Evaluation of "Improving farmer livelihoods in the dry zone through improved livestock health, productivity and marketing"
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Project code: UNJP/MYA/022/OPS
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**Acronyms and abbreviations**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADS</td>
<td>Agricultural Development Strategy</td>
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<tr>
<td>CAHW</td>
<td>Community Animal Health Workers</td>
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<td>CDZ</td>
<td>Central Dry Zone</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>LBVD</td>
<td>Livestock Breeding and Veterinary Department</td>
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<tr>
<td>LIFT</td>
<td>Livelihoods and Food Security Fund</td>
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<tr>
<td>NLBS</td>
<td>National Livestock Baseline Survey</td>
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<td>UVS</td>
<td>University of Veterinary Science</td>
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Map of Myanmar

Adapted from UNITED NATIONS, World Map, February 2019
Map of project area

Adapted from UNITED NATIONS, World Map, February 2019
Executive summary

Introduction

1. This is the final evaluation of the project ‘Improving farmer livelihoods in the dry zone through improved livestock health, productivity and marketing’ (UNJP MYA 022 OPS). The project aim was to sustainably improve the livelihoods and food security of communities and the poor and vulnerable in six townships in the Central Dry Zone (CDZ) of Myanmar through improving livestock health, productivity and marketing. This project is regarded as being of high importance as livestock are critical to people’s livelihoods in the area. The project funding of USD 4.4 million was provided by the Livelihoods and Food Security Fund (LIFT); the project was implemented between 1 January 2016 and 31 December 2019.

2. The purpose of this evaluation was to assess project implementation and whether it had delivered the intended outputs and achieved its expected outcomes considering relevance, governance and efficiency, partnerships and sustainability, and its effectiveness and impact on target groups, taking into consideration cross-cutting issues such as gender and improved nutrition. This final evaluation also identifies lessons learned from the project implementation processes and so provides a basis for future decisions by the Government of Myanmar, LIFT, Food and Agriculture Organization of the United Nations (FAO) and other partners on the design and implementation of similar projects.

3. The final evaluation covered the whole project implementation period and assessed progress made against the three project outcomes: Outcome 1 – Households trial and/or adopt productivity technologies; Outcome 2 – Households access Community Animal Health Workers (CAHW) and Livestock Breeding and Animal Department (LBVD) animal health services; Outcome 3 – Livestock Breeding and Veterinary Department/project implement policies and consider the benefits provided to project stakeholders, particularly the livestock households and CAHWs in the CDZ, the local and union LBVD staff, and staff at the University of Veterinary Science (UVS).

4. The main evaluation questions were:
   i. Relevance. How relevant was the project to the target population, Government, LIFT and FAO priorities?
   ii. Effectiveness. To what extent did the project achieve its planned outputs and expected/revised outcomes?
   iii. Efficiency. How efficient was the project in achieving planned outputs and outcomes?
   iv. Impact. What has been the impact of the project to date?
   v. Sustainability. What is the likelihood that services and benefits developed will be sustainable after project completion?
   vi. Gender. What has the project undertaken and achieved in addressing gender issues?

5. The evaluation adopted a consultative and transparent approach with internal and external stakeholders throughout the process. Triangulation of evidence was used to validate the findings and support the analysis and interpretation on which the conclusions and recommendations are based.

Main findings

6. The main findings of the evaluation are presented below, grouped by evaluation question.

7. **Relevance.** The project is considered to be highly relevant, with agriculture playing a significant role in Myanmar’s economy and being the major source of income and employment
8. **Effectiveness.** The project placed greater emphasis on policy change and was utilized by LBVD as a source of policy advice and development of policy initiatives - a number of policy initiatives were endorsed, others were still a work in progress. The value of adopting new technologies was demonstrated – increased extension activities would have delivered greater adoption rates of the new technologies. The development of understanding of the value of socio-economics was strongly endorsed by LBVD and provides a sound basis for future policy development. With LBVD, the project carried out the NLBS which is invaluable in providing livestock numbers and therefore in addressing health problems, in developing livestock production and trade, and addressing concerns over greenhouse gas production by developing more efficient livestock production systems. The implementation of the NLBS and other activities supported the development of IT, technical and other skills of staff at LBVD and UVS. Limitations on access to animal health services were identified and an accreditation programme for CAHWs developed. The ability of LBVD to develop and implement policies was enhanced through project activities, particularly the NLBS, socio-economic studies, improved understanding of the value chain including for the export of cattle, and the development of investment strategies. The benefits of improved socio-economic analysis and understanding were profound and this approach should be included in any project Phase 2. The adaptability of the project was demonstrated by the leadership role undertaken in preparation for possible incursions of African swine fever (ASF) and by the rapid change in the cattle trade with the development of the export market to China.

9. **Efficiency.** The project was well managed with timely implementation of activities and reporting and benefited from strong commitment, collaboration and support from LBVD. Project start was delayed, which necessitated a no-cost extension. The project priorities changed with increased emphasis on policy development and this resulted on more limited impact on livestock production with reduced extension activities. The two FAO livestock projects in Myanmar (this project and an Emergency Centre for Transboundary Animal Diseases, ECTAD) would have benefited from stronger coordination; this might have been achieved through greater FAO support in-country and from the regional office.

10. **Impact.** The baseline, demographic and value chain studies undertaken, including particularly the NLBS, provide a sound basis for changes in policy and investment in livestock with the adoption of new technologies and improved delivery of animal health services, impacts which will be delivered over time. Direct impact on livestock production was limited by insufficient field extension services, the small numbers of CAHWs that were trained and the time necessary to finalize the many policy initiatives; budget plans were developed by LBVD to address these limitations through a five-year plan to develop CAHW skills across the country. Significant staff development was undertaken at LBVD and UVS recognizing the need for a more rigorous
approach to livestock policy development and economics/socio-economics. Staff development should be continued with ongoing use and mentoring of the newly developed technical competencies, the skills in assessing socio-economics, providing extension activities, data handling and information management, programme management, and policy development. The array of policy initiatives developed need to be finalized and put into practice.

11. **Sustainability.** Some policies have been adopted, others are in the process of being finalized and this indicates a high likelihood of sustainability. LIFT is planning to support a Phase 2 of the project and this endorsement will allow further consolidation of the project work with policy changes, greater development of staff skills, and improved extension services. The new technologies trialled with key farmers are recognized as being beneficial, but sustainability remains questionable until greater commitment is made in the extension of this knowledge. Project sustainability is considered to be high on the CAHWs and LBVD staff that were directly engaged with the key farmer programme, along with the LBVD plans to extend the CAHW training and accreditation programme nationally.

12. **Gender.** Gender issues should have been more clearly identified during project design. Gender equity was addressed by the project with all censuses, surveys and baseline studies including components on gender. In addition, gendered training materials were developed for the women dominated livestock sectors, and project recruitment and activities considered gender and maintained records.

### Conclusions and recommendations

13. The project was evaluated as being highly relevant; it was efficiently delivered with very significant benefits being provided in developing livestock policies with good sustainability and identifying effective new technologies to promote livestock production in the CDZ. The project aim, to sustainably improve the livelihoods and food security of communities and the poor and vulnerable in the CDZ of Myanmar by improving livestock health, productivity, and marketing, was being achieved. The impact of the project will be enhanced over time as policies are consolidated and further extension of the new technologies is undertaken. Gender issues were recognized and addressed during project implementation, but not sufficiently in the design phase.

14. More specifically, the evaluation concluded that:

**Conclusion 1.** The project was highly relevant to Government, donors and stakeholders addressing the core development objective of promoting more efficient livestock production to improve food security, economic development and resilience in the CDZ of Myanmar and by developing coherent policies for livestock production more broadly in the country.

**Conclusion 2.** Overall the project was considered to be effective in achieving its 'programme level outcomes' but the level of effectiveness varied across the range of project activities.

**Conclusion 3.** Project efficiency was evaluated as being high with an adaptive approach taken as priorities changed and opportunities developed, and with strong government support providing considerable staff and other resources.

**Conclusion 4.** At the time of the evaluation, project impact is considered limited as little extension work has been undertaken to improve livestock production practices and many of the policies being developed are yet to be finalized. However, the project has laid down a strong basis for the improvement in livestock policies and improved production practices, and Government has taken strong ownership of these so that over time the impact can be expected to be high.
Conclusion 5. Sustainability of the expected project outcomes was assessed as being high with strong ownership by Government demonstrated by Government and the donor.

Conclusion 6. The project recognized and addressed gender issues where possible during implementation.

15. And recommends that:

Recommendation 1. Greater emphasis should be placed on extension services to provide greater project impact and to ensure sustainability of improved livestock production. (FAO, LIFT, Government of Myanmar)

Recommendation 2. There should be increased support for native chicken production. (FAO, LIFT, Government of Myanmar)

Recommendation 3. A second phase of the project could strongly promote and extend the CAHW training and accreditation programme (FAO, LIFT)

Recommendation 4. A second phase of the programme could capitalize on the approach piloted for socio-economic assessment and investment planning through further development and implementation. (FAO, LIFT)

Recommendation 5. The skills developed by LBVD staff should be further enhanced and consolidated. (Government of Myanmar, LIFT, FAO)

Recommendation 6. The policies in preparation should be finalized and promoted nationally. (Government of Myanmar, FAO)

Recommendation 7. The project delivery using an ‘adaptive management’ approach is endorsed and should be refined and utilized in the future. (FAO, LIFT)

Recommendation 8. There should be greater cross-project coordination leading to improved synergies and efficiencies at country and regional levels. (LIFT, FAO)

Recommendation 9. Gender should be considered in the design phase for all projects and documents and included in the project documents, initial scoping and work plan development, as well as project staff recruitment. (FAO)
1. **Introduction**

1.1 **Purpose of the evaluation**

1. This is the final evaluation of the project ‘Improving farmer livelihoods in the dry zone through improved livestock health, productivity and marketing’ - UNJP MYA 022 OPS.

2. The evaluation assesses project implementation and whether it has delivered the intended outputs and achieved its expected outcomes considering relevance, governance and efficiency, partnerships and sustainability, and its effectiveness and impact on target groups, taking into consideration cross-cutting issues such as gender and improved nutrition.

3. This final evaluation also draws on lessons learned from the implementation processes to inform future decisions by the Government of Myanmar, Livelihoods and Food Security Fund (LIFT), Food and Agriculture Organization of the United Nations (FAO) and other partners on the design and implementation of similar projects.

1.2 **Intended users**

4. The target users of the evaluation are project staff and others at FAO, LIFT and LIFT donors, Livestock Breeding and Veterinary Department (LBVD)/ Ministry of Agriculture, Livestock and Irrigation (MoALI) and the Government of Myanmar.

1.3 **Scope and objective of the evaluation**

5. This final evaluation assessed the whole project implementation period, from 1 January 2016 to the completion of planned project activities in late 2019 (the evaluation mission took place in September and October 2019). The evaluation covered the three project outcomes and the seven project components. It assessed the benefits provided to project stakeholders, particularly the livestock households and Community Animal Health Workers (CAHWs) in the Central Dry Zone (CDZ), the local and Union LBVD staff and staff at the University of Veterinary Science (UVS).

6. The intended project impact was to improve farmer livelihoods in the CDZ through improved livestock health, productivity and marketing. The project was expected to provide impetus for policy change that would benefit livestock production and the rural economy nationally. Progress is articulated around the three project outcomes: Outcome 1 – Households trial and/or adopt productivity technologies; Outcome 2 – Households access CAHW and LBVD animal health services; Outcome 3 – LBVD/project implement policies.

7. The project’s theory of change (Section 3) is not a linear arrangement with considerable crossover of activities and outcomes. The two main project interventions are closely connected with strong cross linkages. These are: i) field extension work aimed at improving livestock health and production through improved adoption of technologies; and ii) policy work to promote sustainable livestock production and trade.

8. This final evaluation provides lessons learned to inform a possible project Phase 2, future interventions in the country and more broadly.

9. The objective of the evaluation was to undertake a review of the project considering its relevance, effectiveness, efficiency, impact, sustainability and gender impact. The evaluation assessed whether the project outcomes had been achieved, project outputs delivered, challenges faced and overcome, and to identify options for future improvements in project
design and delivery. Lessons learned and recommendations were documented for reference by the users.

10. The main evaluation questions used were as follows (further details and sub-questions are included in Appendix 1):

i. Relevance. How relevant was the project to the target population, Government, LIFT and FAO priorities?

ii. Effectiveness. To what extent did the project achieve its planned outputs and expected/revised outcomes?

iii. Efficiency. How efficient was the project in achieving planned outputs and outcomes?

iv. Impact. What has been the impact of the project to date?

v. Sustainability. What is the likelihood that services and benefits developed will be sustainable after project completion?

vi. Gender. What has the project undertaken and achieved in addressing gender issues?

1.4 Methodology

11. The project was critically assessed against the internationally accepted Organisation for Economic Co-operation and Development (OECD)-Development Assistance Committee (DAC – OECD) evaluation criteria of relevance, effectiveness, efficiency, impact and sustainability. The evaluation also assessed to what extent cross-cutting issues such as gender equity and environmental sustainability were taken into account at project formulation and implementation.

12. The evaluation adopted a consultative and transparent approach with internal and external stakeholders throughout the process. Triangulation of evidence was used to validate the findings, and analysis and interpretation used to support the conclusions and recommendations. Particular attention was devoted to assessing whether women were consulted in an appropriate and adequate manner at project inception, implementation and evaluation. The evaluation adhered to the United Nations Evaluation Group (UNEG) Norms and Standards.

13. The project logframe with indicators was prepared for the project document with annual milestones, and was approved by LIFT. The original project logframe with its milestones and annual/semi-annual reports and theory of change was superseded by a revised theory of change and adoption of the LIFT MEAL approach.

14. The evaluation provided a synthesis of the project’s results, taking into account the different perspectives of the various stakeholders. The evaluation identified the project elements that worked, meaning that they made a clear contribution to the stated project outcome: ‘To improve Farmer Livelihoods in the Dry Zone through Improved Livestock Health, Productivity and Marketing’. The project was also expected to provide impetus for policy change that would benefit livestock production and the rural economy nationally. The evaluation highlighted implementation challenges and other contextual factors that negatively affected outcomes.

15. Initially the evaluation undertook a desk review of project reports, other documents and knowledge materials, including the mid-term review. This initial phase was followed by the in-country mission with further document reviews, visits to and interviews with key stakeholders to confirm and consolidate the reported information. This phase included FAO, LIFT, LBVD staff at union, district, township levels, and the private sector CAHWs and some livestock farmers.
16. Surveys undertaken by the project provided useful background and information on relevance, effectiveness, impact, challenges to be addressed, opportunities for further extension and allowed recommendations to be made on the proposed Phase 2 and other future programmes. Focus group discussions were held with CAHWs and district and township LBVD staff. The evaluation used LBVD and project data on animal numbers, disease surveillance and control activities, livestock productivity and marketing initiatives.

17. To assess the effectiveness of the project’s capacity building, activities were classified as per the three dimensions of capacity development: individual, organizational and enabling environment levels (as per FAO’s Capacity Development Framework). The evaluation assessed changes in behaviour at farm level, using data from the baseline survey conducted and from previous capacity needs assessments. The evaluation also assessed interlinkages that had been considered or created between the different levels of capacity development.

18. In addition to key informant interviews and focus group discussions, the evaluation conducted a desktop review of national policies, strategies and programmes to assess outcomes at the enabling environment level. A total of 21 key informant interviews were conducted as per the table below. A list of people interviewed and places visited is included in Appendix 3.

Table 1: Key informants interviewed

<table>
<thead>
<tr>
<th>Key Informant interviews/groups of interviewees</th>
<th>Number</th>
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<tbody>
<tr>
<td>LIFT</td>
<td>1</td>
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<tr>
<td>FAO</td>
<td>3</td>
</tr>
<tr>
<td>LBVD</td>
<td>5</td>
</tr>
<tr>
<td>Myanmar Veterinary Council</td>
<td>1</td>
</tr>
<tr>
<td>UVS</td>
<td>2</td>
</tr>
<tr>
<td>Key farmer groups</td>
<td>9</td>
</tr>
<tr>
<td>Focus group discussions</td>
<td>9</td>
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<tr>
<td>- Township Vos</td>
<td>- 1</td>
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<tr>
<td>- CAHWs</td>
<td>- 2</td>
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<tr>
<td>- Township LBVD</td>
<td>- 1</td>
</tr>
<tr>
<td>- Task team</td>
<td>- 1</td>
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19. Project national policy initiatives, national and local survey and field activities were evaluated: ‘non-project’ activities outside the six target townships were considered outside the scope of this evaluation.

20. Field visits were conducted to meet direct beneficiaries (key farmers) and to assess behavioural changes related to the effectiveness/relevance of project activities. The sites for field visits by the evaluation were selected based on: i) project activities; and ii) accessibility.

21. The in-country mission took place between 30 September and 12 October 2019.

1.5 Limitations

22. No major limitations were identified in undertaking this evaluation. Sufficient access was provided to all project documents and materials, field visits were made possible and strong support was provided by Government staff (LBVD) and the private sector (CAHWs and key

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1 The definition of Capacity Development adopted in the FAO Corporate Strategy on Capacity Development is “the process whereby individuals, organizations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time.” FAO’s Corporate Strategy on Capacity Development (2010): http://www.fao.org/3/a-k8908e.pdf
farmers). In the time available it was only possible to visit a small number of key farmers, but stakeholders in all six townships were consulted (see Appendix 3).

23. The ‘Endline Survey’ of the adoption of new technologies by households, that is the key farmer programme, had not been finalized and was only made available in summary form. This limited the ability to critically review the methodology of the review of this activity.

1.6 Structure of the report

24. Following this introduction, Chapter 2 presents the background and context of the project. Chapter 3 presents the theory of change, followed by findings grouped by evaluation question in Chapter 4. Lessons learned are presented in Chapter 4, while conclusions and recommendations are found in Chapter 5.
2. **Background and context of the project**

25. Myanmar is the largest country by area in mainland South East Asia, it is strategically located between China and India, and is a member of the Association of Southeast Asian Nations (ASEAN). Agriculture plays a significant role in the nation’s economy. It is the major source of income and employment for the large, mainly smallholder, rural-based population. Livestock production is a major part of all smallholder production systems. There are many opportunities to improve rural livelihoods through improved livestock productivity and marketing through improved services and husbandry.

26. The aim of the project ‘Improving farmer livelihoods in the dry zone through improved livestock health, productivity and marketing’ (UNJP MYA 022 OPS) was to sustainably improve the livelihoods and food security of communities and the poor and vulnerable in six townships in the Central Dry Zone of Myanmar through improving livestock health, productivity and marketing. This project is of high importance as livestock in the CDZ are critical to people’s livelihoods; this is the first livestock-productivity focused project in the area.

27. The Government has given a high priority to development in the CDZ to address the high rates of poverty and food insecurity by promoting agricultural development. Livestock play a particularly important role in the farming systems in the CDZ, with cattle, sheep and goats grazing native pastures and cropping areas. Farmers also raise pigs and chickens for cash income and home consumption.

28. The resource partner, the Livelihoods and Food Security Fund is delivering an overall programme to support agricultural and livestock development in the CDZ. Two LIFT priority outcomes were addressed by this project: i) improved policies and effective public expenditure for pro-poor rural development; and ii) increased sustainable agriculture and farm-based production by smallholder farmers. The FAO-led project aimed to achieve livelihood and food security outcomes for smallholders in six townships of the CDZ and has evolved to also develop policies, technologies and extension systems and processes for the livestock sector for broader application within the LIFT CDZ agricultural programme, within the CDZ as a whole, and nationally.

29. The project had a budget of USD 4.4 million and was implemented over the period 1 January 2016 – 31 December 2018, with an agreed no-cost extension to December 2019. A second phase of the project has been proposed.

30. The project objectives were to strengthen animal health services through the CAHWs, to improve public services and to extend technologies to smallholders to improve animal health, feeding, breed improvement and marketing in the target area.

31. The project was to engage with government policy in the areas of livestock development relevant to the improvement of smallholder productivity and marketing, and to pilot mechanisms for investment in livestock development through demand-driven sub-projects to be funded through a Livestock Productivity Fund and processed through a Livestock Productivity Committee.

32. The project rationale was based on problem analyses and stakeholder consultation, in collaboration with the Government, participants, stakeholders, other United Nations agencies and resource partners. Four rationales were identified for the project:

   i. the significant opportunities to improve farmer livelihoods and incomes through better livestock health, productivity and marketing in the six target townships in the CDZ;
ii. the ability to positively influence livestock development beyond the project area, through its influence on national policy development;

iii. recognition that systems and processes at township level could allocate funds to support effective livestock development;

iv. collaboration with the broader LIFT agricultural development programme that was already being developed in the six target townships.

33. The project was to be consistent with National Development Goals and FAO’s Strategic Objectives, in particular Strategic Objective 2 (Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner with producers and natural resource managers adopting practices that increase and improve the provision of goods and services in the agricultural sector production systems in a sustainable manner); and Strategic Objective 3 (Reduce rural poverty with enhanced and equitable access to productive resources, services, organizations and markets, and sustainable management of their resources).

34. Priorities within the Country Programming Framework (CPF) this project sought to address are:

Outcome 1: Increased agricultural production to enhance food security
Outcome 5: Human resource development and institutional capacity building
Outcome 6: Rural livelihoods improvement

35. Project beneficiaries are not identified in the project document. As the project developed, a range of beneficiaries were identified. The major beneficiaries are considered to be:

i. Private sector including livestock owners, producers, traders, vendors and consumers to benefit directly from a reduced incidence of livestock diseases improved production and food safety with improved access to technical information and stronger public-private partnerships.

ii. Rural communities to benefit from improved food security, food safety and rural livelihoods with enhanced livestock health, productivity and marketing.

iii. CAHWs and local government animal health and livestock services to benefit from increased capacity and expertise in livestock health, productivity and marketing.

iv. National animal health services to benefit from local government livestock agencies being strengthened in management, technical understanding and delivery of improved livestock health, productivity and marketing.

v. Improved national policy development to benefit from improved livestock health, productivity and marketing.

36. The project is structured around seven outputs as shown in Appendix 2.

37. The main activities of the project against the three project outcomes are shown in Appendix 5.
3. **Theory of change**

38. A critical factor in project delivery was the flexible approach and ‘adaptive management’ that was used. The project’s theory of change was revised by the project team, retaining the same ‘Programme level outcomes’ but changing the ‘Project outcomes’, the ‘Project outputs’ and the ‘Project interventions’, as shown in the figures below. The original and revised theory of change diagrams are provided in Figures 1 and 2.

39. The evaluation followed the logic of the theory of change considering interventions and their relevance and effectiveness, the outputs and their impact, and the project outcomes and programme level outcomes and their overall impact and sustainability.

40. The project is sound, with a logical progression from low-level project interventions or activities delivering project outputs and so the project outcomes and thus onto the programme level outcomes. The lowest level activity is assessment of needs and opportunities in the livestock system with a focus on the Central Dry Zone, but also considering what was more widely applicable. This understanding then progresses into assessing investment options, the use of technologies, improved demographic information, etc., the strengthening of animal health services and the development of an improved policy environment for livestock production and health. This approach is validated with household trials and improved policies being available, which should then logically lead to the ‘programme level outcomes’ of ‘increased sustainable agricultural and farm-based production by smallholder farmers’ and ‘improved policies and effective expenditure for pro-poor development’.

41. Though recognized and discussed with the donor and LBVD, the project was unable to implement an extension programme to promote the benefits of the adoption of new technologies at the household level. Better progress was made with promotion of the need to improve the delivery of animal health services and policy change. Extension activities were not identified in the theory of change.

**Figure 1: Original theory of change**

Source: Project document UNJP/MYA/022/OPS
Figure 2: Revised theory of change

Programme level outcomes

- Increased sustainable agricultural and farm-based production by smallholder farmers
- Improved policies and effective public expenditure for pro-poor development

Project outcomes

- Households trial and/or adopt productivity technology
- Households access CAHW and LBVD animal health services
- LBVD / Project implement policies

Project outputs

- LBVD, CAHWs extend technology to households
- LBVD, CAHWs provide better health services to households
- LBVD adopts policies

Project interventions

- Project designs investments in animal health and productivity
- Project supports livestock sector policy investment

Project assesses public and private aspects of livestock system, and develops pilot investments

Source: Project document UNJP/MYA/022/OPS
4. Findings

42. The evaluation findings are presented in response to the main evaluation questions and sub-questions. Evidence obtained from relevant sources, triangulated and supported by analysis and assessments substantiate the main findings. Questions and sub-questions (provided in Appendix 1) reflect the context of each project output as presented in the theory of change (see Section 3). Cross-cutting issues such as gender and other equity issues, human rights, environment, climate change and partnerships are addressed under each of the evaluation questions.

4.1 Relevance. How relevant was the project to the target population, Government, LIFT and FAO priorities?

Finding 1. Amongst all stakeholders, the project was universally endorsed as being highly relevant, with agriculture playing a significant role in Myanmar’s economy and being the major source of income and employment for the nation’s largely rural-based population. Agriculture is primarily based on smallholder production systems, in which livestock raising is an integral part, seen as critical for improved food security, resilience and sustainability of production and rural livelihoods and economic development. Improving livestock production is a key priority for the Government of Myanmar aiming, amongst others, to benefit farmers and smallholders.

43. Myanmar is recognized as being highly prone to natural disasters and has experienced several significant disasters in the last ten years. According to the Global Climate Risk Index 2017, Myanmar ranks among the top three countries most affected by weather-related events, which has led to massive displacement of people and the destruction of livelihoods, crops and other food sources. Agriculture sectors are particularly vulnerable, already absorbing up to 30 percent of loss and damage on average. However, the existing national and local authorities still have relatively low capacities in disaster risk management to address the increasing exposure and vulnerability of rural inhabitants to these human-induced and weather- or climate-related disasters. Myanmar is also vulnerable to transboundary animal disease emergencies that affect livelihoods and food security. More insidious and slow-onset disasters are also a threat, such as zoonotic emerging infectious diseases and antimicrobial resistance.

44. The project field operational area was six townships in the Central Dry Zone, an area which has a large rural population with high rates of poverty and food insecurity. Livestock play a particularly important role in the farming systems in the CDZ, with cattle, sheep and goats grazing native pastures and cropped areas. Farmers also raise pigs for cash income and chickens for cash income and home consumption. Livestock are seen to be critical to people’s livelihoods in the CDZ; the CDZ is the major livestock producing area of the country. The project recognized that smallholder livelihoods, food security, nutritional status and resilience to climate change and other external factors would be enhanced by improving livestock productivity and marketing with improved delivery of animal health services and livestock husbandry: this is the first livestock-productivity focused project in the area, and therefore it is highly relevant.

45. The Government has given high priority to promoting agricultural development, recognizing that the country has potential for rapid growth and development in agriculture. The opportunity for significant production and productivity gains is recognized, but it is also true that the country has ‘limited rural infrastructure, complex land tenure issues, and low agricultural productivity and competitiveness of agri-food products’. The Ministry of
Agriculture, Livestock and Irrigation developed a five-year Agriculture Development Strategy (ADS) in 2016, with a corresponding Investment Plan. The ADS identified three main outcomes:

i. enhanced governance and capacity of institutions responsible for agricultural development
ii. increased productivity and farmers’ income
iii. enhanced market linkages and competitiveness

46. Key development issues identified in the ADS addressed in whole or in part by the project include:

   i. transition from subsistence to commercial farming
   ii. food safety and food and nutrition security
   iii. employment and income generation
   iv. right to rural finance, research and extension, and monitoring and evaluation
   v. infrastructure, operations and maintenance

47. Relevance to LIFT: The project has been funded through the Livelihoods and Food Security Fund. LIFT is a multi-donor fund that ‘aims to strengthen the resilience and sustainable livelihoods of poor households by helping people to reach their full economic potential’. This is to be achieved through increasing incomes, improving the nutrition of women and children, and decreasing vulnerabilities to shocks, stress and adverse trends. The project is directly relevant to LIFT’s objectives in the CDZ and has worked to promote livelihoods development and nutrition-sensitive food security in the six prioritized townships and more broadly in the CDZ. The LIFT programme seeks to build the resilience of poor rural households; the project has supported this with its field activities to promote efficient and sustainable livestock production and improved marketing, improving the delivery of animal health services by improving the capabilities of the CAHWs and local LBVD officers, and by generating evidence and supporting evidence-based policy development nationally.

48. The project has contributed to two higher level LIFT outcomes:

   i. improved policies and effective public expenditure for pro-poor rural development
   ii. increased sustainable agriculture and farm-based production by smallholder farmers

49. Based on the LIFT Monitoring and Evaluation for Learning and Accountability (MEAL) Framework, the project has delivered outputs against three outcomes:

   i. households trial/adopt technologies
   ii. households access CAHW and animal health services in LBVD
   iii. LBVD/project implement policies

50. Relevance to FAO: FAO is to continue its support to ensuring an inclusive smallholder-based transformation of the agricultural sector. This includes achievement of long-term goals of increased food and nutrition security, poverty reduction, agricultural trade competitiveness, higher and more equitable incomes for rural households and strengthened farmers’ rights. The FAO Country Programming Framework for Myanmar outlines the priority areas for FAO support to the Government in the period 2017 to 2022. The CPF is to contribute to achieving Government strategies and policies, respond to specific needs by focusing on Government priority areas and guide FAO’s technical assistance to the Government. In formulating the CPF, FAO adopted a participatory approach with Government and stakeholders and took into consideration a number of national, international and FAO strategies and policies. These included the 2030 Agenda and Sustainable Development Goals, Paris Agreement, Sendai Framework for Disaster Risk Reduction, national Agriculture Development Strategy, National...
Findings


i. enhanced food security, nutrition and food safety
ii. strengthened governance and sustainable management of land, forest, water resources and ecosystems
iii. enhanced resilience of local communities and farming households to natural and humanitarian disasters, climate change and transboundary and emerging infectious disease risks

Finding 2. In addition to supporting householders, the project worked with the private sector, identifying key suppliers of animal feeds, medicines and vaccines. It worked particularly with traders and the CAHWs to identify constraints and opportunities in their businesses and how these might be addressed with policy changes that would lead to a shift away from low input-low output systems to medium to high input-output systems. This improved efficiency of livestock production and quality of animal and animal products.

51. Relevance to Households: As indicated above, livestock play a particularly important role in the farming systems in the CDZ and are seen as being critical to people’s livelihoods. Poverty remains substantial in the area with an estimated 50 percent of the population still below the national poverty line. A high rate of infant and child mortality persists with various forms of malnutrition continuing (FAO-CPF). Inadequate agricultural productivity and diversity, inefficient livestock production, low household incomes, poor food safety, land tenure and governance issues, lack of access to clean water, and lack of knowledge and awareness are considered key constraints for improving food security and nutrition. The project has addressed these constraints by promoting efficient, profitable and sustainable livestock productions, improved delivery of animal health services, the collection of livestock population data – the National Livestock Baseline Survey (NLBS) and censuses in the six project townships and of commercial production, and the development of livestock production and trade policies, including export trade to China. In the project townships the census indicated that 65 percent of households were livestock owners.

52. MercyCorps, also funded by LIFT, undertook a ‘Strategic Resilience Assessment Survey’ which evaluated the potential for agricultural-based communities in the CDZ to be harmed by ‘shifting environmental conditions, a disabling governance and policy environment, and inefficient agricultural-based markets. Food insecurity was assessed as a primary constraint for CDZ communities with a high reliance on market purchase for food access in a context of ‘low, undiversified, agriculture-based incomes, high debts, and reliance on credit’; nearly 40 percent of households were assessed as having difficulties meeting their food needs on an annual basis. The report found that debt accumulation and restrictive repayment terms reduced households’ ability to positively cope and adapt to social, economic and environmental shocks, and these were being exacerbated by poor access to ‘quality inputs, unsupportive policies, erratic rainfall, and land degradation’. The project has addressed these issues in the livestock sector by trialing new technologies for efficient and profitable animal production, by improving availability and demand for quality animal health services and promoting the development of supportive livestock policies.
In addition to supporting householders, the project identified key suppliers of animal feeds, medicines and vaccines. It worked particularly with traders and the CAHWs to identify constraints and opportunities in their businesses and how these might be addressed with policy changes that would lead to a shift away from low input-low output systems to medium to high input-output systems. This improved efficiency of livestock production and quality of animal and animal products. One benefit of the change to more efficient livestock production systems is the reduction in greenhouse gas emissions. The promotion of climate-friendly agribusiness in the CDZ fits with the policy of developing more efficient livestock as stated in the ADS and as has been receiving support from the Asian Development Bank (ADB) and others.

Finding 3. The project maintained a high relevance as it adapted and responded rapidly to changes in the external environment that required a policy response from LBVD.

Current relevance: The project maintained a high relevance as, with the support of LIFT and LBVD, it was able to respond to changes in the external environment that required a policy response from LBVD. Examples of the ‘adaptive management’ approach include the work on the cattle trade reacting to Chinese demand for beef, the work on poultry sector policy arising from the project engagement with nutrition policy (Multi-sectoral National Plan of Action on Nutrition, MS-NPAN), preparation for African swine fever (ASF) entering the country, the work arising from the approval of the ADS, and the role of the Chief Technical Adviser in the policy groups (CAHWs, Cattle Trade).

The mid-term review correctly pointed out that the project was working more on policy than on the direct enhancement of household livestock production systems. This came about as the project considered ‘sustainability’ to refer largely to institutional sustainability, i.e. after the end of the project, as this was considered to be the approach to the livestock sector and how it could be developed and sustained after project completion.

The project remains highly relevant to the Government of Myanmar and LIFT and discussions for a Phase 2 of the project are underway. This second phase would replicate the project and training in other townships to the east of the country to fit with LIFT’s revised strategy of focusing on conflict-affected areas.

4.2 Effectiveness. To what extent did the project achieve its planned outputs and expected/revised outcomes?

Finding 4. The project placed greater emphasis on policy change than on direct engagement and promotion of livestock production across the CDZ. A number of policy initiatives were endorsed/well advanced. The value of adopting new technologies was demonstrated and increased extension activities would have led to greater effectiveness.

Overview: Overall the project contributed to achieving the programme level outcome of ‘improved policies and effective public expenditure for pro-poor development’ recognizing that policies and changes in government spending take time and that though considerable progress was made, many policy initiatives were still a ‘work in progress’. The second programme level outcome ‘increased sustainable agricultural and farm-based production by smallholder farmers’ was more problematic: though a strong trial programme laid down the basis for change, limited extension activities reduced effectiveness.

According to the original project document the objective (defined as ‘the purpose’ in LIFT parlance) of the project is “to sustainably increase the food and livelihood security of communities and the poor and vulnerable in six townships in the Dry Zone through improving
livestock health, productivity, and marketing”. This objective was to be achieved through the delivery of seven outputs to achieve the three project outcomes (Outcome 1: Households trial and/or adopt productivity technologies; Outcome 2: Households access CAHW and LBVD animal health services; Outcome 3: LBVD/project implement policies), as follows:

i. Project implementation design informed by inception phase and consultations.

ii. Representative, efficient and effective structures and processes established to develop, review and approve livestock productivity sub-projects.

iii. Sub-projects implemented improve animal health services and result in the uptake of new or improved livestock management practices and technologies (Outcomes 1 and 2).

iv. Improvements are made in livestock sector policy options, and supporting modalities and guidelines are developed which support improved smallholder livestock health, productivity and marketing in the Dry Zone (Outcome 3).

v. Productivity benchmarks and impact on livelihood and food security established (Outcome 1).

vi. The Project is managed efficiently and effectively (cross-cutting).

vii. A functioning monitoring and evaluation (M&E) system that acts to improve project implementation, to inform LIFT on project progress, and to assess project contribution to improving livelihoods and food security (cross-cutting).

59. Sub-activities and a results framework were provided in the project document and are discussed further below.

Finding 5. The project was recognized and utilized by LBVD as a source of policy advice and development of policy initiatives.

60. By the time of the first six monthly report (July 2016), very significant changes were already being proposed. The changes in priority were based on lessons learned from a baseline assessment of needs, identification of opportunities and the likely constraints on project delivery, and in particular recognized the high-level commitment from LBVD. Priority changes advocated were:

i. policy work to be significantly upgraded (Output 4)

ii. a significant expansion of baseline studies (Output 3)

iii. strengthening of LBVD data management capacity (Output 3)

iv. a programme to trial livestock productivity technologies (Output 3)

v. strengthening of CAHWs capability (Output 3)

vi. modification of the process for the approval of sub-projects (Output 2)

vii. engaging with the animal science course at UVS (Output 5)

viii. develop the MEAL approach, as required by LIFT (cross-cutting)

61. These project changes were endorsed, with budget revisions, during the second six-month period of the project (by the end of 2016), with implementation immediately underway. By the end of 2016 the project reported that it was already recognized by LBVD as a major provider of policy advice on issues related to the smallholder livestock sector and also to the commercial sector. The project was already providing policy advice and developing policy initiatives including working with LBVD to influence policy on the CAHWs, promoting socio-economic understanding and the development of a census in the project area, and a plan for a national livestock survey. The project was also making progress in other policy areas including extension and research-extension linkages, the structure, function and capability of township level LBVD officers, livestock trade and livestock disease control and improving forage.
Outcome 1. Households trial and/or adopt productivity technologies.

Finding 6. Adoption rates of new technologies were assessed after approximately two years and, though predictably variable, were considered to be high and to provide strong evidence for improved livestock production, economic development, food security and resilience. The approach used in the survey conducted was prone to bias and only limited validation was undertaken; ongoing monitoring during the trial phase was insufficient to provide sound evidence of real change.

62. Baseline: The project assessed options for promoting livestock production to smallholders considering case studies, surveys of the use of ‘key farmers’, and incentives to change to higher input-output systems (Outputs 2 and 3). Sub-projects were developed and implemented with a household livestock census of the six-township project area (240,000 households) and follow-on socio-economic surveys, undertaken by UVS students, providing a baseline of household assets, income/expenses and opportunities. This baseline assessment was fundamental to understanding the livestock sector in the CDZ and the development of effective interventions and extension activities.

63. The ‘key farmer’ programme was developed to identify the most effective interventions to promote livestock productivity and economic development in households in the CDZ. In this programme, 545 farmers were recruited from a range of sectors (bulls, cow/calf, boars, sow/breeding, goat breeding and goat fattening) and paid (MMK 3,000 per day) to maintain records of their livestock business (number of animals mated, feeding, growth rates, animal heath, etc.) and to implement new ‘technologies’ (improved feeding, breeding, animal health and hygiene, etc.); bonuses were paid if growth rates exceeded certain thresholds (no bonuses were paid to the bull and boar operators). Key farmers signed contracts, typically for three or six months. CAHWs with LBVD township officers provided guidance to the key farmers with regular visits. The key farmer programme ended in late 2017 with a general assessment that it was very valuable in trialling interventions at the farm level and also effective at developing the skills and understanding of the CAHWs and LBVD townships officers.

64. Endline Survey: In August 2019 an ‘Endline Survey’ was conducted under LBVD of ‘adoption rates’ by key farmers and extension to other farmers. These indicated that the approach had been very effective. The Endline Survey was developed with LIFT and used a mix of independent and project staff to interview farmers, with 105 key farmers and 134 other farmers taking part in the survey. The provisional survey findings indicated high rates of adoption (over 50 percent) for all livestock sectors for ‘husbandry factors’ that is improved animal health (vaccines, animal treatments and improved hygiene), provision of supplementary feed and access to clean water; ‘practices to reduce inbreeding’ were also being adopted by the bull and boar farmers. The Survey also assessed ‘linkage factors’, that is contact and support from LBVD, CAHWs, other farmers and feed suppliers, and these were also found to be high (over 50 percent). The evaluation team were only able to visit nine key farmers and the adoption rates were found to be more variable and generally much lower, but given the low numbers any generalizations must be made with great caution.

65. Of the nine farmers visited, the three worst performing were pig farmers in a village rather remote from CAHWs, LBVD and any feed suppliers. The project team indicated that with its poor access, this village was an outlier; recognizing this, other more accessible pig key farmers were contracted and their results were reported as much better, however the evaluation team were not able to validate this. Of the other key farmers visited, the goat farmers were exemplary with excellent husbandry and animal health practices, likewise the bull farmers, with the cow/calf operators adopting some aspects of the programme. All nine key farmers had ceased
to keep records of their activities and practices – one of the cornerstones advocated by the project. The finalized report of the Endline Survey should contain a section discussing the validity of the Survey and be critically reviewed when it becomes available.

66. In assessing the Endline Survey there are concerns of bias – interviewer and interviewee biases are likely with a misclassification towards a positive outcome as both interviewer and interviewee will tend to a positive response. To validate the findings of the Endline Survey, it would have been useful to have monitored the farmers more over the intervening two years (since the end of the key farmer programme in late 2017) and to have triangulated the data more vigorously. Furthermore, the project was not able to maintain records of extension activities from key farmers to other farmers as implemented by LBVD staff with CAHW support, so no detailed information is available. It appears that much more extension with effective dissemination of the lessons learned from the key farmers could have been undertaken but that the project focused more on national policy development and the necessary resources were not available; this problem was also identified in the project mid-term review.

Finding 7. The development of understanding of the value of socio-economics was strongly endorsed by LBVD and provides a sound basis for future policy development.

67. The socio-economic survey: The project successfully introduced socio-economics, training LBVD staff and the UVS animal science academic staff and students. With project support, UVS conducted a socio-economic survey in villages on livestock production and economics. LBVD have taken strong ownership of the use of socio-economics and are planning to train additional staff and are using the increased understanding to develop relevant policies. UVS are including socio-economics in their core curriculum. The use of socio-economics cuts across all three project outcomes.

Finding 8. With LBVD, the project carried out a national livestock survey which is invaluable in addressing health problems, developing livestock production and trade.

Finding 9. The project developed the IT systems and the IT staff skills required for NLBS and data collection, cleaning, analysis and reporting. Reliable statistics on livestock numbers, (previously available numbers were found to have significant errors) is providing the foundation for developing coherent livestock policies and setting a realistic development agenda.

68. Livestock census and National Livestock Baseline Survey: Censuses were undertaken of the local areas in the project townships and also of commercial producers, and then a ‘National Livestock Baseline Survey’ (a randomised survey of more than 1.5 million households from 275 townships) were conducted. These surveys indicated a major discrepancy between the reported and actual livestock numbers. In conducting these censuses and surveys, LBVD and project staff developed IT skills in designing data collection methodologies and managing and reporting the data.

Outcome 2. Households access CAHW and LBVD animal health services.

Finding 10. The project developed a strong assessment programme of the needs and the delivery of animal health and production services, and then developed appropriate training for the CAHWs and LBVD staff. Strengthening of the CAHWs is being further enhanced by the establishment of a CAHW Core Group, a policy platform chaired by LBVD, which has developed a draft regulation and accreditation process. Though only in small numbers, the development of the CAHWs is effective and is being adopted by LBVD in a national programme.

69. CAHW capacity building: The private sector CAHWs are seen as critically important in the delivery of field animal health services in Myanmar. Compared with neighbouring countries, the CAHW programme has been in place for much longer (since the mid-1970s) and is well
established and valued. Nevertheless concerns have been expressed about the capabilities of the CAHWs and the need to address these limitations is well recognized. The project conducted a baseline study of CAHW activity and their businesses including their income in the project area (n = 61) and in seven other states/regions (n = 231) with CAHWs keeping daily records of their activities. The data was analysed by project and LBVD staff, and contributed to the policy of developing CAHW skills and their accreditation. This review of CAHW activity highlighted the core roles of the CAHWs of providing animal health services, extension of best practices and liaison with LBVD. The process of undertaking the review was also endorsed as strengthening the relationship between the private sector CAHWs and LBVD (Government). Following the review, the project developed an extensive, 54 module training programme for CAHWs and this with mentoring and assessment will form the basis of the CAHW accreditation programme. A CAHW Core Policy Group has been established and has reviewed the training materials and developed a regulation, still in draft, for the accreditation of CAHWs. To date, 59 CAHWs have completed the pilot CAHW training course and, as assessed by the evaluation team, found the training being provided to be very valuable, the training materials and approach to be excellent, and their improved capabilities and competence to support their role and business as a CAHW. ‘Training of Trainers’ is also being undertaken by the project to increase the capacity to deliver the CAHW training. The CAHW development programme, as developed by the project and LBVD, can be regarded as highly effective (Output 3), though to date it has only been piloted.

Outcome 3. LBVD/projects implement policies.

Finding 11. The project’s development of reliable livestock statistics (NLBS and animal census household data) on trade and on the CAHW business model provides a sound basis for developing policies. Policy initiatives and discussions were developed with LBVD and addressed a wide range of livestock production and trade issues.

Livestock Surveys: The censuses and surveys of livestock populations that were conducted, or facilitated, by the project, are assessed as being highly effective with a logical progression from small area pilot studies to a full national survey. After an initial pilot, a census was carried out in the six townships of the project area of the CDZ (267 211 holdings in 1 182 villages and 61 wards). As the early results indicated a significant difference between official and actual livestock populations, the pilot study was expanded by LBVD to eight townships in the Mandalay region as a precursor to undertaking a national survey. Based on experience gained from the pilots, the Government approved a national randomized survey which covered all townships of the country, except the townships that had been covered in the previous surveys, urban townships with few livestock, and ‘inaccessible’ townships (see Figure 3) – 1.5 million households from 275 townships, of the 330 Myanmar townships. Government funded the National Livestock Baseline Survey (MMK 1.4 billion) and the project trained LBVD staff on implementation of the survey, including the use of tablets for entering data on a commercially-available data platform, purchased by the project; LBVD and project staff trained the enumerators on data collection. In addition as many of the larger commercial holdings were thought to be concentrated in localized areas and might be missed in a simple random survey, a census was also conducted of the larger holdings – 10 909 holdings were included in this census. The combination of pilot studies, censuses of specific populations and areas and the NLBS was highly effective in providing accurate statistics on livestock populations, including recognizing the limitations of the previous system, providing a sound basis for policy development and developing staff data collection, analysis and reporting skills. The project also provided extensive training on data handling, analysis and reporting to LBVD staff on designing and conducting the censuses and NLBS.
Finding 12. Project work on policy evolved as the project progressed with a focus on CAHWs, livestock data/NLBS and cattle trade, and most recently on livestock registration and preparedness for African swine fever.

Policy initiatives: The project has been effective in developing policy initiatives with LBVD and a number of these have been formally endorsed. According to the 2018 annual report, the project had exceeded targets for policy development to date and further targets in policy development had been identified for the extension period (to end 2019). In brief the project has worked with LBVD to develop policies in the following areas:

i. CAHWs: the development of the policy and regulations to recognize and accredit CAHWs.

ii. NLBS: the cattle data has been used to inform cattle offtake rates and the export trade, and chicken data used to develop options for investment planning.

iii. Commercial farm census: information is supporting policy development for larger commercial producers.

iv. Climate change: the greater understanding of the livestock population and the offtake rates allowed the drafting of a ‘Climate-Smart Livestock’ policy under which the project led discussions considering regional experiences in climate-smart approaches. The need to develop policies on efficient livestock production, to improve reporting of the livestock contribution and to seek methods of limiting to greenhouse gas production was promoted.

v. Cattle breed improvement: baseline data on bull management and options for artificial insemination including the development of a five-year investment plan.

vi. Domestic and export cattle trade: policy briefs on the volume of trade, and draft Standard Operating Procedures on trade policy and management. The project also supported establishment of the Cattle Trade Advisory Group to consider the benefits and challenges of the cattle export trade to China and how best to manage these.

vii. Goat trading: population data arising from the NLBS is allowing estimated offtake rates as a basis for policy development.
viii. Agriculture Development Strategy livestock sector: medium-term (five-year) investment plans for the livestock sector, as advocated in the ADS.
ix. Nutrition national plan: support for MS-NPAN using NLBS data.
x. Forage policy: support for a forage development policy provided at a workshop and in developing a ‘national forage investment plan’.
xi. Subject Matter Specialist Training: support to develop an in-service training policy and programme for Subject Matter Specialists for the different livestock species, project management, data management and socio-economics.
xii. Poultry: NLBS data allows estimate of offtake and the development of evidence-based policies including five-year investment plans. It is recognized that chickens are important for nutrition and as a household cash reserve.

Finding 13. Investment planning was endorsed as being a valuable approach to developing the livestock industry. However, it was recognized that the investment plans were mainly being used for training as planning in this way is not yet mainstreamed in LBVD systems.

72. The project has focused on policies as a priority area and has developed a sound evidence base for developing policies and investment plans; policy changes take time. Effectiveness is expected to be high, but it is too early for objective assessments to be made.

Finding 14. The project, with LBVD, developed a better understanding of the domestic value chains for cattle and goats, and for cattle being exported to China, as well as on the impact of African swine fever. This led to policies on cattle trade and improved preparedness for ASF being developed by LBVD. A Cattle Trade Advisory Group was established with members from public and private sectors producers, traders and investors.

73. Increased cooperation with LBVD: The project is judged to have been very effective in developing a close working relationship with LBVD. The support provided by the project has promoted a strong symbiosis, good project alignment and the flexibility and dynamic to address emerging issues. A clear example of this approach has been the project support for LBVD in developing preparedness, training and surveillance systems for African swine fever. Brief background: ASF was first detected in the region in China in August 2018 and subsequently the disease spread to many of the mainland ASEAN countries. Myanmar was at obvious risk and steps were taken to be prepared for the likely incursion of the disease. The project was effective in its support through a number of activities including the NLBS and other survey data on pig populations and their distribution, supporting a national awareness meeting for LBVD staff, working with key farmers on improved husbandry and awareness of animal health risks, developing and piloting training materials for the CAHWs, developing protocols for a pig holding registration scheme and establishing a weekly reporting surveillance system using the systems provided by LBVD staff trained by the project. ASF focus was outside the direct project scope but was invaluable in supporting LBVD.

74. Assessment: In consideration of the Government ADS, the project is assessed as having been effective and has contributed to a number of the proposed outcomes with strong correlation across many elements, including in policy development, agricultural extension with the development of public-private partnerships, increasing skills in the agricultural sector, the application of new technologies (with promotion of sustainable farming methods, support from the agricultural censuses and surveys, and the CAHW development programme) and the promotion of trade and economic development. The cross-linking of activities and outcomes is shown in Appendix 4.
4.3 Efficiency. How efficient was the project in achieving planned outputs and outcomes?

Finding 15. The project was well managed with timely implementation of activities and reporting. It benefited from strong commitment, collaboration and support from LBVD with good access to LBVD senior managers, the secondment of many LBVD staff to support project delivery and the adoption of project supported information management systems for the population surveys and other activities.

Finding 16. Though the project achieved much by its end date, its start was delayed and this necessitated a no-cost extension.

75. The project was well managed and efficiently delivered after a slow start with appropriate modifications to project activities and approval of no-cost extensions. The project faced typical set-up challenges in its early stages which were gradually resolved resulting in a high-level of project delivery and effectiveness. Major challenges included:

i. Delays in setting up the project office including renovation and procurement.

ii. Delayed recruitment of the Chief Technical Adviser.

iii. Low availability of district and township LBVD staff in certain periods.

iv. Finding the right technical staff in a complex project. This issue was addressed by engaging in ‘Task Agreements’ which enabled LBVD staff to be assigned to work on the project. This allowed the effective development of LBVD staff skills particularly in project management and delivery, data and information management, livestock production and economics – and reduced the number of technical consultants required.

v. Uncertainty over the roles of the regional LBVD staff. The 2010 constitution assigns responsibility for animal health to the union level, and livestock production to regional level. The project document emphasized that policy work would engage at the union level with field work taking place at township level, but the regional LBVD role was only roughly defined. It was also noted that engagement was more complicated as the project covered two regions – Magway and Mandalay. For the project, this issue was resolved when the Director-General of LBVD established a direct organizational structure from LBVD headquarters to the districts.

76. Duration: The initial project proposal was for a four and a half-year project with a six-month setting up period, but this was changed to a three-year project to run from January 2016 to December 2018, the original closure date for LIFT. The logical framework of the project document still indicated a four-year implementation period (from 2015) though the work plans and budgets in the project document only covered the three years (2016 to 2018). This anomaly apparently arose from the delay in project commencement with no adjustment being made. In the inception report of July 2016, the targets were adjusted to account for the reduced project duration and also replaced the project logical framework with a LIFT MEAL format. In November 2018, a no-cost extension was agreed between LIFT and FAO to 30 September 2019; the project end date was recently further extended to 31 December 2019. The no-cost extension to December 2019 was appropriate as the project had a delayed and slow start, exacerbated by the delayed engagement of the Chief Technical Adviser owing to new FAO recruitment procedures, and many activities were still in progress and needed further work/consolidation. Such activities included the CAHW policy initiatives and the finalization and piloting of the CAHW training programme and CAHW accreditation, as well as the need to analyse NLBS data and develop investment plans.
Monitoring: According to the project document, a Project Steering Committee (PSC) was to be established, to be chaired by the Deputy Minister, with representatives from LBVD, FAO and LIFT (fund managers and board members). One PSC meeting was held on 29 June 2017. No minutes were available from this meeting. A second meeting was proposed but never held. The project developed such a close liaison with LBVD and good coordination and communications with LIFT that it was decided that further PSC meetings were unnecessary. This approach was rational, but resulted in a lack of documented monitoring or approval of the project changes being made, other than references in the semi-annual and annual project reports prepared by the Chief Technical Adviser.

Project activities were generally well monitored with updates provided as required to stakeholders, and details provided in the semi-annual and annual project reports. Information was provided on the full range of project planning, activities and resources, including the assignment of LBVD staff, updated work plans and monitoring (based on the theory of change), tracking sheets for policy development, baseline studies and statistics, monitoring and evaluation reports and inventory reports. Information provided was detailed and informative on activities undertaken, identifying progress being made and challenges to be overcome. For example, for each policy area the ‘Policy Influence Contribution Analysis’ referenced the expected outcomes, changes and/or progress made, unexpected outcomes, the evidence, influencing factors and suggested adjustments. The Endline Survey of key farmers was not monitored over time with only a baseline and follow-up survey after some two years providing information.

Finding 17. Owing to changing priorities, little emphasis was made by the project on wider extension activities to improve livestock husbandry so the ability to have a broader impact had not taken place.

One outlier of the project where activities were less well monitored was the extension activities that took place with other farmers using information developed by the key farmers; this was undertaken by the local LBVD and CAHWs and data capture of these activities was limited, making it impossible to assess the level of activity or their effectiveness. The Endline Survey of key farmers and other farmers addressed some of these issues as it assessed adoption rates (see paragraph 64) but did not provide details on numbers of activities and extent of engagement (denominator information was not available).

Institutional arrangements: The original project proposal included the intention to pilot mechanisms for investment in livestock development through demand-driven sub-projects that were to be funded through a ‘Livestock Productivity Fund’ and processed through a ‘Livestock Productivity Committees’. However, these were never established as the Government organization changed with LBVD becoming part of the Ministry of Agriculture, Livestock and Irrigation with rural development having a much lower role than when livestock were part of the Ministry of Livestock, Fisheries and Rural Development (MLFRD). A number of options were considered to deliver the proposed investment approach but ultimately rejected, in part owing to the change of governance, as indicated above, and in part owing to the reduction in project time to three years gave no time to develop and implement any investment plans. Further LIFT support was limited and though some initial training was provided, LBVD has chosen not to pursue this further at this time.

Efficiency and partnerships: The project adopted the ‘Value for Money’ approach to financial probity and efficiency and identified cost drivers by carefully planning expenditure against the budget, and it was sensitive to maintaining the balance between programme and other costs.
Project delivery was enhanced by LBVD funding many activities, including staff training on survey design, data capture and management from the NLBS and censuses undertaken.

82. The project has had a high level of national ownership, based on extensive consultations with government staff at all levels, the private sector and with smallholder farmers. This has formed the basis for broad support of project activities and particularly in the development of policy initiatives.

83. The project is considered to have had efficient and significant outreach with its national policy work on livestock surveys (NLBS and commercial and project area censuses), CAHW policy and cattle trade. Further project activities with key farmers have the potential for outreach to the wider community, but this activity received little emphasis – extension of the endorsed technologies is considered applicable throughout the dry zone and in many cases beyond.

84. LBVD staff capabilities have been developed through their engagement with the project and this has been efficient in providing the staff resources required by the project and in developing staff skills. LBVD staff assigned to the project were not paid any increment so the only costs incurred were living and travel allowances.

Finding 18. The two FAO livestock projects in Myanmar have had limited contact and greater synergies could have been developed. FAO in-country and FAO Regional Office for Asia and the Pacific (RAP) only provided limited coordination between the project and their regular programmes.

85. Synergies with other FAO projects: In recent years, FAO in Myanmar has had two livestock-focused projects: the CDZ livestock project under review and the Emergency Centre for Transboundary Animal Disease (ECTAD) programme. The FAO ECTAD programme was established internationally to address concerns over highly pathogenic avian influenza and other emerging infectious diseases and focuses on capacity building to strengthen disease surveillance, laboratory diagnostics and disease control. Both the CDZ livestock project and ECTAD have had inputs into preparedness for incursions of African swine fever but the programmes could have liaised more closely, developed greater synergies and delivered greater impact. Overall FAO supported LBVD and its preparedness for ASF well, particularly as this project and its Chief Technical Adviser have developed such a strong relationship with LBVD staff, but the FAO in-country approach could have been more efficient if the two activity areas had coordinated better. Further, greater support and coordination could have been provided to the project by the FAO Country Office. The FAO Regional Office for Asia and the Pacific (RAP) only provided minimal coordination between the project and regular programmes.

4.4 Impact. What has been the impact of the project to date?

Finding 19. The project has undertaken a number of baseline studies and these provide a basis for change in livestock production and the adoption of new technologies, the improved delivery of animal health services and the need for policy changes which will deliver an impact in time.

Finding 20. Impact has been limited by insufficient field extension services, the small numbers of CAHWs that have been trained to date and the time to finalize the many policy initiatives. Plans with budget have been developed by LBVD to address these limitations.

86. Programme outcome: With reference to the two programme level outcomes of improved and sustainable livestock production by smallholders and improved pro-poor policies and public expenditure, the project is evaluated as having identified the benefits of improved
technologies in livestock production, though not yet having had a significant impact on the
many households with livestock, and as having supported LBVD develop an evidence base for
new policies and investment in livestock production and trade. However, little actual change
has taken place.

87. The trialling of technologies by key farmers identified a number of sound approaches that
should continue to be used by these farmers themselves and also should be extended to other
farmers in the CDZ – improved record keeping, nutrition, breeding, husbandry and animal
health. The actual impact of these trials was limited as key farmer adoption rates were variable
and the resources to develop and implement strong extension programmes were not available
to the project, with the project not reaching its target population of households.

**Finding 21. Significant staff development has taken place at LBVD and UVS with greater
recognition of the need for a rigorous approach to livestock policy development,
economics/socio-economics – staff training has been undertaken and more is proposed.**

88. The project has developed a number of policy initiatives with LBVD, some of which have been
formally endorsed. Policy initiatives that have been endorsed are strongly committed to
include CAHW accreditation, NLBS, cattle breed improvement and export trade in cattle,
investment planning, nutrition (with support for MS-NPAN) and developing native poultry
production.

89. Impact on CAHWs and UVS staff and students: One benefit of the key farmer approach was
the development of knowledge and understanding by the CAHWs and the local LBVD staff.
This improved understanding should form the basis for extension activities to the broader
community and some reference was made to this benefit in project reports. It was not clear to
the evaluation team how much this was actually happening though discussions with CAHW
groups indicated they appreciated the better understanding and that it did help their business
model allowing them to provide and charge more for their animal health services.

90. The impact on the students and staff of UVS of undertaking socio-economic studies in the CDZ
was significant on the individuals with the development of their understanding of the broader
constraints on livestock production. LBVD staff now have a greater understanding of the socio-
economic context and this is invaluable as they develop new policies on livestock production
and trade.

91. CAHW capacity building: The development and piloting of CAHW training materials provides
a sound basis for a national CAHW training programme and the 59 CAHWs trained, to date,
have demonstrated greater technical knowledge of animal health and production, and
improved skills in engagement, extension activities and business management. The overall
impact of the CAHW training is currently small as few CAHWs have completed the course.

92. LBVD Capacity building: LBVD staff have developed enhanced skills in a number of areas
through being assigned into or working with the project. In designing and undertaking the
livestock censuses and the NLBS, staff developed skills in data entry, management and analysis
including in a number of software programmes (CommCare, QGIS, Microsoft Office, Google
Earth), the use of email, structured and non-structured interviews, case studies, extension
methodologies, record keeping, work planning, budgets, training skills, policy development,
and investment and business principles. In addition, a number of LBVD staff learned about
socio-economics through their collaboration with the UVS surveys. LBVD staff in the project
area and in the LBVD Training Section were introduced to competency-based training
programmes and union LBVD and the Myanmar Veterinary Council developed an
understanding of ‘Technical and Vocational Education and Training’ as distinct to professional education.

93. The project, with LBVD, has engaged with private veterinarians such as the Myanmar Veterinary Association and the Myanmar Veterinary Council. These organizations had expressed concern over the potential impact on their businesses as CAHW competencies improved and they achieved formal accreditation under the proposed new regulations. Private veterinarians were mollified when the logic of the training was explained and the recognition that CAHWs would only be able to provide basic level services, not including anaesthesia or major surgery.

4.5 Sustainability. What is the likelihood that services and benefits developed will be sustainable after project completion?

Finding 22. Many of the policies that have been developed by LBVD with project support on improving livestock health and production and trade are in the process of being finalized and this indicates a high likelihood of sustainability.

Finding 23. LIFT is well advanced in its planning to support a Phase 2 of the project and this endorsement will allow further consolidation of the project work with policy changes, greater development of staff (LBVD and CAHW) skills and improved extension services – even though Phase 2 is expected to focus on other areas of the country, significant engagement with LBVD nationally is expected to continue.

94. The development of an understanding of socio-economics by the students and staff of UVS and the inclusion in the curriculum of core subject modules on socio-economics demonstrates a high likelihood of sustainability; UVS staff have also been identified to take on postgraduate training in socio-economics to become competent lecturers. It is intended that students will continue to undertake socio-economic surveys – a great learning exercise. The greater understanding of LBVD staff of socio-economics will support the development of new policies to improve livestock production and trade.

Finding 24. The new technologies trialled with key farmers are recognized as being beneficial, but sustainability remains questionable until greater commitment is made in the extension of this knowledge.

95. The trialling of new technologies by key farmers identified a number of sound approaches that should have a sustainable impact over time but will not do so without greater investment in extension services. Successful approaches identified to be effective in promoting more efficient livestock production included improved livestock husbandry (better hygiene, access to clean water, animal housing), improved breeding (bull and boar management, elimination of inbreeding and increased use of artificial insemination) and improved animal health (increased vaccination, use of parasiticides, prompt treatment of disease).

Finding 25. Project sustainability is considered to be high on the CAHWs and LBVD staff that were directly engaged with the key farmer programme and the LBVD plans to extend the CAHW training programme nationally, with formal accreditation indicating a strong commitment to sustainability in the future.

96. CAHW capacity building: LBVD has committed to extending the CAHW training nationally in a five-year programme and other agents (non-governmental organizations (NGOs), etc.) have also expressed interest in delivering this training. As the training is extended beyond the CDZ, some modifications will be required owing to different species mix and different husbandry systems. Over time it is expected that the majority of CAHWs will receive training and become accredited but that the remaining CAHWs will be allowed to continue to operate. In time the
numbers of untrained CAHWs are expected to decrease, but it may be that some lose their business to the accredited CAHWs. LBVD will need to monitor this situation as it may be necessary to take further action, perhaps making accreditation mandatory for all CAHWs and/or to manage the loss of business for the unaccredited CAHWs.

97. LBVD Capacity building: The project made a significant and lasting contribution to the capacity building of LBVD staff and for these staff their improved skills and training should be sustainable as a number of activities are continuing and are now being led by LBVD, e.g. the enhanced pig disease surveillance system, the ongoing analysis and reporting of data from NLBS.

4.6 Gender. What has the project undertaken and achieved in addressing gender issues?

Finding 26. Gender was not identified in the project document or in the early design phases of the project.

98. The project document contains no reference to gender, nor was gender included in the Theory of Change.

Finding 27. Gender equity was addressed by the project with all censuses, surveys and baseline studies including components on gender. Gendered training materials were developed for the women dominated livestock sectors, and project recruitment and activities considered gender and maintained records.

99. The project’s mainstreaming of gender is in line with the guidelines from both FAO and LIFT. The project has included gender analysis in all baseline studies, productivity pilots and sub-projects, and NLBS has collected data on male or female-headed households.

100. Gender analysis was undertaken by the project and resulted in the modifications of project activities. Case studies showed the relative roles of men and women in livestock raising and this was reflected in the selection of key farmers and the extension activities undertaken – women commonly took the lead in pig husbandry, men with cattle, and goats tended to be shared. It was noted that most decision-making was taken at household-level and involved both men and women. Extension activities interacted with the household as a unit, not as an individual key farmer but with recognition of the relative roles of men and women.

101. Gender-relevant activities undertaken included the collection of gender-related data in the UVS socio-economic surveys with the separation into male and female farmer focus group discussions, data on whether households were male or female-headed and disaggregated data on respondent’s gender.

102. The topic of gender was raised as an issue in discussions with LBVD and the development of the CAHW database, at meetings, and in the development of guidelines. Disaggregated data on gender was collected on CAHWs and the engaged LBVD staff. It is recognized that the CAHW population is overwhelmingly male. For example, in the pilot training of 59 CAHWs, only two were women. In the CAHW Core Policy Group discussions have been held on options for increasing the number of women. The project planned to undertake case studies of the different work of male and female CAHWs, but it was determined this could only take place after accreditation. The CAHW training materials are gender-sensitive, recognizing the important role of women in livestock raising, particularly of small stock. In contrast, LBVD staff are more evenly balanced between men and women, though the LBVD township officers are predominantly male; at the union level the ratio of men and women is more balanced.
During implementation, the project recognized the need to monitor gender and the relative roles of men and women in livestock rearing in the CDZ and in the programmes developed and delivered with the CAHWS and LBVD. Options for promoting the roles of women in livestock production and in increasing the number of female CAHWS were identified, but little impact was possible in the time frame of the project.
5. **Lessons learned**

104. This project was evaluated as being highly successful and provides some key lessons learned:

   i. **Close alignment with Government objectives**: The close alignment of the project with Government priorities was key with strong support for project activities and significant allocation of Government resources.

   ii. **Adaptive and flexible management**: Project implementation benefited from an adaptive and flexible approach by Government and the donor that allowed the project to be largely successful in achieving its outcomes and with a high probability of good long-term impact and sustainability.

   iii. **Baseline livestock demographics**: The development of a solid baseline of livestock demographics provided insights into livestock production and identified opportunities for its development including in developing exports.

   iv. **Understanding of socio-economics**: The development of an understanding of socio-economics provided the foundation for project delivery and the development of coherent and attainable policies which would not have been possible with a purely technical project focusing on livestock production.

   v. **IT systems**: The development and application of IT systems for data capture and analysis of the NLBS and censuses was very successful and can be regarded as best practice as a model to be used in other projects in Myanmar and more broadly.
6. Conclusions and recommendations

6.1 Conclusions

Conclusion 1. The project was highly relevant to Government, donors and stakeholders addressing the core development objective of promoting more efficient livestock production to improve food security, economic development and resilience in the Central Dry Zone of Myanmar and by developing coherent policies for livestock production more broadly in the country.

105. The project delivered a strong programme in the Central Dry Zone in identifying needs, trialling new technologies and improving the delivery of animal health services. A number of national policy initiatives were well advanced, however many others remain in earlier stages of development.

Conclusion 2. Overall the project was considered to be effective in achieving its ‘programme level outcomes’ but the level of effectiveness varied across the range of project activities.

106. The identified improved practices and new technologies were not widely promoted to the broader household population and so the actual impact on livestock production in the CDZ was limited. The work undertaken to strengthen the delivery of animal health services by LBVD and the CAHWs was highly effective in those directly engaged with the project with the development of high-quality training and strong mentoring programmes. Undertaking the NLBS and focal area censuses along with the socio-economic studies and improved understanding of the value chain has provided a sound evidence base for the development of improved policies for livestock production and trade.

Conclusion 3. Project efficiency was evaluated as being high with an adaptive approach taken as priorities changed and opportunities developed, and with strong government support providing considerable staff and other resources.

107. The project was able to quickly adapt to changes in Government administrative structures and processes to realign and/or delete some expected project activities with the prompt approval of the donor. This adaptive management allowed the project to develop and maintain a high level of engagement and support from Government (LBVD), which resulted in direct support for the project from seconded staff and the Government taking the lead in funding major activities such as the NLBS and also the establishment of policy groups to oversee the development of the CAHWs and the cattle trade.

Conclusion 4. At the time of the evaluation, project impact is considered limited as little extension work has been undertaken to improve livestock production practices and many of the policies being developed are yet to be finalized. However, the project has laid down a strong basis for improvement in livestock policies and improved production practices, and Government has taken strong ownership of these so that over time the impact can be expected to be high.

108. The project recognized the benefits of working at the policy level to improve livestock production and trade and focused its energy and resources at this higher level with the consequent reduction in direct field operations with farmers. Notwithstanding, the project carried out an extensive trial programme with key farmers and identified opportunities for improved production practices. This approach has provided solid evidence for future extension services which have been proposed to LBVD with cost-benefit analysis. The CAHW training and accreditation programme has been strongly endorsed and successfully piloted and its extension across the country endorsed by LBVD; regulations for the accreditation of the
CAHWs were being finalized. Staff at LBVD have also developed skills and are using a number of computer-based systems for improved data handling and analysis; this impact will be sustainable. The policies in preparation have a sound basis but have yet to be delivered and to have an impact.

Conclusion 5. Sustainability of the expected project outcomes was assessed as being high with strong ownership by Government demonstrated by Government and the donor.

109. Recognizing the comments made in Conclusion 4, project impact is expected to increase over time and so is considered to have a high probability of being sustainable. The work with key farmers has provided strong evidence for practical approaches to improving livestock production, profitability and improved trading, but has lacked the necessary extension and ongoing support activities without which the sustainability of this finding will be questionable. The improved skills of the CAHWs and LBVD staff are strongly endorsed by the people themselves and are well recognized by LBVD with a strong Government programme for ongoing development and use of these skills in place. UVS are including socio-economic skills in both their veterinary and animal science courses.

Conclusion 6. The project recognized and addressed gender issues where possible during implementation.

110. The project collected sex-disaggregated data on all its activities, including the NLBS and censuses. However, some biases were inevitable owing to the culture of households typically designated as male even though women contributed significantly to livestock work; the project worked with households, rather than individually with men or women and this approach avoided any gender discrimination. In addition, materials specific for women were developed in the sectors dominated by women. In further consideration of gender, the population of CAHWs is very male dominant and increasing recruitment of women was discussed; any change will take considerable time.

6.2 Recommendations

111. The recommendations made here follow the prescribed Office of Evaluation (OED) format and so are restricted in number and detail. Further recommendations and details can be derived from the Findings and following paragraphs in the main body of the text. The recommendations made here are identified by the agency/ies who should take the lead in addressing these options; it is noted that some recommendations are quite generic and cut across all the project stakeholders: Government, LIFT and FAO.

Recommendation 1. Greater emphasis should be placed on extension services to provide greater project impact and to ensure sustainability of improved livestock production. (FAO, LIFT, Government of Myanmar)

112. The next Myanmar CPF could consider including extension services to be supported by LIFT, FAO and others. The project identified effective technologies to improve livestock production, but insufficient extension activities were put in place. The project provided LBVD with an investment plan for livestock extension and, as extensions are a government prerogative, this plan could and should be endorsed and implemented by Government, with support from any future project and/or other stakeholders. The project key farmer concept should be developed further into ‘demonstration farms’ that have ongoing support from the CAHWs/LBVD and provide a focus for other livestock owners to observe best practices in animal husbandry and animal production. This approach should be supported by the development of ‘Good Husbandry Practices’ for each production sector by LBVD. Improved livestock production
efficiency with the use of semi-intensive systems is recognized as reducing greenhouse gas emissions.

**Recommendation 2. There should be increased support for native chicken production. (FAO, LIFT, Government of Myanmar)**

113. The project focused on cattle, pig and goat production with only a review of options for native chicken production. Native chickens are regarded as a valuable production system, supporting food security and providing cash income. Support should be provided for more efficient and productive systems of native chicken production, including the application of the key farmer approach with trials of new technologies, among which improved record keeping, better husbandry, feeding and animal health.

**Recommendation 3. A second phase of the project could strongly promote and extend the CAHW training and accreditation programme. (FAO, LIFT)**

114. The CAHW training materials are regarded as being excellent and appropriate for the CDZ but will need continual updating as situations change and as the programme is extended to other areas (Phase 2 of the project under discussion). The second phase could support the CAHW training programme in terms of management in order to maintain quality with the provision of effective ‘Training of Trainers’ and the development of additional modules for additional species, important in other areas of the country, as disease situations change and to support the response to emergency animal disease incursions. To maintain the quality and commitment of the CAHWs, in addition to training a formal follow-up programme of ongoing development and mentoring led by LBVD, FAO and LIFT could suggest Government put in place township staff.

**Recommendation 4. A second phase of the programme could capitalize on the approach piloted for socio-economic assessment and investment planning through further development and implementation. (FAO, LIFT)**

115. The improved understanding of socio-economics and investment opportunities and returns has provided a sound foundation for policy development and adoption by households and other stakeholders (feed and medicine suppliers, traders, etc.) but is, as yet, largely unrealized. Ongoing formal training at UVS of veterinary and animal science students will provide longer term benefits in livestock production and could be strongly supported by any future project (Phase 2 of the project). The policies derived from the improved understanding of socio-economics need to be finalized and implemented with an effective extension programme.

**Recommendation 5. The skills developed by LBVD staff should be further enhanced and consolidated. (Government of Myanmar, LIFT, FAO)**

116. LBVD staff skills at union and district/township level were regarded as limited in technical competencies, extension activities, data handling and information management, programme management and in policy development. These skills have all been improved through project activities with direct training and mentoring. A number of systems have been established within LBVD such as the NLBS, livestock registration and an improved surveillance system for pig diseases. This capability needs nurturing through ongoing support and development of staff and their operational systems. Regular surveys and censuses should be supported to ensure currency of data and information.
**Recommendation 6.** The policies in preparation should be finalized and promoted nationally. *(Government of Myanmar, FAO)*

117. Working with LBVD, the project has assisted in the preparation of a number of significant policy changes but most of these new policies are still under development. LBVD, with support from FAO and others, should finalize these policies and then ensure a high level of awareness and commitment to them through an extension programme working through the animal health services (LBVD staff and CAHWs) and with livestock producers, suppliers, traders and other stakeholders.

**Recommendation 7.** The project delivery using an ‘adaptive management’ approach is endorsed and should be refined and utilized in the future. *(FAO, LIFT)*

118. The project recognized opportunities and limitations and was able to adjust its priorities accordingly. Despite the excellent working arrangement developed between the project, LBVD and the donor, LIFT, and appropriate requested changes being promptly approved, a lack of documentation on the logic and the actual approval process exists. Refining the approach to include this documentation in the future is recommended.

**Recommendation 8.** There should be greater cross-project coordination leading to improved synergies and efficiencies at country and regional levels. *(LIFT, FAO)*

119. Both within FAO and the LIFT programmes there are other projects/programmes in place and there is currently a lack of strong synergies between them and the project or its second phase. The FAO ECTAD programme and this project have few coordinated activities though there is a crossover of activities, particularly in developing preparedness for African swine fever incursions. FAO in-country and FAO Regional Office for Asia and the Pacific (RAP) only provided limited coordination between the project and their regular programmes. LIFT has a ‘Microfinance Initiative’ and this approach is already supporting the development of sustainable key or demonstration farms and allows the more widespread adoption of improved livestock production practices.

**Recommendation 9.** Gender should be considered in the design phase for all projects and documents and included in the project documents, initial scoping and work plan development, as well as project staff recruitment. *(FAO)*

120. The project addressed gender in all its activities but only informally and it was not specified in the project document. Gender should be considered and addressed at all stages of project design, needs assessment, endorsement, implementation and monitoring.
References

DIMAGI. CommCare. https://www.dimagi.com/commcare/


MercyCorps. 2015. The Dry Zone of Myanmar: A strategic resilience assessment of farming communities, 2015Key non-project documents referred to in the course of the evaluation:


MS-NPAN. 2018. Multi-Sectoral National Plan of Action on Nutrition (MS-NPAN), 2018

OECD. Development Assistance Committee (DAC). http://www.oecd.org/dac/development-assistance-committee/


### Appendix 1. Evaluation questions matrix

<table>
<thead>
<tr>
<th>Evaluation criteria</th>
<th>Evaluation question</th>
<th>Sub-questions</th>
<th>Methods used</th>
</tr>
</thead>
</table>
| 1. Relevance        | How relevant was the project to the target population, Government, LIFT and FAO priorities? | 1.1 How relevant and how well aligned was the project to:  
- government priorities, including the new Agriculture Development Strategy (ADS)?  
- strengthening the University of Veterinary Science (UVS)?  
- previous and new LIFT strategies?  
- FAO priorities?  
1.2 To what extent has this project been coherent with other interventions (national and regional) which have similar objectives?  
1.3 What benefit has the project provided to:  
- the development of national animal production and health policies?  
- the national veterinary services (including early warning, disease prevention and control)?  
- livestock production and marketing in the Central Dry Zone (CDZ), and more broadly? | Project document review  
Situation review with stakeholders  
Semi-structured interviews with key Government, UN, NGO and community stakeholders  
Focus group discussions with farmers and CAHWs |
| 2. Effectiveness     | To what extent did the project achieve its planned outputs and expected/revised outcomes? | 2.1 To what extent did the project achieve planned outputs and outcomes for:  
- household technology trials?  
- CAHW system development?  
- National Livestock Baseline Survey?  
- Livestock Breeding and Animal Department (LBVD) policy development?  
- UVS staff and students?  
2.2 Is there evidence of improved livelihoods and food security from project activities?  
2.3 What factors have contributed to the achievement or non-achievement of the intended outcomes?  
2.4 What was the value/impact of the National Livestock Baseline Survey? | Project document review  
Analysis of available national indicators including changes in governance structures and policy changes  
Semi-structured interviews with key Government, UN, NGO and community stakeholders  
Survey to representative sample of beneficiaries (data collection and analysis)  
Field visit |
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<th>Evaluation criteria</th>
<th>Evaluation question</th>
<th>Sub-questions</th>
<th>Methods used</th>
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</table>
| 3. Efficiency       | How efficient was the project in achieving planned outputs and outcomes? | 3.1 What mechanisms for efficiency were used by the project?  
- how could the project have been conducted more efficiently?  
- were the project organizational arrangements appropriate and efficient?  
- were lines of communication fully operational?  
- were processes documented clear and in use?  
- were all available resources sufficient and fully exploited?  
3.2 What were the implementation gaps and delays, their causes and consequences, between planned and implemented outputs and outcomes? What remedial measures were taken?  
3.3 What was the quality and what use was made of monitoring and evaluation data in informing and modifying project implementation? | Organizational structure  
Project document review  
Project financial reports  
Semi-structured interviews with key  
Government, UN and NGO stakeholders  
Survey to representative sample of beneficiaries (data collection and analysis)  
Field visit | |
| 4. Impact           | What has been the impact of the project to date? | 4.1 What has been the impact of the project on, and uptake of project activities and approaches by:  
- trial farmers (technology trials)?  
- other farmers?  
- CAHWS?  
- LBVD (capacity development)?  
- LBVD (policy development)?  
- UVS staff and students and curriculum?  
4.2 Were there activities that would not have been conducted or would have been conducted differently in the absence of the project?  
4.3 Is there evidence of improved livelihoods and food security from project activities? | Project reports and group and individual interviews  
Documented policy and legislation changes  
Semi-structured interviews with key  
Government, UN, NGO and community stakeholders  
Survey to representative sample of beneficiaries (data collection and analysis)  
Field visits | |
| 5. Sustainability   | What is the likelihood that services and benefits developed will be sustainable after project completion? | 5.1 What is the likelihood that:  
- the CAHW system will be sustainable?  
- the technology trials in households will continue and be extended?  
- policy issues identified will be addressed/policy changes will be implemented?  
- UVS activities and changes will continue into the future? | Project document review  
Document review (particularly of FAO, LIFT and national development policies and strategies)  
Semi-structured interviews with key  
Government, UN and NGO stakeholders  
Survey to representative sample of |
<table>
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<tr>
<th>Evaluation criteria</th>
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<tbody>
<tr>
<td>5.2 Were partners, interested stakeholders mapped/documentected/contacted? Are the links to partners strong and sustainable - international, national, NGOs, etc? 5.3 Have the different regions/states/townships worked together/shared information?</td>
<td></td>
<td></td>
<td>beneficiaries (data collection and analysis) Field visits</td>
</tr>
<tr>
<td>6. Gender</td>
<td>What has the project undertaken and achieved in addressing gender issues?</td>
<td>6.1 Have gender relations and equality been affected by the project? 6.2 Was gender included in ProDoc? 6.2 Was gender included as part of a baseline assessment of needs? 6.2 Considered when developing the project operational plan and the design and implementation of activities? 6.2 Considered when recruiting staff? 6.3 Did focus groups consider and address women’s role in livestock health, production and marketing? 6.3 What monitoring was carried out to assess gender issues and how they were being addressed?</td>
<td></td>
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</table>
## Appendix 2. Project outputs with target populations and areas

<table>
<thead>
<tr>
<th>Output</th>
<th>Geographical area</th>
<th>Focus population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output 1</strong>&lt;br&gt;Project Implementation Plan informed by Inception Phase</td>
<td>Six target townships (Myingyan, Mahlaing, Taung Tha and Natogyi in Mandalay; Pakokku and Yesagyo in Magway) for field work and at national level&lt;br&gt;LBVD for policy issues</td>
<td>Livestock owners and managers, input and service suppliers, and traders and marketers&lt;br&gt;LBVD policymakers are the focus of the policy work</td>
</tr>
<tr>
<td><strong>Output 2</strong>&lt;br&gt;Representative, efficient and effective Township Livestock Productivity Committees (LPCs) in place</td>
<td>Six target townships</td>
<td>Members of the LPC are:&lt;br&gt;LBVD leadership staff of Mandalay and Magway regions&lt;br&gt;LBVD district staff of Myingyan and Meikhtila (Mandalay) and of Pakokku district (Magway)&lt;br&gt;Township, staff of LBVD, Department of Rural Development&lt;br&gt;Township Myanmar Livestock Federation members&lt;br&gt;Representatives of CAHWs</td>
</tr>
<tr>
<td><strong>Output 3</strong>&lt;br&gt;Sub-projects are implemented which improve animal health services and the uptake of improved or new livestock management practices and technologies</td>
<td>Six target townships with additional targeting of village tracts and villages driven by the capacity of CAHWs to coordinate sub-projects (additional targeting - out of scope though the survey and its results are included)</td>
<td>Livestock owners and managers, input and service suppliers, and traders and marketers</td>
</tr>
<tr>
<td><strong>Output 4</strong>&lt;br&gt;Improvements are made in livestock sector policies, supporting modalities and guidelines which support improved smallholder livestock health, productivity and marketing in the CDZ</td>
<td>National level policy, with a focus on dry zone issues&lt;br&gt;Studies and field trips to other areas of Myanmar</td>
<td>Senior staff of LBVD</td>
</tr>
<tr>
<td><strong>Output 5</strong>&lt;br&gt;Productivity benchmarks and impact on livelihood and food security established</td>
<td>Six target townships, UVS, Yezin</td>
<td>Livestock owners and managers, input and service suppliers, and traders and marketers</td>
</tr>
<tr>
<td><strong>Output 6</strong>&lt;br&gt;The project is managed efficiently and effectively</td>
<td>Management functions that support the field and policy work</td>
<td>FAO project staff&lt;br&gt;LIFT&lt;br&gt;Project Steering Committee</td>
</tr>
<tr>
<td><strong>Output 7</strong>&lt;br&gt;A functioning M&amp;E system acts to improve project implementation, to inform LIFT on project progress, and to assess project contribution to improving livelihoods and food security</td>
<td>Management functions that support the field and policy work</td>
<td>FAO project staff&lt;br&gt;LIFT&lt;br&gt;Project Steering Committee</td>
</tr>
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</table>
### Appendix 3. People interviewed and places visited

<table>
<thead>
<tr>
<th>No</th>
<th>Date</th>
<th>Place</th>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
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## Appendix 3. People interviewed and places visited

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<th>Date</th>
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<td>4 October</td>
<td><em><em>Maung</em> Aung</em>*&lt;br&gt;Dr. Ann Ko  &lt;br&gt;Dr. Win Myo Aung  &lt;br&gt;Htin Lin  &lt;br&gt;Kyi Myint  &lt;br&gt;Maung San  &lt;br&gt;Myint Aung  &lt;br&gt;Myint Win  &lt;br&gt;Tin Aung Moe  &lt;br&gt;Win Aung  &lt;br&gt;Zaw Lin  &lt;br&gt;Tin Win  &lt;br&gt;Aung Htay  &lt;br&gt;Myin Gyi</td>
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<td>7 October</td>
<td><strong>Mount Pleasant Hotel, Nay Pyi Taw</strong>&lt;br&gt;Daw Tha Win  &lt;br&gt;Dr. Thiri Myint  &lt;br&gt;Dr. Htun Min  &lt;br&gt;Dr. Win Aung  &lt;br&gt;Dr. Su Se Hlaing  &lt;br&gt;Daw Tha Win  &lt;br&gt;Dr. Htun Min  &lt;br&gt;Dr. Thiri Myint  &lt;br&gt;Dr. Htun Min  &lt;br&gt;Dr. Aye Zaw Win  &lt;br&gt;Dr. Win Aung</td>
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<td>11 October</td>
<td><strong>UNOPS</strong>&lt;br&gt;Dr. Htein Thida Myint  &lt;br&gt;Murray Maclaine  &lt;br&gt;Perl Htet Khin  &lt;br&gt;Hariel Muschler  &lt;br&gt;Curtis Silver</td>
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<td><strong>UNOPS</strong>&lt;br&gt;Hin Nwe Tin  &lt;br&gt;Phyo Win  &lt;br&gt;Thet Hnin Aye  &lt;br&gt;New Lydia Se</td>
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<td><strong>FAOR</strong>&lt;br&gt;Ms. Yae Kjier Fan  &lt;br&gt;Tin Khine</td>
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<td><strong>LOBO, Maungtaw</strong>&lt;br&gt;Dr. Oo Se</td>
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*Tha Hlaing Maung (UPT) present at all meetings except FAOR briefings

* May Thu Aung (FAO) present at all these meetings
Appendix 4. Table showing correlation between the Agriculture Development Strategy outcomes/outputs and project outcomes

<table>
<thead>
<tr>
<th>ADS outcomes and outputs</th>
<th>Project outcomes (PO)</th>
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<tr>
<td>Outcome 1.2 Policy Capacity: Improved capacity for policy formulation and analysis</td>
<td>PO3: LBVD/ Project Implement Policies Developed</td>
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<tr>
<td>Outcome 2.2. Agricultural extension: Transformed public-private agricultural extension system delivering improved products (including for livestock) and technology for adoption and adaptation, better linked to agriculture research</td>
<td>PO2: Households access CAHW and LBVD animal health services</td>
</tr>
<tr>
<td>Outcome 2.3. Education and Training: Development of effective education and training to build ‘human capital’ in the agricultural and food sector responding to the evolving needs of farmers and the private sector in rural areas</td>
<td>PO2: Households access CAHW and LBVD animal health services</td>
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<tr>
<td>Outcome 2.7. Increased use of improved livestock breeding, health and husbandry service and technologies by livestock producers</td>
<td>PO1: Households trial and/or adopt productivity technologies</td>
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<tr>
<td>- Output 2.7.6 Community Animal Health Workers (CAHW) programme institutionalized nationally, with supporting legislation</td>
<td>PO2: Households access CAHW and LBVD animal health services</td>
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<tr>
<td>- Output 2.7.8. Farm animal population baseline survey implemented</td>
<td>PO3: LBVD/Project Implement Policies Developed</td>
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<tr>
<td>Outcome 2.8 Sustainable Farming, Good Animal Husbandry Practices (GAHP) are established and adopted</td>
<td>PO1: Households trial and/or adopt productivity technologies</td>
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<tr>
<td>- Output 2.9.8. Increased climate-smart and conservation-oriented livestock utilization practices and conservation farming</td>
<td>PO1: Households trial and/or adopt productivity technologies</td>
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<tr>
<td>Outcome 3.1 Improved business environment, information and investment along the agri-food supply chain</td>
<td>PO3: LBVD/Project Implement Policies Developed</td>
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<td>Outcome 3.9 Trade facilitated agri-food and agricultural product export growth</td>
<td>PO3: LBVD/Project Implement Policies Developed</td>
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Appendix 5. Table showing main activities against project outcomes

Main activities only are provided here, further details are in the body of the report or in the project progress reports. It should be noted that many activities are relevant to more than one project outcome – only the primary associations are shown here.

<table>
<thead>
<tr>
<th>Project outcomes (PO)</th>
<th>Main activities</th>
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| PO1: Households trial and/or adopt productivity technologies | - Baseline studies – economics/livelihoods assessment, census, animal health, private sector stakeholder analysis, livestock trade  
- Key farmer trial programme  
- Disease surveys  
- Native chicken study  
- Communications materials  
- Documentation of lessons learned |
| PO2: Households access CAHW and LBVD animal health services | - Review of CAHW activities and economics  
- Establishment of CAHW Core Group  
- Development of training materials  
- Development of CAHW accreditation programme with legislation  
- Coordination with township LBVD staff on CAHW training and key farmer programme  
- Development of LBVD staff skills including in planning, budgeting, surveys, information management and reporting, presentation skills  
- LBVD Subject Matter Specialist Training |
| PO3: LBVD/Project Implement Policies Developed | - Investment scoping and case studies  
- Policy drafts on breeding, goat and cattle trade with assessment of economics and sustainability  
- Reduction in greenhouse gas emissions with improved livestock production efficiency  
- Preparations for ASF incursions and response  
- Pilot livestock identification scheme |
| Cross-cutting | - Socio-economic studies  
- National Livestock Baseline Survey |