

Recommended Guidelines and Strategy for 2020-2021 SAFE Ecosystems Project Animal Husbandry, Village Vet and Feed Activities

1. Brief Background and Introduction:

Livestock Activities completed in 2019 and 2020:

- In 2019, the SAFE Project prepared Annual Plans (or proposals) to be submitted to the Environmental Protection Fund¹ for chicken, goat and pig raising training.
- As part of this, animal banks were developed in the participating villages with rules and regulations prepared for each village group.
- The village groups are as follows:
 - Pig Raising in 13 Target Villages: Sanamxay, Nongsonghong, Tangvainam, Tangvaikhoke, Nongsim, Dongnongkhan (Xonnabouly); Nathang, Phaleng (Songkhone); Sanoun (Phalanxay); and Kae, Naphek (Phine); Padong, Nathaman (Thapangthong).
 - Chicken Raising Groups in 8 Target Villages: Dongnongkhan, Nasano, Naxay (Xonnabouly); Phaleng (Songkhone); Sanoun, Nahou (Phalanxay); Kae and Naphek (Phine).
 - Goat Raising within 4 Target Villages: Nongsonghong, Nasano, Naxay and Padong villages
 - Fish Raising within 4 Target Villages: Sanamxay, Tangwainam, NagngwaiKhok and Nahou villages
- Initially, the DAFO livestock extension teams from each of the Districts were intended to be engaged and play a major role for the implementation of these activities, however due to multiple setbacks and delays due to inaction by the DAFOs, the project sought out support from the Nong Tao Training Center and the Savannakhet Agriculture Training College.
- To date, the implementation of livestock and animal banks activities has not been to the standard as originally planned, nor yielded any significant livelihood improvement results.
 - The methodology prepared in the Annual Plans for the EPF have not been followed.
 - In general, the training for animal husbandry has been basic and not taught in any great detail to ensure communities understand techniques or concepts.
 - District staff have “rushed” planned visits to the villages.
 - To date, approximately 50% of the livestock for project livelihood activities have been purchased and delivered.
 - In several cases, observed animal pens have not been built according to the trainings, not has proper feed been used.
 - DAFOs responsible for purchasing and supplying livestock for this activity did not record activities well. There is no official inventory list that has been provided, no signature from villagers receiving animals, nor have there been photos as part of record of animals being delivered.
 - In some cases, animals reported as being delivered to villages by the DAFOs have already been reported as having died before an inventory could be taken, yet no proof of mass mortalities has been provided to the project.
- As a result of the poor results from the animal bank and livestock purchases, this activity will not be continued beyond 2020. However, there will be a need to purchase the remaining 50% of the livestock as this had been pledged to the communities through the 2019 conservation contracts.

Fish Pond activities completed in 2019 and 2020:

¹ In December 2017, the SAFE Ecosystems Project prepared an MOU with the EPF to transfer \$1.2 million USD to their accounts as a means to facilitate grant making for village livelihoods and reforestation activities.

- Similar to goats, chickens and pig trainings, an Annual Plan (or proposal) was submitted to the EPF in June 2019.
- Ponds in four villages had been determined as appropriate for this activity.
 - Support Village Fish Raising Groups in 4 Target Villages: Sanamxay, Tangvainam, Tangvaikhoke and Nahou villages.
- Trainings on this activity were provided by the Nong Tao Training Center and were considered to be relatively “hands-on”.
- As part of this activity, Villages fenced community ponds to prevent cattle, buffalo and goats from entering the water and polluting it. Ponds were stocked with fingerlings and methods on fish raising and harvesting were taught.
- Several of the villages have already harvested fish and have acquired earnings.
- The sustainability of this activity is yet to be determined as villages have not yet made arrangements to purchase new fingerlings with the profits earned from harvesting. Despite the relative success of the activity, the villages were not adequately prepared to continue with their activity on their own. The participating villages have already indicated they are interested in continuing this activity.

Village Vet activities completed in 2018, 2019 and 2020:

- Village vet activities were initiated in 2018 and were continued with an Annual Plan (or proposal) submitted to the EPF in 2019.
- There are currently 49 Village Vets that have been trained to some degree and are operating in the 16 main target villages.
- Similar to issues noted with the DAFO livestock extension units above, there is some question as to how in-depth the animal health training has been.
 - Similar to above, trainings may have been rushed and DAFOs may have been inactive.
- There is also some question as to the selection process of the individual village vets; in several cases, the participants did not volunteer to become village vets, but rather were chosen by the Village Development Committees.
 - It has been noted that since the original selection of Village Vets, several participants have quit. It may be possible this has been a result of the selection process.
- Finally, it has been reported from some villages that there is a lack of trust with the Village Vets and their abilities resulting in low usage of their services.

Issues that need to be addressed:

“Big Picture” Understanding of Activities

- Several issues related to the quality of livestock extension activities have been noted above.
- However, there has been one issue related to all livelihoods activities that is not quality related, but has more to do with the purpose of the activities as they are related to the overall Project goal and objectives (Note: this issue is not only an issue with livelihoods, but have been an issue with the implementation of multiple Project activities).
 - To date, each livelihood activity has been implemented in a silo fashion simply for the sake of the activity without a clear purpose.
 - Targets and indicators (such as income generation) have been largely ignored.
 - Activities have been developed in a way that does not identify how it will address the overall goal or objective of the Project.

- As part of this, issues related to livestock raising within the Dry Dipterocarp Forest have yet to be addressed:
 - Cattle and buffalo are left to range freely within the forest which potential contributes to compacting soils and foraging of young tree seedlings. This has been particularly noticed in the reforestation areas of the project where young seedlings have been significantly affected.
 - Villagers set fire to forest areas around the village annually in order to burn brush and stimulate fresh growth of wild grasses. While fire is a part of the ecology of Dry Dipterocarp Forests, the fact that this is an annual activity in the same areas is likely having an impact upon the fauna diversity, the health of the soils, and biodiversity in general. Additionally, the burning also releases green house gasses into the atmosphere and contributes to reduces air quality.
 - Promoting alternative livelihood activities and income generation as an incentive, or alternative, to illegal timber harvesting within the National Eld's Deer Sanctuary.

Extension Training Activities

- As noted above, the DAFO teams have been inactive during the implementation of livestock related activities. As such, it was necessary to recruit outside support from the Nong Tao Training Center and the Savannakhet Agriculture Training College.
- Additionally, the Livelihoods Specialist hired by the project is not a technical expert in the field of animal husbandry and has limited ability to fill training gaps.
- Given the need to improve the quality of the livestock activities and ensure Village Vets are well utilized, there is a need to have a Specialist with the project able to take the lead with these activities, support Village Vets and ensure overall quality.

Sustainability

- In order for livestock activities to become more sustainable, issues related quality of training, feed, and purpose in relation to the Project objective and goals need to be addressed.
- Animal Husbandry – currently there are low skill levels within the Project villages required to improve livestock production. Improved quality of training on such methods would be beneficial to villagers as well as reduce stress upon forest management.
- Feed – currently, villagers generally do not grow or produce feed for their livestock. Introduction of new feed methods and feed production would complement animal husbandry training and reduce stress upon forest management as it there is the potential to reduce the need for livestock to roam freely for feed.
- Minimize fire – As areas of forest are burned annually by villagers, education on fire management and reduction may be necessary to improve forest management.
- Economic incentive – the income generated, or at least the potential of the income that could be generated from livestock and fish raising has to be enough of an incentive to discourage villagers from engaging in illegal timber harvesting.

COVID 19

- While not directly related to natural resource management or conservation, the recent global pandemic, **COVID 19**, will undoubtedly influence the success and outcome of the SAFE Ecosystems Project.
 - As of writing, only 23 individuals in Lao have been officially diagnosed with this virus, however, with the National lockdown and closure of International borders, thousands of Lao workers returned to Lao PDR and are currently without employment or incomes.
 - While the current medical emergency is not as dire as in other countries, there is a real risk of economic depression which could exacerbate illegal logging and other forest crimes within the project area. Gains that have been since Project inception in 2016 could be lost as a result

- Therefore, all livestock activities, should only be implemented if they provide clear economic benefits and income generation.

Moving forward in 2020-21:

- In general, livestock activities supported for the remainder of the Project will need to address the overall SAFE Ecosystems Project Objective: *“to facilitate a transformative shift towards sustainable land and forest management in the forested landscape of Savannakhet Province in order to secure the critical wildlife habitats, conserve biodiversity and maintain a continuous flow of multiple services including quality water provision and flood prevention.”*
- Therefore, livestock activities need to be an adequate alternative to illegal logging and other forest crimes which many villagers engage with.
 - All livelihood activities must provide an economic benefit and improve income generation for participating villagers.
- Focusing upon the key aspects above, livestock efforts will need to be revised for the remainder of the SAFE Ecosystems Project to address the above issues through the following:
 - Recruitment of Agriculture Specialist directly by the Project. This position would be assigned to work with PAFO/DAFO extension officers to take the lead and train, develop and maintain all livestock related activities within Project villages.
 - As part of completing the 2019 conservation contracts, the remaining 50% of livestock will need to be purchased.
 - Hands-on, practical animal husbandry training and capacity development with villagers will need to be implemented; the focus of this training will need to be on “how to improve livestock productivity”.
 - Improved methods of feed will need to be explored; in particular, training villagers on how to grow proper feed that would assist in improving livestock productivity and reduce the local practice of allowing livestock to range freely within the forest.
 - Support and improve training with the local Village Vets in order to increase their skills and build confidence from the communities to use their services.
 - In coordination with the Community Conservation Contracts, explore ways to assist villagers to improve land-use and minimize wild fires and improve their fire management.
 - Potentially explore livestock group agreements to reduce fire in exchange for grass seed for cattle feed.
 - Support fish raising activities with emphasis on increasing household income and sustainability of the activity beyond the project period.
- Explore integrating livestock management activities with other Project livelihood activities.
 - If improved animal husbandry methods could keep cattle and buffalo near villager’s homes, then the manure from these animals could be collected and processed to make organic fertilizer which could be used for home gardens and rice production.
 - Coordinating with the Reforestation component of the Project to plant trees at villager’s homes that could be used as forage / feed for cattle, buffalo and goats.
 - Coordinating with the agricultural specialist on growing fruits and plants that could be used as feed for pigs and chickens.

2. 2020-2021 Guidelines and Strategy:

Livestock Extension and Training Activities	
Step	Description
1	<ul style="list-style-type: none"> • Recruitment of Livestock Specialist to provide comprehensive support to ensure sustainable livelihoods opportunities links and benefit from forest and wildlife conservation inclusively. <ul style="list-style-type: none"> (i) Lead and support the planning and implementation of livestock / animal husbandry activities for the villages supported by SAFE Ecosystem project to generate stable household income. (ii) Lead coordination and selection of viable villages for livestock related activities and provide advice to project team and government counterparts, as well as communities. (iii) Facilitate adoption of various productivity enhancing technologies to improve household incomes and promote sustainable livestock production practices. (iv) Build the capacity of village veterinary members to be able to provide basic animal health services in their communities in target areas in collaboration with DAFOs. (v) Provide technical support related to livestock management to the participating households to ensure they generate sustainable incomes from livestock raising opportunities with keen interest provided to vulnerable groups such as youth, women and ethnic groups within the project target area. (vi) Facilitate community consultations and follow up on trainings involving relevant stakeholders to support sustainable livestock related activities to the target communities.
2	<ul style="list-style-type: none"> • Planning and preparation of livestock / animal husbandry activities for villages supported by Project to generate stable household income. • In order for the Livestock Specialist to gain a greater understanding of the activities completed prior to his/her recruitment, there should be a survey or analysis of livestock activities within the 16 villages. <ul style="list-style-type: none"> ○ The overall objective of this activity will be to make a SWOT analysis of all activities. ○ Identify the strengths, weaknesses, opportunities, and threats that are found in each activity. ○ The identification can help decision making to enable the sustainability of future actions for achieving the goal for 2020-21.
3	<ul style="list-style-type: none"> • Based on analysis, provide insights on how to move forward with the animal banks. • Remaining livestock for animal banks must be completed as soon as possible. Therefore, a final, agreed upon plan must be developed to achieve this. • The Livestock Specialist will be required to work with the Livelihoods Specialist and Component 3 Coordinator to complete the purchase of the remaining pigs, goats and chickens for the animal banks as part of the incomplete 2019 Conservation Contract activities.

	<ul style="list-style-type: none"> ○ An audit of all animals reportedly purchased and provided by the DAFOs to the villagers must be completed. As part of this, a proper inventory with photo record should be prepared. ○ Regarding the purchase of the remaining animals, the Project may need to contract a livestock broker as this activity may consume a significant amount of time. ● As part of this, participating villagers must receive training (see step 4) and complete required actions (such as proper animal pen construction) prior to receiving the livestock.
4	<ul style="list-style-type: none"> ● Based on the analysis in Step 2 identifying village needs for improved animal husbandry / livestock production, the Livestock Specialist must develop a curriculum and training schedule. ● Training to be scheduled monthly and quarterly at the Ong Mang Center and within villages. <ul style="list-style-type: none"> ○ Phased implementation of livestock extension training activities which corresponds with markets and seasonal village activities. ● Livestock training extension training activities to be divided into 4 main components (but not limited to): (i) animal husbandry, (ii) feed preparation, (iii) veterinary medicine and (iv) community land-use planning for livestock. ● Potential ideas for training include: <ul style="list-style-type: none"> ○ Allotting commune area specifically for the cattle and goat grazing in village and growing grass for rotational grazing. ○ Applying silvopastoral techniques in the forest land areas of the village that are allowed for animal grazing. ○ Promoting the improved utilization of rice straw, using available local feedstuffs (rice bran, cassava....) as feed supplementation and growing high yielding grass at individual farmers' land. ● All livestock training activities should be implemented in coordination with the Village Vets as a means to improve their knowledge, skills and abilities. ● As necessary, equipment and tools for livestock production may be procured and handed over to the Village Development Committees.

Coordination of Livestock Activities with other Project Activities	
Step	Description
1	<ul style="list-style-type: none"> ● As part of planning and preparation for livestock extension activities, a meeting should be held between all of the Project Specialists and Government Component Coordinators to determine areas of cross-over and cooperation in activities. ● As part of the sustainability of livestock management within the villages, it is necessary to understand how activities could be combined and complement each other. <ul style="list-style-type: none"> i. <u>Organic Fertilizer</u> – as part of the agriculture extension activities that are to be led by the Agricultural Specialist, there will be training on preparation and application of organic fertilizer. This will directly require engagement with livestock management activities.

	<ul style="list-style-type: none"> ii. <u>Tree Planting</u> – The tree planting strategy for 2020-21 will engage the villagers directly by providing them with trees for the village area, homesteads, and rice paddy areas. There are opportunities to work with this Project activity to plan and prepare seedling production of trees that can support livestock feed. iii. <u>Ecotourism</u> – Certain villages are engaged with ecotourism activities. As such, there will be a need for growing and preparing food for visitor consumption. There is likely an opportunity for livestock management to be a part of this.
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Fire management Activities	
Step	Description
1	<ul style="list-style-type: none"> • As part of Coordination listed above, conduct study/survey within the project villages to understand community relationships and attitudes towards the usage fire and annual burning. • Survey questions to be considered: <ul style="list-style-type: none"> ○ Why do villagers use fire? ○ Do villagers understand the effects of fire upon soils? ○ Would villagers consider alternatives to fire if made available? • Study/survey could be conducted by either existing project/government staff or could consider procuring a consultant. • Results and outcomes of the study/survey to be presented to both villages and PAFO/DAFO and will guide Project actions until 2022.
2	<ul style="list-style-type: none"> • Based on results of study, develop and implement a village training course on fire and effects upon agricultural production, as well as dry forest ecology. • As a follow-up of training, development of Village Fire Regulations • Such regulations would be developed in a participatory manner. • Regulations would determine appropriate/acceptable usage of fire within the village; no burn areas; commitment to reducing fire usage; and organization of village firefighting team. • Aim to eliminate fire usage for livestock management practices provided sustainable alternative practices are available.

Livestock Monitoring and Evaluation	
Step	Description
1	<ul style="list-style-type: none"> • There is a requirement for monitoring and evaluation of Livestock management activities. • Based on the initial analysis, the Livestock Specialist must establish a set of indicators and a monitoring methodology. • This should be done in cooperation with the Project M&E Officer.

2	<ul style="list-style-type: none">• Monitoring & Evaluation of livestock management activities need to be carried out on a quarterly basis.• This should be done in coordination with the Conservation Contracts that have been developed for 16 target villages.• This should be implemented with cooperation with the District DAFOs if possible.
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