disaggregating the data above according to ethnic group, we see that complaints about members missing labor requirements in Group 1 were made mainly by the Phuan, signalling that perhaps either the Khmu are having the most difficult time with this aspect of the group or the Phuan are more sensitive to a generalized problem. In Group 2, comments regarding labor inputs were made equally by Khmu and Phuan. There is some feeling within Group 2 that they are being taken advantage of by Group 1 members who do not contribute labor but still graze their animals in the communal grassland that new Group 2 members are working hard to plant and maintain. In the past year, all but three households in Group 2 had to borrow rice from the

office. But a previous project had already done so, and it was decided that the URDP groups should access medicines through the existing District fund. For whatever reasons, this did not happen. When there were animal health problems in Phonethong, the group took the initiative to collect money from the members and requested that the District officials at the village purchase the necessary medicines. In the end, however, the group could not produce the money that had been pledged by the members, and the good initiative failed. It is interesting that this innovation was tested, because it could be argued that this is one function that the group could successfully play in the future, if adequate support were provided.

2.2 Goat group findings

The Phonethong goat group has been hit hard by extremely high levels of animal death this past rainy season. Goat herds are known to be vulnerable in the rainy season, and the group has seen one of the worst possible scenarios. The group’s internal governance seems to be quite weak, which has exacerbated the problems. With the dwindling herd population, many of the members have expressed frustration and even a desire to leave the group. At first glance, it seems that the goat group was an unfortunate victim of bad weather. Further investigation shows that there may be technical and institutional factors affecting the bad situation.

There are 13 members in the goat group. Of the total, 11 are Khmu and two are Phuan. The growth of the goat group is summarized in the table below. Aside from the original two

Table 7: Status of Goat heard

Livestock	Number at start			Current number	Born	Died	Lost	Consumed	Sold	Returned
	2005	2006	2007							
Goats	10	6	6	26	40	24	0	0	14	10

rice bank. Some Phuan members of Group 1 stated their belief that the Khmu are less willing to cooperate. We still do not understand the dynamics behind these observations.

Farmers suggested that part of the groups’ problems come from the lack of detail in the groups rules and regulations, and the general low level of understanding about what the group is trying to achieve. In fact group members are divided into those who would like to see significant reorganization of the group, and others that think the problems are not that significant. The major point of diversion has to do with the need to apply sanctions to freeloaders. A more radical suggestion was that non-performing members should be expelled and the animals reallocated to people who are serious about participating. Some other people felt that the ‘solidarity’ of the group is more important.

Cattle Group 1 tried to expand the scope of its normal activities to vaccinate the herd against disease, because there was nothing in the group’s establishment regarding veterinary or animal health concern. URDP did discuss the possibility of setting up a medicine bank at the District

Phuan members that joined at the founding of the group, the membership of the goat group the group is predominantly Khmu. The members mentioned that this is a group of poor households. The members who have newly joined in 2008 have worked together with the group throughout the previous season, but have not received any animals yet because of high mortality in the herd this rainy season.

Table 8: Group members ethnic

	2005	2006	2007	2008	Total
Khmu	4	5	0	2	11
Phuan	2	0	0	0	2

Only the members who joined in 2005 have been able to sell any goats so far, and with the herd population drastically reduced, it is not likely that many will be sold this year.

The strengths and weaknesses of the goat group, as given by the members themselves, are presented in the table below. In general, goats are liked by farmers because they provide short-term fungible income. In Phonethong, it is clear that

the members have appreciated the provision of animals and the technical knowledge. Solidarity within the group is also mentioned as a positive outcome of the group.

Table 9: Reflection of Goat members groups

<i>Strengths</i>	
Able to learn new techniques	5
Technicians provided guidance and assistance in treating sick animals	3
There is solidarity within the group	3
Received animals from project	3
Easier because no need to search for fodder	2
Got income from sale of seed	1
Members follow the instructions of the group head	1
Able to create individual grassland plots	1
No one misses labor requirements	1
Able to harvest seed for sale	1
<i>Weaknesses</i>	
People do not meet labor requirements	5
Goats get sick	2
Personal work is affected by labor requirements	1
No solidarity with new members	1
Animals die frequently	1
There is insufficient labor	1
The group leader is not effective	1

In terms of weaknesses, the most common response had to do with the difficulty members experience in meeting labor requirements. In fact, it is interesting to notice that most of the responses have to do with the management of the group – labor requirements and shortages, ineffective leadership, and lack of solidarity.

The area of communal grassland planted by the group is small, but the group has not kept records and they are not sure of the actual area. In the first year, it was reported by District staff that an area of 48x48 meters was planted. This was followed by an additional area of 50x50 meters in the next year. In 2007 and 2008, there was more planting but there is no data available. The group was confident that there is a total of 10 more hectares available for planting, but expansion in area has not yet occurred.

In 2005, individuals interested in goat raising were trained, and then the group was established based on this membership. They agreed on a few basic rules for the group – primarily the regulations for duties in watching over the herd and the fine for missing labor inputs. But the rules were never written down. It seems that the members joining after the original 6 are not so clear about the group's functions and member responsibilities. The group do not hold regular meetings to discuss management issues. Rather, the group's activities have been just to call members to communal work duties. The lack of clear participation and a sense of ownership within the members have meant that a

mechanism for broad cooperation among members has not emerged. Members view the group as slowly falling apart because of its lack of clarity in purpose and activities.

Even this year when the goats are dying at an alarming rate, the group has not convened itself to discuss the problem and possible responses. It is recognized that the spread of disease could have been prevented to some degree if the management of the group had been more solid. For example, management of the pens is weak. On several occasions the goats got out of the pen when the doors were left open by the person in charge. Cleaning of the pens is not sufficient, and the pens are often damp because of a substandard roof. Furthermore, there is still a need for vaccination of the animals to protect them from parasites and disease in the rainy season. These are issues that could be handled by a functioning group. The leaders of the goat group have discussed this year's problems with the leaders of the cattle group, however. The goat members explained how they wanted to stop their goat activities and change to cattle. The cattle group does not have enough animals to continue with expansion of the group at the present. Effectively the only group response to these problems has been to try to find a way to stop raising goats.

The group is dominated by poor households, many with limited labor and land availability. Again, the experience of the group shows that several households have not been able to participate fully because of these constraints. The largest burden for the members is the communal labor requirement, and it seems that this works against the poorest of the members. In the course of discussing this issue, some of the members suggested that the selection criteria for the group should be revisited. Availability of labor is one of the original criteria for the group, but in reality a strong statement of commitment to cooperating within the group has held the most weight in the decision about who should be accepted as a member.

There is a palpable sense of disappointment in the goat group and their first message during our group meeting was that they were ready to stop raising goats. This year they have not released the goats into the grazing area, and when the animals started to die they put the remaining goats in the *sanam* to wait and see how things develop. However, when we began to discuss the details, there were plenty of ideas about how the group might be improved. These suggestions were about the need for focusing on individual grasslands, the need to improve the management of the group and the need for keeping records and monitoring the group's activities.

2.3 Seed production activities

One innovation tested in the Phonethong livestock groups is the production of fodder grass seed in individual fields. The original plan within the URDP model for support was to plant communal grasslands for locally consumed fodder. Knowing that the programme was planning to expand livestock activities in the new districts, URDP encouraged and assisted farmers to produce fodder grass seed for use in new activities.

With the promise of additional income sources villagers enthusiastically engaged in the seed production activities. The activity expanded from a communal activity managed by the group, to an individual activity led by members. This transition was further stimulated in 2007 when URDP offered to purchase seeds from the Phonethong group to supply new livestock activities starting in other Districts. A similar development was seen in Ban Saisamphanh in Namo, where a farmer frustrated with the unequal cost-benefit distribution of the communal planting system started planting in his own fields. The key to larger scale production in Phonethong seems to be the appearance of a market.

In 2008, under the URDP programme of support, approximately 50 farmers gained income from the sale of grass seeds. A total of 7,800 kilogrammes of seed was sold, consisting of four varieties. The average level of cash income was 2.1 million kip per farmer, with a range of almost 8 million kip to just above 100,000 kip. This is a significant increase in annual cash income, although further analysis will have to be done to understand the impacts on household economies.

Looking into the distribution of income among members, preliminary analysis of the data suggests that the Phuan farmers benefitted more from seed sales. First, a significantly higher number of Phuan farmers made sales. Second, the average income from was approximately half of the total average. This is perhaps not surprising, given that the Khmu farmers have a significantly smaller area of planting, and is a concrete reason for further investigating the limiting factors to farmers' expansion of individual planting.

There is a need to look further into the seed sales of Phonethong farmers, because it seems that some farmers acted as 'agents' for other farmers. This is not captured in the data, and may distort the data to some degree. For the Khmu, for example, it is possible that several farmers sold seed together, which essentially hid the number of people selling. That would mean that the average income was even less than estimated. We know from anecdotal evidence that several Phuan farmers played this role. In any case, it would be interesting to follow the process of selling seed more closely to see how farmers react to the market access opportunity. In principle, there is no problem with local buyers emerging. In fact, it is very interesting to observe how farmers organize to engage with a market opportunity. However, since the project is concerned with the local economic benefits, the local purchasing arrangements should be investigated more closely in upcoming seasons.

While the vast majority of sellers was from Phonethong, several farmers from the neighboring village of Ban Na Ngoi sold seeds. This demonstrates that technology has spread from Na Ngoi, while farmers brought the product back to the village to sell.

Seed production is a potentially interesting source of supplementary income for the livestock group. And the shift from communal grasslands to individualized grasslands may enable the production of a considerable amount of seed. However, a stable and reliable market for seed, beyond the project's own internal demand, has not yet been identified. Farmers' expectations have been raised by the initial level of purchase by URDP, but even the internal demand is unclear at this point. One lesson to be learned from the experience with seed production, applicable more generally to any cash-cropping opportunity, is that the market should be thoroughly investigated before farmers are encouraged to adopt any activities. This is especially so in areas like Phonethong where – unlike places with good access to roads, transport and regional marketplaces – there are major constraints to farmers' using their own resources and networks to develop market linkages by themselves. As with other economic opportunities, the promotion of production options should be closely linked to a market demand.

2.4. Other livestock activities in Phonethong

Outside of the URDP livestock activities, Phonethong farmers are engaged in livestock raising as well. Buffaloes and goats are the main animals kept. According to data from 12 households surveyed, households raising buffaloes kept an average of 4 to 5 animals. The village herd size has been stable. Households raising goats have an average of 5 to 6 animals. The herd has increased modestly over the past 5 years. There is only one household raising goats.

More than half of the households surveyed have gained income from sale of animals. Six households have sold buffaloes at a total value of 24.8 million kip (average 4.1 million kip per household), while 3.6 million kip (average 1.2 million kip per household) of income was generated in the goat-raising households.

Non-member households had a somewhat different set of insights on grassland planting as an economic activity. The positive effects include: improving individual time use in livestock activities, increasing income through seed sales, and improved numbers of healthy animals. These households raised the following problems, as well: bad seed formation, loss of planted area to pests, lack of land, and conflict with other livestock owners and loss of harvested seed to pigs.

Table 10: Total number of animals in Phonethong

Type	Number of animals at start				Current number (2008)	Born	Died	Lost	Eaten	Sold
	2004	2005	2006	2007						
Buffaloes	48	45	48	46	52	24	9	2	0	11
Goats	23	20	24	27	35	31	21	7	0	17
Cattle	4	4	4	4	5	1	0	0	0	0

3. Expansion of technology and information

In some senses, the successes of the Phonethong activities may provide a model that could be replicated in other areas. This is in fact one of the key areas of interest both within URDP and the District. We do see that some of the technology and information have spread already beyond the original scope of the project.

First, grassland planting has generated some interest in Phonethong beyond the URDP-supported group. Thirteen non-URDP households were surveyed for livestock and seed production activities. In this sample of households, farmers have planted a total of almost 5.5 hectares of seed grass, using both rusa and guinea. This is the second year of planting. In 2006, four households planted 1.26 hectares. In 2007, an additional nine families planted. In the two years, just over one ton of seed was produced and sold. The total income from seed sales was 21.3 million kip. Per household income ranged from 300,000 kip to 3.6 million kip, with an average of 1.6 million kip. Technical support was not given by the project, but came rather from local members of the URDP group.

Second, the grass technology has begun to spread beyond Phonethong. For example, in neighboring Ban Na Ngoi two households asked for seed from the URDP office. As already mentioned, villagers from Ban Na Ngoi sold seed to URDP in 2008. However, interest is lower than it might otherwise be, because of the lack of a market. Farmers report that right now, the presence of a buyer is more important than any concerns with the price. It is also believed by successful farmers that if the seed production could be turned into a business activity, there is real potential for alleviating poverty.

It is interesting to note that Ban Huai Khing has also started planting grassland, but are not interested in buying seed from Phonethong because they have been able to produce enough seed themselves to start their own operation.

With regards to expansion of the herd, the project and the District would like to begin to reallocate the existing capital to other villages in Phonexay. In this sense, there is confidence that the husbandry model is successful enough to begin to actively 'scale-out'. The village headman has expressed a desire to keep the capital in the village until all interested families have been able to build up their own herd.

The momentum for scaling out signifies two things. First, benefits are being created through the project's approach. Second, there is a need to understand and revise the evolving model, to ensure that the problems encountered in this first round of activities are not unnecessarily exported to new farmers.

4. Synthesis of issues in Phonethong livestock groups

This study of the Phonethong livestock groups has identified a number of interesting issues that are relevant for the URDP programme as it prepares to initiate research on livestock management in other districts of the north. As mentioned

above, the cattle group has been successful in increasing herd size, returning the borrowed animals and increasing the membership of the group. The synthesis below focuses on the remaining lessons learned.

4.1 Communal vs. individual grasslands

Farmers expressed a strong preference for planting fodder grass in individual fields, rather than the joint group fields. The basic problem of free-loading in a situation where distribution of benefits is not proportional to inputs. The incentive structure for participating in the group's communal planting activities are extremely low, and have resulted in poor results. The incentives for planting in individual fields, using technology from the programme, seem to be much more interesting. This preference is supported by non-group farmers who have adopted the technology.

4.2 Equity in access to group benefits

The requirement of labor contribution to joint planting activities is a constraint to participation, especially for poorer households. Labor availability is one of the criteria for membership. There were some cases of members dropping out because of their inability to contribute the required labor inputs to group activities. We see that the discrepancies in individual grassland area have translated into significantly different levels of income, and that the balance has clearly been in favor of the Phuan. In terms of livestock management, goats and cattle differ in farmers' minds. Cattle are being raised with a long-term view towards making major improvements in living conditions. Goat herders are looking to secure short-term income to meet daily needs. These two strategies are linked to the economic status of the members, and it is worrying that the poor group is having more difficulty.

4.3 Technical problems

Although the cattle group has made an impressive show of their herd growth, the group's planting activities are still experiencing problems. In addition to the labor input problems, the management of the grasslands and herd is still problematic. In the case of the grasslands, it was originally envisioned that farmers would cut-and-carry grass to feed the cattle. In reality, the grasslands have become grazing land that is not managed well. The result is that consumption of grass is unpredictable and uneven among members. Management of pens – including construction and animal movement – has an impact on the success of the group.

4.4 Group management constraints

In all cases in Phonethong, the groups do not function as real groups. The main group function is labor inputs to communal grassland planting. Regular meetings are not held, understanding of group rules and regulations is low, and the group leaders are for the most part unable to sanction individuals who do not uphold their obligations as a member.

4.5 Grassland for feeding vs. grassland for seed production

There are two purposes for planting grasslands with fodder seed. The first is to produce grass to feed one's own animals. The second is to produce feed for sale. With limited area and labor for planting activities, there may be a trade-off that farmers are making with regards to how they reap benefits of their efforts. While the original intention was to create a larger herd of healthy animals for sale, commercial production of seed has grown rapidly. The implications of commercial production on local fodder consumption are not understood.

4.6 Implications for Phonexay as a model 'meat district'

The success of the Phonethong livestock group in expanding the herd to date suggests that there is potential for other villages to increase herd size in response to the district development priority. Since the Phonethong group has not yet begun to sell cattle on a large scale, the economic impacts are yet to be seen. Commercial production of seed is another option. The economic success of the activities will rely upon the villagers' ability to find markets for their products. Road access, transport and the capacity of local markets to absorb new supply will all be key factors.

5. Local recommendations

Farmers made a number of useful suggestions during our field activities. These recommendations were obtained through individual interviews and group discussions. The recommendations provide an important point of verifying our preliminary conclusions and a starting point for considering next steps of support.

5.1 Increase technical support to groups

The group members, both cattle and goat, made general requests for more regular support from URDP technical staff. In particular, villagers requested assistance in dealing with the goat death problem and the systems for fattening cattle.

5.2 Increase area of grass planting to meet local need for animal feed

Villagers value the grass planting activities that have emerged. They almost unanimously say that there is still not enough fodder for the herd and that they would like to expand the area under planting.

5.3 Provide training and education for group members

In general, group members were not entirely satisfied with the management of the groups, and felt that training and education for both leadership and members would be beneficial.

5.4 Increase number of goats available to group

With the serious die-off this year, goat group members requested more animals to rejuvenate the herd.

5.5 Arrange study tour to areas where livestock groups have been successful

Farmers expressed interest in travelling to other areas where livestock groups have been successful. Areas of interest include not only husbandry, but also group management, grass planting and marketing.

5.6 Re-organize groups

There were several serious calls for the groups to be reorganized; that is, leadership reviewed in conjunction with a reassessment of the rules and regulations that should govern the group. It was thought that:

- ◆ the District should provide more detailed support in revising livestock regulations
- ◆ group leadership should be changed where necessary
- ◆ capacity and responsibility in leadership should be built
- ◆ group activities should be revised in recognition of the labor contribution problems.

5.7 Provide veterinary support

Villagers are concerned with the death rate of the goats. The general understanding is that goats are dying because they are eating wet grass. Disease with in cattle is also of concern, but not to the same degree of urgency as goats.

6. Researcher recommendations

After detailed discussions with Phonethong farmers and analysis among the research team in the field, a number of recommendations were identified. These include both technical and institutional issues.

6.1 Revisit group management

It seems clear that there is an urgent need to revisit basic rationale, structure and function of the groups. This review should include attention to: the incentive problem with planting, the role of the group, and responsibilities of members. URDP support should have a strong component of 'management' that would help group leaders and members participate in the group. Currently, the group serves two functions – mobilizing labour and redistributing calves. Exploring the group as a problem solving body, or a forum for discussing issues that the group members face, could greatly enhance the role of this local organization. Other functions that could be discussed include: dispute resolution, veterinary services and supplies, and marketing. For example, the cattle group has already mobilized itself to purchase medicine for the animals, but the necessary support was not forthcoming. Such new functions would all require specialized inputs from the programme.

6.2 Re-examine market potential for seed production

It is somewhat remarkable how the seed production took off in its first year and spread into the second year. However, with the programme being overwhelmingly the largest market, the programme should invest in a study of the options for facilitating farmer access to seed markets. There is a risk that farmers may suffer losses to their investments if markets are not seriously considered. At the same time, there is a real potential for increasing incomes, which should be researched further. Expansion of seed production should be done cautiously.

6.3 Explore options for fattening

As farmers are just getting ready to enter into large-scale cattle sale, the time is right for technical support for fattening. Group leaders expressed interest in fattening, and this is something that the programme could provide. A new package of support for finishing would not only increase the potential economic benefits for farmers, but would increase the levels of trust between farmers and the programme. Responding to information in this type of feedback loop is important for URDP.

6.4 Analyze costs and benefits of group activities

There is much discussion of the labor costs involved in various aspects of the group's activities. There is also a question of trade-off between grass for fodder and grass for seed. Once farmers start selling cattle it would be interesting to document how household economies change with the influx of cash. For the goat groups, the successful stories should be more carefully documented to demonstrate the types of economic benefits that are available. It would be interesting to examine within the member households what impact the group activities has had on gender relations. There was also mention of children's roles, which could be examined further, as well, to understand the social impacts of the groups.

6.5 Analyze the markets for meat production and distribution

The technical success of the livestock groups is encouraging, but the marketing side will determine whether it becomes a valid development model. URDP should follow up with studies of the marketing issues over the next year. It is likely that the difficult road access may be a barrier to farmers' realizing income growth. However, farmers assured the research team that they have active networks with the main middle-men in several areas. Much could be learned about how farmers use their networks to overcome marketing constraints. Similarly, follow-up research could identify areas which the district could provide assistance in order to make the 'meat district' vision a reality.

6.6 Reassess goat raising activities

The morale of the goat group is very low. The herd has taken a big hit in the past rainy season. The programme should examine the groups management practices and follow up with an enhanced capacity building effort. This could include support to the overall group functioning, animal and pen management, and veterinary support. The first recommendation of the goat group was to shut down activities and start something else. When the issues were probed more deeply, it became clear that farmers appreciate and value the economic benefits to be had from goats. Sale of goats can provide a vital source of income to cover basic expenditures and buffer from some external shocks. The programme should thus make another effort to improve the management of goats.

7. Conclusions

The Phonethong livestock groups provide insightful lessons on the potential for livestock as a driver of local development. The Phonethong situation is particularly interesting because it is taking place within a district strategy that prioritizes livestock production. Because the group was successful in expanding herd size, we have been able to observe the reallocation of animals and expansion of the group. We have also seen the beginnings of more diversified approaches to livestock, in which animal husbandry and market-oriented seed production are combined. We have not yet seen how economic benefits will be distributed and what impact they will have on the village.

The groups themselves have experienced some basic, but serious problems in terms of function. This case suggests that the fundamental role of the group should be re-examined. The difficulty in labor contributions, and the spontaneous development of individualized grass planting activities may mean that the group should not focus on mobilizing labor for communal activities. Rather, there is a range of issues having to do with how the group manages itself to support its members in problem solving and facilitating access to other resources necessary for market-oriented production.

The role of ethnicity within the groups is clearly an issue, and may be a key framework for examining how equitable access to URDPs support it. Although the groups started out with representative membership reflecting the relative proportions of Khmu and Phuan, implementation of the activities seems to be bringing about some differentiation among the two. This is also compounded by inherent levels of poverty in the group.

Projects that promote production for the market should conduct thorough studies of the target market so that project interventions do not create distortions in the local economy and increase the vulnerability of local people who participate.

Field Note Report Series

No.	Title	Author
701	Report on Area-based Analysis in Namong, 9-12 July 2007, Namong, Oudomxay	Research Management component
702	Area - based Analysis – Phongsavath District, Luang Prabang Province, 16th to 19th July, 2007	Research Management component
801	Exploring Human-Rights Based Approach in URDP, 23-29 March 2008	By Nathan Badenoch, Johan Hallenborg, Houmchitsavath Sodarak & Thongsavanh Keonakhone
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