



Lao People's Democratic Republic

Peace Independence Democracy Unity Prosperity

Ministry of Agriculture and Forestry

**Trade Facilitation: Improved Sanitary and Phytosanitary (SPS)
Handling in Greater Mekong Sub-region (GMS) Trade Project**

ADB Loan 2874 – LAO (SF)

ADB Grants 0296 – LAO (SF) and 0546-LAO (AF)

PROJECT COMPLETION REPORT

Project Management Unit, Trade Facilitation: Improved SPS Handling of
Greater Mekong Sub Region Trade Project,

Sithan Neua Village, Sikhottbang district, Vientiane, Capital, Lao PDR

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BASIC DATA (31 March 2022)

A. Loan and Grant Identification

1	Country	Lao PDR
2	Loan Number	2874-LAO (SF)
3	Grant Number	0296-LAO (SF) and 0546-LAO (AF)
3	Project Title	Trade Facilitation: Improved Sanitary and Phytosanitary (SPS) Handling in Greater Mekong Subregion (GMS) Trade Project
4	Borrower	Ministry of Finance
5	Executing Agency	Ministry of Agriculture and Forestry
6	Amount of Loan	L2874-LAO (SF): SDR 1,942,000 (US\$ 2,760,840 equivalent)
	Amount of Grant	G0296-LAO (SF): US\$ 11,000,000 G0546-LAO): US\$ 10,000,000

B.1 Project Data: L2874-LAO (SF) and G0296-LAO (SF)

1. Appraisal

– Date Completed Not Applicable

2. Loan and Grant Negotiations

– Date Started 27 March 2012

– Date Completed 30 March 2012

3. Date of Board Approval

26 June 2012

4. Date of Financing Agreement

01 August 2012

5. Date of Loan Effectiveness

– In Financing Agreement signing) 1 November 2012 (within 90 days of

– Actual 19 September 2012

– Number of Extensions Nil

6. Project Completion Date

– In Financing Agreement 31 August 2017

– Actual 31 August 2017

– Number of Extensions Nil

7. Loan and Grant Closing Date

– In Financing Agreement 28 February 2018

– Actual 28 February 2018

– Number of Extensions Nil

B.2 Project Data: G0546-LAO

1. Appraisal

– Date Completed Not Applicable

2. Loan and Grant Negotiations

– Date Started 17 Aug 2017

– Date Completed 18 Aug 2017

3. Date of Board Approval 03 Oct 2017

4. Date of Financing Agreement 13 November 2017

5. Date of Grant Effectiveness

– In Financing Agreement 5th January 2018

– Actual 5th January 2018

– Number of Extensions Nil

6. Project Completion Date

– In Financing Agreement 31 August 2017

– Actual 31 August 2017

– Number of Extensions Nil

7. Loan and Grant Closing Date

– In Financing Agreement 30 June 2021

– Actual 31 March 2022

– Number of Extensions One

C. Current Status

1. Time Elapsed

G0296/L2874: 63 months (from effectiveness)

G0546: 51 months (from effectiveness)

2. Funds Disbursed to Date (1 March 2022)

- Grant G0296 LAO (SF) \$11,000,000

- Loan 2874-LAO (SF) \$2,760,840

- Grant G0546-LAO \$10,000,000

3. Dates of most recent ADB Review Mission

13-15 December 2022

ABBREVIATIONS & ACRONYMS

ADB	Asian Development Bank
AFF	Agriculture, food, forestry
AFU	Animal Feed Unit
CIU	Component implementation unit
CQS	Consultant qualification selection
CSF	Classical swine fever
DALY	Disability Adjusted Life Year
DMF	Design and monitoring framework
DOA	Department of Agriculture (MAF)
DOLF	Department of Livestock and Fisheries (MAF)
EA	Executing agency
FA-NUOL	Faculty of Agriculture (National University of Laos)
FBO	Food Business Operator
FDD	Food and Drugs Department (MOH)
FMD	Foot and Mouth Disease
GAP	Good agriculture practice
GFIS	Grant Financial Information Services
GMP	Good manufacturing practice
GMS	Greater Mekong Subregion
GOL	Government of Lao PDR

ICB	International competitive bidding
ICS	Individual consultant selection
INFOSAN	International Food Safety Authorities Network
IPPC	International Plant Protection Convention
LFIS	Loan Financial Information Services
MAF	Ministry of Agriculture and Forestry
MOE	Ministry of Education
MOH	Ministry of Health
MOU	Memorandum of understanding
MTR	Midterm review
M&E	Monitoring and evaluation
NAHL	National Animal Health Laboratory
NCB	National competitive bidding
OIE	World Organization for Animal Health
PAM	Project administration manual
PBME	Project benefit monitoring and evaluation
PEQ	Post-entry quarantine
PMU	Project Management Unit
PPC	Plant Protection Center (MAF)
PRC	Peoples Republic of China
PSC	Project Steering Committee
QBS	Quality based selection
QCBS	Quality-and cost based selection
SEACFMD	Southeast Asian China Foot and Mouth Disease Project
SOP	Standard operating procedure
SPS	Sanitary and phytosanitary
TAD	Transboundary animal diseases
TOR	Terms of reference
VEU	Veterinary Epidemiology Unit

I. PROJECT DESCRIPTION

A. Objectives

1. Project objective is to enhanced sanitary and phytosanitary (SPS) management systems. The Project strengthened institutions and operational and management capacities in the area of sanitary and phytosanitary (SPS) measures in Lao PDR and enhanced capacities for operating cost-effective SPS systems that were needed to facilitate trade and protect health. The Project focused on Lao PDR’s trade in agriculture, food and forest (AFF) products for which SPS measures for plant health, animal health, and food safety applied. The Project established, strengthened and implemented: (i) surveillance and inspection programs for plant health, animal health and food safety; (ii) enhanced education levels and university training of SPS specialists; and (iii) promoted regional cooperation and harmonization for SPS. It selectively strengthened food safety handling capacities of private enterprises in the Lao PDR tourist industry.

B. Components

2. The RRP and PAM do not use the term “components” but rather refer to “outputs”. Although these two terms are different, “component” can be substituted for “output”, which is consistent with the use of the term “component implementation unit”.

3. Project outputs as shown in the project design and monitoring framework (DMF) were as follows:

- a. *“strengthened surveillance and inspection programs designed and implemented (for plant health, animal health, and food safety including safer food handling in the tourist industry);*
- b. *improved regional cooperation and harmonization in SPS management in AFF trade;*
- c. *enhanced education levels/university training of SPS specialists; and*
- d. *effective project management”.*

4. Whereas the components can be viewed as:

- i. plant health
- ii. animal health
- iii. food safety
- iv. academic education
- v. project management

5. Improved regional cooperation and harmonization does not appear as a separate component but was integrated within all five components and implemented by the component implementation units (CIUs) and the project management unit (PMU).

6. The following illustrates the relationship between these two terms.

OUTPUTS	COMPONENTS
A. Strengthened surveillance and inspection programs	
i. plant health	1. plant health
ii. animal health	2. animal health
iii. food safety	3. food safety

B. Improved regional cooperation and harmonization	
C. Enhanced education levels/university training of SPS specialists	4. academic education
D. Effective project management and monitoring	5. project management

7. To provide some context for the first three components, the following comes from the PAM: *“Each of Lao PDR’s plant, animal and food safety surveillance programs will be strengthened with expanded scope of coverage in terms of additional provinces, equipment upgrades and scaled up training programs. Closely related to the technical work carried out by specialists, the Project will also review and - where necessary, update - technical regulations, standard operational procedures (SOPs) and inspection manuals”*. This is why the first three components have been grouped under the same output.

C. Implementation methods

8. The Project’s executing agency was the Ministry and Agriculture and Forestry (MAF). Three components were implemented to address the first output mentioned above (for plant health, animal health and food safety). Separate components for academic education and project management corresponded to the third and fourth outputs. The regional cooperation output was integrated within all five components, which were implemented by the CIUs and the PMU as shown below:

- a. Plant Health: implemented by the Department of Agriculture (MAF)
- b. Animal Health: implemented by Department of Livestock & Fisheries (MAF)
- c. Food Safety: implemented by Food and Drugs Department (Ministry of Health)
- d. Academic Education: implemented by Faculty of Agriculture (National University of Laos)
- e. Project Management: implemented by Department of Planning and Coordination (MAF) (EA and Coordination) and Department of Livestock and Fisheries (Day to day Management)

9. **Plant Health** - The objective of the component was to move from an ad hoc approach to a sustained and planned program of surveillance and monitoring for plant pests and diseases, especially for priority crops and forest products. To achieve this, the Project supported capacity building across a broad spectrum of technical fields with a focus on identification of pests and diseases, along with provision of improved laboratory and greenhouse facilities to assist diagnostics and taxonomic identification, post-entry quarantine (PEQ) for seed and other propagative plant materials, response to plant pest and disease outbreaks. Apart from focus has been given on upgradation of fertilizer and pesticide analysis capacity, participation in proficiency testing, enhanced monitoring of pesticide residues on farm produce through annual programs of sampling and testing with rapid test kits, upgrading of human capacity through regional scholarships and study tours. Forest health and SPS compliance of trade in forest products through further technical assistance, conducting a national situational analysis of the forest pest situation and phytosanitary requirements imposed by importing countries, establishing the passive surveillance by collect and collate available information to describe and understand the forest pest situation in the country; and engaging in regional consultation, that will provide a forum to identify common issues, weaknesses and opportunities for countries to work together to mainstream forest health into their national SPS compliance processes. DOA introduced risk-

based import management by risk categorization, development of SOPs and staff training in their application. Strengthening the capacity of the border inspectors in the identification of suspected pests and diseases, production of SPS/ International Standards For Phytosanitary Measures (ISPM) awareness materials - explaining the global trading environment under the WTO, the SPS Agreement and its principles, ISPMs, improved data management on plant pests in AFF trade provides for the identification of threats and risks, and for the analysis of trends and monitoring of pesticide residues at border points. PPC also emphasized on supply chains of crop products for growing regional markets (especially PRC) by strengthening enhancing both public capacity to support better on-farm and post-harvest management practices, the surveillance of inputs, residues and pests , and – additionally - private sector capacity to introduce and attain GMP. Post-entry quarantine (PEQ) capacity will also be enhanced following the construction of the first PEQ facility in Lao PDR under the existing project. These measures will encourage Lao PDR's agriculture trade to become more formal, sustainable and valuable. The Plant Protection Center (PPC) of the Department of Agriculture (DOA) was the focal point for these activities.

10. **Animal Health** - For animal health, the Project followed a similar strategy to that for the plant health component with improved surveillance, diagnostic and response capacity for two priority animal diseases in four target areas as the objective, while simultaneously strengthening the generic surveillance and response capacity which progressively reduces the burden of transboundary animal diseases (TAD) with the ultimate goal for eradication of TAD. Interventions were focused in the National Animal Health Laboratory (NAHL), which received a refurbished laboratory and adequate supplies of materials to support the expanded testing program. Besides staff of NAHL, capacity building was also conducted for staff of the Animal Feed Unit (AFU) and the Animal Products Quality Assurance Control Unit.

11. **Food Safety** - Programs for food safety surveillance, monitoring, inspection and hazard response were designed and introduced in areas where risks of food safety hazards are highest. This was done through use of rapid test kits for a number of food safety parameters that were expanded as the Project continued. Information and awareness were disseminated to the public through workshops, awareness materials and the mobile laboratory, which also collected food samples to test for contaminants. The key to the strategy was the upgrading of staff capabilities.

12. Secondly, improved food safety handling in the tourist industry and related food industry was promoted through training provided by food safety trainers and evaluated through a grading system established around audit systems that are routinely used for diagnosing food safety handling procedures around the world. This component included the targeting of imported foods through training of risk-based assessments as well as testing of locally produced food.

13. **Academic Education** - The Primary objective under this component was to have an adequately equipped cadre of people who will be the future SPS staff – namely graduates of the Faculty of Agriculture of NUOL. To prepare them properly for such roles, FA-NUOL got an upgrade of its teaching facilities as well as the curriculum that was being taught. Curriculum upgrading was focused on the curricula taught in the departments of Plant Protection, Veterinary Medicine, and Food Science and Rural Economy. Concurrently faculty members had their own knowledge and skills improved – both technical and pedagogical including English language training. This was accompanied for a selected number with formal Masters Degree courses, along with various short courses in SPS-related subjects and through visiting scholars.

14. **Project Management** - This component established the necessary processes and systems needed to facilitate project implementation in accordance with both ADB and GOL requirements. PMU was responsible to ensure that the CIUs followed proper procedures as required by ADB and GOL, and also served as an interface between ADB and the CIUs.

15. PMU was responsible for procurement under ICB, NCB and shopping procedures. It also established the financial management system and administered the loan and grant imprest accounts for disbursement of eligible expenditures in accordance with ADB's Loan Disbursement Handbook. The PMU also developed and implemented a monitoring and evaluation system based on the project DMF (**Appendix-4**). PMU also coordinated and submitted progress reports on a regular basis to the Government and ADB.

D. Description and justification of changes in components or implementation methods

16. The Project was implemented in accordance with the Project Administration Manual (PAM) and physical progress was monitored against activities and output indicators shown in the DMF. During the implementation of the original financing (G0296/L2874) four activities under the Animal Health component had not been reflected in the project DMF even though they had been budgeted and planned for as activities under this component. Therefore, during the Midterm Review of the original project, the DMF was revised to include these four activities: (i) Formulation testing of veterinary drugs; (ii) Training veterinary drugs; (iii) Study tour in region, veterinary drugs; and (iv) Conduct annual domestic study tour on veterinary drugs. Same implementation arrangements continue in the additional financing G0546-LAO.

17. During the implementation of the additional financing, project has not included the budget for the surveillance program for the insect pests and plant diseases, weeds, forest pests and food safety in the cost tabs of additional financing (G0546) which has been incorporated in the annual work plan and budget after discussion with the ADB. Some adjustments have been made to change some of the activities which require international travel including bilateral working group meetings, International SPS Meetings/Workshop/OiE Meetings, participation in ASEAN and GMS Country SPS Workshops for improve coordination with training courses on SPS related topics including surveillance of the pest of crops, outbreak response and management, workshop on review of plant quarantine pest list for the plant health and training courses of border checkpoint staff on SPS related topics including risk assessment and management, procedures for import and export of animal and animal products, new law and decrees on livestock etc. for promotion of trade of Agriculture and animal and primary animal products for animal health CIU. Similar changes have also been made for the CIU food safety to conduct audit of 200 Food Business Organization including Food Processing Units, Restaurants and Drinking Water Plants.

18. There was also changes to recruit consultants as per the demand from the CIUs, 3 new packages of consultants have been included under CIU plant health for post-harvest handling and agribusiness market promotion, 1 consultant has been included under CIU Animal Health for illegal animal trade strategy and 3 new consultants under the PMU including 1 national and 1 international consultant for the impact assessment of the project and 1 international consultant as resource person for impact story writing.

II. PROJECT IMPLEMENTATION

A. Planned Compared to Actual Implementation

20. The Overall Project Implementation Plans are shown in Chapter III, Part B of the PAM of both original financing and additional financing. Overall Project Implementation Plans for the additional financing updated based on the extension of the project closing date due to COVID19. These reflect the project design to address the renovation of facilities followed by training to build capacity utilizing these same facilities. Crucial to this plan was the construction and renovation of laboratories as well as the procurement of laboratory equipment and consumables needed to conduct the capacity building programs. However, actual implementation of the project closely follow the plan. The civil works contract for the NUOL teaching and laboratory building, along with the renovation of PPC laboratories was awarded on 30 September 2014 and the work was completed until 12 November 2015. The first large laboratory equipment package was procured following ICB procedures and lots were awarded in September 2013 and procurement of equipment under NCB and Shopping packages done in steps keeping in view the readiness of the laboratories being constructed and mobilization of the consultants. Under the additional financing, there was small civil work packages which included 2 NCB packages of 4 Storage Rooms for PPC Lab and PEQ Green house and embankment protection of existing PEQ

21. During the implementation of original project (G0296/L2874) there were total 72 packages of good comprising of 1 ICB of laboratory equipment of 7 lots, 2 NCB, 35 Shopping packages and 34 DCs packages. There were 4 packages of works comprising of 1 NCB, 2 Shopping and 1 DC package. Consultant service comprising of 23 packages including 2 QCBS, 3 CQS and 18 individual consultants.

22. Under the additional financing (G0546-LAO) there were total 66 packages of Goods comprising of 19 NCB, 27 Shopping and 20 DC packages. There were 2 NCB package of Works and 47 packages of consulting service which include 2 LCS and 45 individual consultants. All of the procurement packages have been done smoothly on time.

23. Procurement of the laboratory consumables also follow readiness of the CIUs and most of the laboratory consumables procured using Shopping method of procurement both under the original project and additional financing. Technical consultants under the original financing, who were mainly responsible for the capacity building programs, were recruited in March 2013 and mobilized in May 2013 in original project. Under the additional financing most of the consultants were onboard by mid of 2018. Initial inputs prior to the completion of laboratories and renovations, and procurement of equipment and laboratory consumables, were effective as the consultants have developed the technical guidelines as civil work facilities and equipment and laboratory consumables needed to conduct training and capacity building were available on time when needed.

24. **Physical progress:** Under the original financing (G0296/L2874) after 20 quarters of the elapsed period of project implementation (100% of total), the percentage of physical project completion was calculated to be 97.2% (Appendix-1). Given the shortage of funds to conduct training, workshops, meetings and awareness raising, which was partly due to the depreciation in the value of the US Dollar against the loan denominated SDR, this result is highly satisfactory. However, under the additional financing (G0546) against the 17 quarters of the elapsed period (including extend period) of project implantation (94.4% of total time), the percentage of physical project completion was calculated to be 100.9% (**Appendix-1**).

B. Estimates Compared to Actual Costs

25. The Project experienced cost overruns, especially on the loan account, which were largely due to the depreciation of the US Dollar against SDRs. The original US Dollar value of the loan was equivalent to \$3 million. However, over the course of project implementation, the value of the loan was reduced by about \$240 thousand to \$2,760,840 at the end of December 2017.

26. The main items financed by the loan 2874-LAO were civil works and training, workshops, meetings and awareness activities. The main civil works construction was the NUOL Teaching and Laboratory facility with an original cost estimate of \$500 thousand. Cost estimate for the construction of university building was higher due to construction of complete facilities including classrooms for the 3 new degree courses, meeting rooms and laboratory buildings. During its procurement, this was revised upwards to more than \$700 thousand and as a result most of the unallocated funds under the loan were reallocated to the works category to meet the higher cost of construction.¹

27. The original unit costs estimated during project preparation and appraisal for training, workshops, meetings and awareness raising were also underestimated. In a decision of MAF on cost norms, travel allowance and accommodation for Government officials' travel was increased. This had a significant bearing on the actual costs incurred, especially for overseas travel thereby impacting the cost of study tours, short-term training and bilateral working group meetings.

28. Towards the end of project implementation, when the loan had been fully committed and it was clear that the Project could not achieve all of its targets and performance indicators without supplemental financing for training and workshops, ADB approved a reallocation of grant finances to provide an additional \$170 thousand for this purpose.²

C. Performance of Consultants

29. During the original project (G0296/L2874) the team of technical services consultants under the T1 contract provided the largest and most important consultant services for the Project. A QCBS system for selecting the firm to provide these services was followed and an association of Institute for Trade and Investment (ITI) consultant company and the Korean quasi-government Quarantine and Inspection Agency (QIS) was selected in 2013. Some international consultants under the T1 package were replaced by more experienced and better qualified consultants, some of whom were better able to communicate in Lao language, which resulted in improved performance and much more valuable outputs by these individuals consultants under the T1 package. Nevertheless, all the deliverables required from International Technical Services Consultants were provided. Performance of all the consultants under the T1 Plant, Animal Health & Food Safety technical improvement package was satisfactory.

30. Project Management and Implementation Support consultants have been recruited using QCBS recruitment method. Project Management and Implementation Support consultants (T6) assisted PMU and CIUs to implement the Project, especially in relation to procurement, financial management, and monitoring and evaluation (M&E). T6 consultants also assisted PMU with the preparation of the Financial Management Manual, Procurement Manual and Monitoring & Evaluation framework, all of which were finalized in 2013. Performance of all of the consultants under the project management consultant package was satisfactory.

¹ See ADB approval letter of 5 November 2015.

² See ADB approval letter of 2 August 2017.

31. Enhancing Restaurant and Food Enterprises Food Safety Capacity consultants have been recruited using CQS. Performance of all the consultants under this package was satisfactory.
32. Service contract for audit of (i) enterprises for good practice post-harvest handling and GMP (360 enterprises), and (ii) enterprises for good practice post-harvest handling and GMP (70 enterprises) recruited using CQS. Performance of the consultants under this package was satisfactory.
33. Design/ Supervision and construction monitoring consultants have been recruited using CQS. Performance of the consultant to conduct the construction supervision was satisfactory.
34. Apart from above, 19 individual consultants have been recruited using ICS method of recruitment. Performance of all of the 19 consultants was satisfactory.
35. International and National Consultants (T2) for Supply Chain Studies of Rice and Corn contributed to the Export Promotion program of the Plant Health Component with the preparation of studies on market and trade agreements, and an integrated report with supply chain and strategies.
36. International Food Safety Consultants for Enhancing Restaurant and Food Enterprises Food Safety Capacity (T3) prepared checklists and scorecards for restaurants and food processing enterprises, and conducted the pilot phase of training staff of food enterprises. T3 consultants also supervised S1 individual consultants on the mainstream phase of food safety training for good manufacturing practices (GMP).
37. Food Safety Specialists for Training GMP and Safe Food Handling (S1) conducted training for staff of restaurants and food enterprises, and training of food business operators (FBOs) in Vientiane, Luangprabang, Champassak and Savannakhet. Altogether, total of 38 trainings have been organized (19 training courses under G0296 and 19 training courses under G0546 additional financing in which 1,499 FBO (891 female) have been trained (318 from Savanakhet, 334 from Champasack, 268 from Vientiane province, 305 from Vientiane capital, 169 from Luangprabang and 65 from Oudomxay province). Auditing of total 724 FBOs for GMP certification (360 FBOs under L2874/G0296 and 364 FBOs under G0546) was completed therefore, the target of 630 food enterprises was exceeded.
38. Consultants for Auditing Corn and Rice Enterprises for Good Agricultural Practices (GAP) and Post-Harvest Handling (S2/P13) completed evaluations for certification of total 18 rice and 23 corn enterprises.
39. Three international Curriculum Upgrading Specialists (T4) prepared drafts incorporating SPS into the curricula of Plant Protection, Veterinary Medicine and Food Technology departments of FA-NUOL. These revised curricula were approved by the Ministry of Education in January 2015 and were subsequently implemented with assistance of T5 Visiting Lecturers.
40. Six international visiting lecturers (T5) assisted the three FA-NUOL departments of Plant Protection, Veterinary Medicine and Food Technology to implement the upgraded curricula with the preparation of teaching materials, course modules and presentations. New degree courses of 6 years degree programme of Doctors of Veterinary Medicines (DVM), 4 years degree programme B.Sc. Plant Protection and 4 years degree programme B.Sc. Agriculture Economy and Food Technology have been created to meet the human resource requirement for SPS. These 3 degree programmes have been approved by the Ministry of Education and Sports to start the courses from the academic year 2017-18.

41. International Surveillance Specialist (T7) conducted training and prepared a border strategy for live animals and animal products targeting informal live animal trade, prepared the set of actions that can be implemented by the Lao PDR Government agencies to better manage the SPS risks associated with the trade “on the ground” in Lao PDR and developed the SOP for staff in administering the animal movement controls across the borders and within Lao PDR.

42. Under the additional financing (G0546-LAO), there were total 47 consultants’ packages comprising of 45 individual consultants of which 42 recruited using ICS method and 3 recruited as SSS method of recruitment. 2 Consultants company have been recruited using LCS method of recruitment. 2 Individual consultants have been replaced during period of implementation due to unforeseen death of these 2 consultants. Performance of all of the 45 individual consultants and 2 consultant companies was satisfactory. Under the plant protection, consultants have developed the guidelines for the preparation and issuance of phytosanitary certificates; manual and provide advice to the PPC, PAFO and relevant local industry on how to meet the SPS requirements of potential countries, guideline for the preparation of market access proposal; manual for phytosanitary export inspection and Standard operating procedures (SOPs) for export inspection and certification of plants and plant products. Other consultants have also completed their tasks as per the TOR. The list of deliverables prepared and submitted by project consultants is shown in **Appendix 2.1 and 2.2 - Consulting Services Deliverables**.

D. Procurement of Goods and Services

43. During the original project, procurement of the Goods and Work procurement packages conducted as plan. To expedite the procurement process some remedial measures were taken including the revision of procurement plans to substitute shopping procedures instead of NCB for the procurement of some equipment procured in later stages of the implementation period. Direct purchases were also applied in later stages for procurement of laboratory consumables and test kits, which put more procurement responsibility and control in the hands of CIUs and were successful in expediting procurement of these items.

44. Performance of suppliers and contractors was good. Equipment and laboratory consumables were procured and delivered on time. A summary of procurement is shown below.

Original project (G0296/L2874)

- **Goods (total of \$3,810,165)**
 - **ICB (1 package):**
 - 1 ICB of laboratory equipment of 7 lots of \$666,602
 - **NCB (2 packages)**
 - 1 NCB for Vehicles of \$451,204
 - 1 NCB for Laboratory equipment of \$428,133
 - **Shopping (35 packages)**
 - 17 for equipment of \$697,221
 - 3 for vehicles of \$136,128
 - 15 for consumables of \$1,160,810
 - **Direct Contracts by CIUs**
 - 34 DCs for test kits and consumables of \$270,066
- **Works (total of \$773,323)**
 - **NCB (1 package):**
 - 1 NCB with 2 Lots for university building, Laboratory and green house of \$702,201

- **Shopping (2 packages)**
 - 1 for Renovation of PMU Office Building of \$31,831
 - 1 for Renovation of CIU Office Buildings of \$29,815
- **Direct contract:**
 - 1 DC for Installation of Electricity at PPC of \$9,656
- **Consultant Services (total of \$5,630,588)**
 - **Contracts with firms:**
 - 2 QCBS for Technical Services & Project Management of \$3,795,848
 - 3 CQS for Food Safety Training and auditing of \$712,250
 - **18 individual consultants under ICS of \$1,122,490**
- **Grand Total of \$10,214,076**

Additional Financing (G0546)

- **Goods (total of \$3,282,096)**
 - **NCB (2 packages)**
 - 19 NCB for Equipment and Vehicles of \$2,444,841
 - 2 NCB for Works of \$321,202
 - **Shopping (35 packages)**
 - 27 for consumables and equipment of \$662,551
 - **Direct Contracts by CIUs**
 - 20 DCs for test kits and consumables of \$174,704
- **Works (total of \$321,202)**
 - **NCB (2 package):**
 - 2 NCB for Works of \$321,202
- **Consultant Services (total of \$ 3,506,535)**
 - **Contracts with firms:**
 - 1 LCS for Service provider - Food safety handling and GMP grading audits of \$78,500
 - 1 LCS for Service provider - GMP certification of \$66,032
 - **45 individual consultants under ICS and SSS of \$ 3,362,003**
- **Grand Total of \$ 7,109,834**

E. Compliance with Conditions of the Financing Agreement

45. All of the loan and grant covenants that appear in the Financing Agreement between the Lao People's Democratic Republic and ADB (dated 1 August 2012) and in additional financing (13 November 2017) have been or are being complied with. The details of loan and grant covenants compliance are shown in **Appendix 3.1 and 3.2 – Compliance With Loan and Grant Covenants**.

F. Loan and Grant Utilization

46. As of 1 January 2018 there were total contract awards of \$2.43 million financed from Loan 2875-LAO (SF), accounting for 88% of the adjusted loan amount. There were also cumulative disbursements of \$2.73 million accounting for 100% of the total adjusted loan amount. The details are shown on **Table 1**.

Table 1: Loan 2874-LAO(SF) –Disbursements (as of 31 December 2017)

S. No.	Category	Total allocation (adjusted after reallocation)	Total expenditure
1	Civil Works	773,323.14	773,323.14
2	Training, awareness, workshops and meeting	1,814,745.63	1,814,745.63
3	Small laboratory goods	85,535.23	85,535.23
4	Interest during implementation	56,909.18	56,909.18
Total		2,730,513	2,730,513.18

47. As shown in table-1 above, 100% of the allocation for Civil Works (Loan category 1) has been utilized. For Training, awareness, workshops and meetings (Loan category 2), expenditure has exceeded the allocation by almost \$90 thousand, which was needed to finance urgent unfunded activities. ADB approved a reallocation of \$170,000 grant savings for this purpose on 2 August 2017. For Small laboratory goods (Loan category 3), 46% of the allocation has been utilized and more than \$99 thousand remains. For Interest during implementation (Loan category 4) 65% of the allocation has been utilized with more than \$30,000 remaining. Finally, all of the unallocated funds (Loan category 5) under the loan have been reallocated. Overall, of the total loan allocation of about US \$2.76 million, 100% has been utilized. The details of loan utilization by financing category and component are shown in Appendix 4 – Grant and Loan Utilization.

48. Besides Goods and Consulting Services, recurrent cost expenditures are also financed from the grant. As of 1 January 2018 there were total contract awards of more than \$10.96 million financed from Grant 0296, accounting for almost 100% of the total grant amount. Including an imprest account advance, there were cumulative disbursements of \$11 million accounting for 100% of the total grant amount. The details are shown on **Table 2**.

Table 2: Grant 0296-LAO –Disbursements (as of 31 December 2017)

	Category			Total allocation (adjusted after reallocation)	Total expenditure	Balance
	Equipment			2,394,000	2,283,115	110,885.20
3601	I	1A	Vehicles	587,300	587,332	(32.48)
3602	II	1B	Laboratory and Other Equipment	1,806,700	1,695,782	110,917.68
3101	III	2	Consulting Services	5,633,600	5,593,470	40,130.31
			Laboratory system support	622,300	620,924	1,376
3901	IV	3A	Testing, Surveillances and other Services	584,500	571,217	13,282.68
3902	V	3B	Small laboratory goods	12,800	24,707	(11,907.08)
3903	VI	3C	Data Management	25,000	25,000	-
3904	VII	4	Recurrent Costs	2,180,100	2,307,039	(126,938.67)
			Consumable Goods and Services	1,565,900	1,392,661	173,239.21
			Maintenance and Operating Expenses	614,200	914,378	(300,177.88)
3801			Training and Workshop	170,000	195,452	(25,452.44)
Total				11,000,000	11,000,000	0

49. As shown, about 95% of the allocation for Equipment (Grant category 1) has been utilized with about \$110 thousand remaining. For consulting services (Grant category 2), about 98% of the allocation has been utilized with about \$100 thousand remaining. For Laboratory Systems Support (Grant category 3), 100% of the allocation has been utilized. For Recurrent costs (Grant category 4), expenditure has exceeded the allocation by about \$126 thousand. All of the unallocated funds (Grant category 5) have been reallocated. For the new Category 3801 - Training and Workshops, expenditure has exceeded the allocation by about \$25 thousand. Overall, of the total grant allocation of US\$11 million, 100% has been utilized.

50. Under the additional financing (G0546-LAO) budget was divided in to 3 categories. Budget was reallocated 1 time. Civil Works, Vehicles, Computers, Furniture, Laboratory Equipment, System Support and Consulting Services expenditures was made from category-1. Trainings and workshop under the category 2 and recurrent cost under the category-3. Recurrent cost also included the procurement of the laboratory consumables and tests kits required for the operation of the laboratories during the implementation of the project. are also financed from the grant. As of 31 March 2022 contract awards of more than \$7.11 million financed from Grant 0546. There were cumulative disbursements of \$10 million from the ADB Grant 0546 accounting for 100% of the total grant amount. Government contribution was planned for an amount of US\$ 0.315 million against which government has contributed worth US\$ 0.581 in the form of kind by mobilizing the government staff to work with the project. The details are shown on **Table 3**.

Table 3: Grant 0546-LAO –Disbursements (as of 31 March 2022)

S. No.	Category	Total allocation (adjusted after reallocation ADB G0546)	Total expenditure up to 31/03/2022 (ADB G0546)	GOL Planned contribution	GOL Actual contribution	Balance
1	Civil Works/ Vehicles/ Computers/Furniture/ Lab. Equip./ Syst. Support/ Consulting Services	5,017,800.00	5,023,063.91			(5,263.91)
2	Trainings/ Awareness/ Workshops/ Studies and Meetings	2,523,807.00	2,518,612.90			5,194.10
3	Recurrent cost	2,458,393.00	2,458,323.19			69.81
4	Unallocated					-
5	Government Contribution			315,000	581,400	-
	Total	10,000,000.00	10,000,000.00	315,000	581,400	0.00

51. There were few delays in the utilization of loan and grant proceeds. Throughout the period of project implementation actual cumulative disbursements met or exceeded projected disbursements as shown in **Figure 1** and **Figure 2** (overleaf).

Figure 1: Actual and Projected Grant 0296-LAO (SF) Disbursements (US\$ Million)

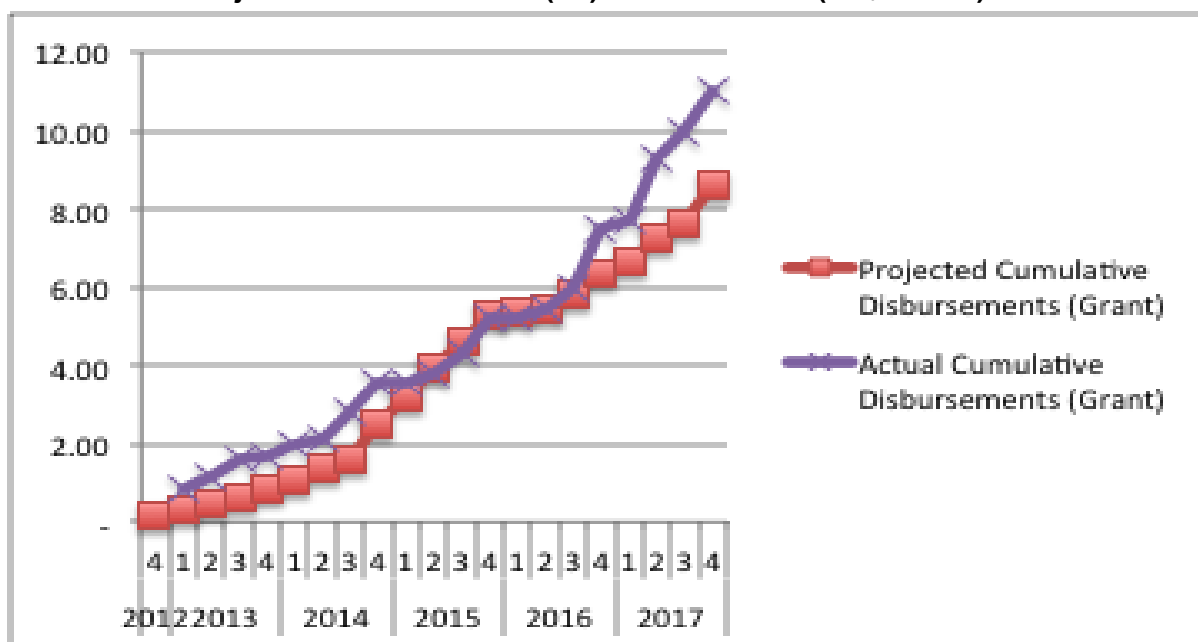
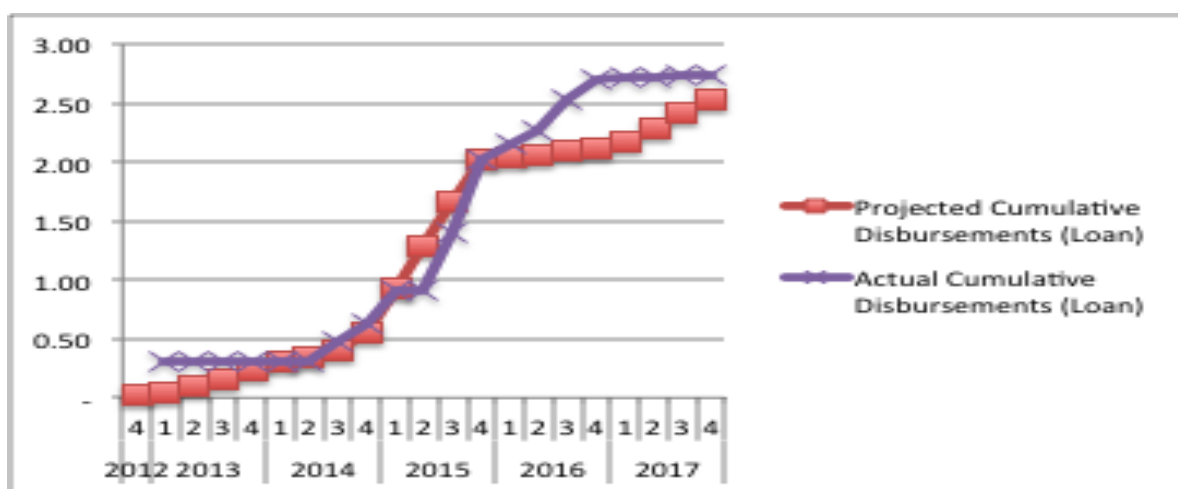


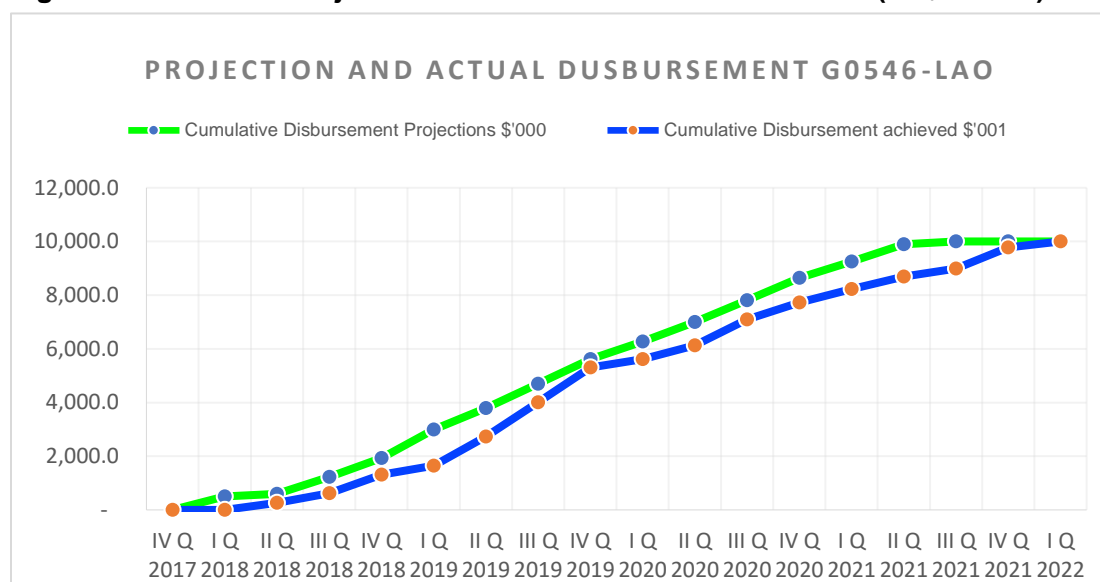
Figure 2: Actual and Projected Loan 2874-LAO (SF) Disbursements (US\$ Million)



52. The reallocation of unallocated funds under the loan is mentioned above in Chapter 2B. As described, the main purpose for this reallocation was to meet the increased cost of construction for the NUOL training and laboratory facilities building. The reallocation of some grant proceeds for the purpose of supplementing funds for training and workshops is also mentioned in Chapter 2B. As described, the justification for this reallocation was to meet DMF targets that would not be achieved without supplemental finance given the cost overruns mainly caused by the depreciation of the US Dollar against the SDR. There was also the reallocation of unallocated grant funds, mainly to increase the amount available for procurement of equipment.³ The main justification for this reallocation was to effectively utilize uncommitted grant funds for additional laboratory equipment to increase capacity and improve effectiveness of related programs.

³ See ADB approval letter of 15 February 2017.

Figure 3: Actual and Projected Grant G0546-LAO Disbursements (US\$ Million)



53. Under the additional financing G0546-LAO fund flow remains smooth as plan despite the COVID19 pandemic. However, during the pandemic period, there was delay in implementation of the project activities which has prompted to extend the project completion date for 1 year from 30 June 2021 to 30 June 2022. However, project activities have been completed 3 months before by 31 March 2022. In original allocation there was savings of about US\$ 192 thousands under the category-1 especially under the consultant packages and some under the civil works. These savings and unallocated funds were allocated to the category-2 and 3.

G. Executing and Implementing Agency Performance

54. As executing agency (EA), MAF's performance was satisfactory. Beginning with effectiveness in 2012, implementation of physical activities proceeded on time or ahead of schedule. Submission of quarterly reports was complied with and project benefit monitoring and evaluation started in 2013 with the preparation of the M&E framework that was based on the project DMF for the original project and additional financing. ADB procedures for procurement of goods, equipment and consulting services were complied with; and the Project Steering Committee (PSC) meetings were regularly convened to resolve issues affecting policy and operations.

55. Under the guidance and coordination of DOA the Plant Health component of the Project overachieved the targets as given in the Project DMF. Under its Pest List Development program total 70 pest surveys have been completed of which 17 pest surveys in G0296/L2874 and 53 pest in G0546, which resulted in the finalization of pest lists for rice, corn, banana, cassava, watermelon, sorghum, sacha inchi, job's tear, bloom grass, coffee, rubber, vegetables and fruit trees and 26 new crops. This information was uploaded on the IPPC/APPPC website as pest reporting obligations and shared with regional trading partners to facilitate an increase in trade of plants and plant products. As a result updates of pest lists for five priority crops (rice, corn, watermelon, cassava and banana) were completed for the revision of the previously signed

market access agreements with PRC to extend its periods.⁴ Negotiations/preparation for 24 MOUs of new crops and three MOUs for medicinal herbs (*Spatholoby caulis*, *Smilacis glabrae*, *Cytotracjelus longimanus*) have been submitted to PRC.

56. Against the target of 6 crop- or product-specific market access agreements, total of 40 market access agreements/MOUs signed (12 MOUs⁵ were completed under L2874/G0296 and 28 MOUs⁶ were signed under G0546).

57. Under its Pesticides Management program a total of 4,206 (2,070 in old project and 2,136 in additional financing) specimens of fruits and vegetables were collected from international checkpoints, farms and local markets, and tested for Maximum Residual Limit of which 564 samples (13.4%) exceeded safe level of pesticides residue. Under its Export Promotion program guidelines and manuals were prepared for GAPs, GMPs (scorecard system), SOPs for certified seed, pest and pesticides management, and on-farm harvesting, drying, shelling, storage and transport. Training of trainers was conducted along with training workshops for the industry, and farmer awareness was completed. S2 auditors completed evaluations of 41 corn and rice producers for GAP/GMP certification in 7 provinces. Under the import handling PEQ has been conducted for 637 consignments of which 36 consignments found infested with exotic pests and have been disposed off.

58. Under the guidance and coordination of DOLF the Animal Health component of the Project achieved 94% of its targets both under the original project and additional financing as given in the Project DMF. Under its TAD Control program guidelines for national TAD surveillance procedures, and guidelines on laboratory testing protocols for TAD Control were prepared. The animal disease surveillance plan was developed, and equipment and consumables procured. The surveillance plan was rolled out with active surveillance and related awareness activities were conducted in the two target provinces (Xiengkhuang and Savanakheth) in original project and have been rolled out in 2 new provinces (Bolikhamsai and Khammuane) during additional financing. Vaccinations were carried out in high-risk areas chosen for the trialing of disease control zones within these provinces. A total of 8,087 samples (2,808 samples in old project and 5,279 sample in additional financing) from cattle, buffalos and pigs were collected and are being tested; 136,154 animals (5,723 animals in old project and 130,431 in additional financing) were vaccinated. Under its Veterinary Drugs, Animal Feed and Food Safety Animal Products programs, pesticides and heavy metals surveillance was conducted and information collected for the database. All together, 608 samples of veterinary drugs, 2,746 samples of animal product and 2,025 samples of animal feed were collected and tested for these and other contaminants.

59. Under the guidance and coordination of FDD the Food Safety component of the Project achieved 97% of its targets both under original project and in additional financing as given in the Project DMF. Under its Surveillance System Upgrade program guidelines for national food safety

⁴ Under support of Grant 0296/Loan 2874, Lao PDR has developed and updated pest lists for 11 crops, which led to 5 market access agreements signed with PRC for the first time (MOU on phytosanitary import conditions for rice, watermelons, banana, cassava, and corn); and 3 formal trade agreements reached with Thailand for corn, corn with kernels and bloom grass.

⁵ Five market access agreements (5 MOUs on Phytosanitary import condition for Rice, Corn, Watermelon, Cassava and Banana) were signed with People's Republic of China (Rice and corn in January 2015, Watermelon, cassava and banana in Sept 2016); Two MOUs for Rubber and Sacha inchi with PRC were negotiated in September 2017; Four market access agreements with Thailand on Tobacco, Broom grass, Corn and Corn with kernels were signed in October 2015 and One import permit for Lao Dragon fruit to Vietnam was approved in August 2017.

⁶ 15 Import Permit have been signed with Vietnam comprising of Corn, Cassava, Banana, Sticky rice, Passion Fruit, Pomelo, Mango, Citrus, Pomelo, Carrot, Mustard leaf (Phak Kaat), Onion, Napier grass, Lettuce and Jack fruit from May 2019 until Feb 2020. 12 declaration of import permit (MOUs) have been signed with DOA of Thailand for allow import of Citrus, Cassava, Soybean, Local banana, Vegetables, Chilly, Passion Fruit, Potato, Papaya, Tomato, Pumpkin and Jatropa from December 2019 to March 2020. One MOU for the export of Sweet potato to China has been signed in October 2019.

surveillance and food poisoning outbreak identification and control were developed. A risk categorization framework was prepared and the mobile food safety laboratory collected 15,319 samples (4,714 food samples in old project and 10,605 samples in additional financing) to test for salmonella, E-coli, sulphites, borax, and formalin in fresh produce and processed food in Vientiane Capital, Luangprabang and Champasak provinces and being expanded to three new target provinces of Oudomxay, Savannakhet and Vientiane province. Apart from these, 5,076 samples have been collected by 3 mobile food safety laboratories. Under the Tourist Industry Support program staff of 1,573 FBOs (800 FBOs in old project and 773 FBOs in additional financing) were trained. Against the target of 630 FBOs audits for evaluation of GMP certification readiness were conducted for 724 FBOs (360 in old project and 364 in additional financing). final inspection for GMP certificate issuance for 20 FBOs has been completed. Out of total 2,491 restaurants/BFOs in 6 targeted provinces, FDD inspectors have visited 2,572 restaurants/BFOs for the food safety inspection and collection of food samples. Usually inspectors have visited each restaurants/BFOs 2 times per year.

60. Annual programmed food safety surveillance and inspection activities are being conducted in Vientiane Capital, Luangprabang and Champasak provinces and being expanded to three new target provinces: Oudomxay, Savannakhet and Vientiane province. There were 5 occurrence of food poisoning was 2 in 2015, 0 in 2016, 1 in 2017, 1 in 2018, 1 in 2019, 0 in 2020. FDD responded for all of the 5 food poisoning. There were 2 Food Outbreaks in year 2017 (1 in Vientiane capital and 1 in Vientiane province). FDD responded for both the food outbreaks.

61. Under the guidance and coordination of FA-NUOL the Academic Education component of the Project achieved 100% of its targets as given in the Project DMF, including:

- i. Revised curricula for plant health, animal health and food safety that was approved by the Ministry of Education in 2015 and been taught since October 2015, along with teaching materials that were subsequently developed.
- ii. Under the original project, 7 staff of FA-NUOL (1 female) were enrolled in Masters courses in Thailand. Under the additional financing 3 staff of FA-NUOL (3 female) were enrolled in Masters courses in Thailand. All of the 10 faculty members have completed their Master degree programme.
- iii. Six staff (4 of whom were female) from the three departments being supported by the Project for short-term SPS technical courses overseas.
- iv. Against the target of 9 intern, during the year 2019 12 students have been mobilized to work as interns with the CIUs of which 3 students (2 female) worked with FDD, 6 students (3 female) worked with PPC and 3 students (2 female) worked with DLF. During the year 2020 Eighteen students working as interns with the CIUs of which 4 students (4 female) worked with MOH's food and drug control department, 8 students (4 female) work with MAF's plant protection center and 6 students (3 female) work with MAF's department of livestock and fisheries. During the year 2021 supported 18 Students of final years from the new SPS degree programme of Plant protection, veterinary science and food safety have been mobilized to work with CIUs as interns. Out of 18 interns, 8 interns (4 female) have been mobilized to work with CIU Plant Health, 6 interns (3 female) with CIU Animal Health and 4 interns (4 female) with CIU Food Safety.
- v. 14 faculty members (6 under original project and 8 under additional financing) have undergone English Proficiency training. About 30% of the participants were female.

- vi. The new laboratory and training facility building was completed in December 2015 and immediately put into use for training and research purposes.
- vii. Under the 3 new Curricula Development Programme, During the academic session 2021-22, 46 students (34 Female) have been enrolled for 6 years degree programme of Bachelor degree programme Doctors of Veterinary Medicines (DVM); 19 students (8 female) have been enrolled in 4 years degree programme of Bachelor of Science in Plant Protection and 21 students (9 female) have been enrolled in 4 years degree programme of the Bachelor of Science in Rural Economy and Food Science. About 59% of the student participants were females.

62. Under the guidance and coordination of PMU the Project Management component of the Project achieved 100% of its targets as given in the Project DMF with the Project fully staffed and operational since 2013 with financial, operational and monitoring and evaluation systems in place. About 50% of the project staff were female and about 67% of PMU staff were female.

III. INITIAL OPERATIONS

A. Transition and Initial Operations

63. With additional financing of a \$10 million grant approved by ADB,⁷ the Project has not yet been completed and is not yet fully ready for initial operations with financing from the Government budget. Nevertheless, initial operations of all project-financed facilities are considered to be smooth and effective. The loan financed construction of the FA-NUOL teaching and laboratory facility culminated with a building that is being used intensively by staff and students conducting teaching and research activities. The construction of the 4 laboratory rooms and PEQ greenhouse under the additional financing has provided the PPC with the capability to test imported plant material and seeds for pesticide residues and other contaminants. The renovation of PPC laboratories and the NAHL along with supplementing them with laboratory and IT equipment has improved capacities of these departments to conduct the laboratory testing for which they are responsible. The provision of the 3 mobile food safety laboratories for FDD has provided the ability to conduct regular food sampling and testing for contaminants as well as provide awareness raising to help control food poisoning outbreaks.

B. Project Sustainability

64. As part of the financing conditions, which include a condition to ensure sustainability,⁸ discussions on increased operational funding and staffing were initiated with ADB in the context of possible additional financing during the Review Mission in December 2021 and will continue during the additional financing phase of the Project. The Government realizes the importance of institutional development and improved capacity financed by the Project and is committed ensure its sustainability. It will identify the necessary financial and human resources for this prior to the end of the additional financing phase of the Project.

C. Project Benefits

65. The prospects of project benefits are very good given the benefits that have already been realized. The status of completion of targets and progress indicators from the DMF is detailed in **Appendix 5 – Monitoring and Evaluation Framework** (summary).

66. The Plant Health Component Outcome Indicators are, “*crop- or product-specific market access agreements based on new pest/disease information (3 - corn, rice, one other)*” and “*GMS trading partners regard Lao PDR plant, animal and food SPS data and practices as more reliable (timeliness and quality of reporting to partners and international organizations)*”. The Plant Health program has completed the indicators towards meeting the project outcome with the completion of 70 pest surveys and finalization of pest lists. Updates of pest lists for five priority crops (rice, corn, watermelon, cassava and banana) were completed for the revision of the previously signed market access agreements with PRC to extend its periods.⁹ Negotiations/preparation for 24 MOUs of crops (including 10 of the first priority crops,¹⁰ and 14 of the second priority crops¹¹) The

⁷ See ADB letter of 17 October 2017.

⁸ Schedule 5, para. 3: Prior to the completion of the Project, the Beneficiary shall, in consultation with ADB, increase operational funding and staffing within the relevant ministries to a sustainable level that will ensure the SPS system to be developed under the Project shall be properly maintained beyond the Project implementation period.

⁹ Under support of Grant 0296/Loan 2874, Lao PDR has developed and updated pest lists for 11 crops, which led to 5 market access agreements signed with PRC for the first time (MOU on phytosanitary import conditions for rice, watermelons, banana, cassava, and corn); and 4 formal trade agreements reached with Thailand for tobacco, corn, corn with kernels and bloom grass.

¹⁰ Sweet potato, jackfruit, longan, durian, passion fruit, mandarin, pomelo, dragon fruit, and 10 types of vegetables (pepper chilly, soybean, mung bean, peanuts, Chinese bean, white radish, cabbage, pumpkin, eggplant, tomato).

¹¹ Tea, jobs tear, rubber, melon, coconut, pineapple, papaya, rambutan, guava, sugarcane, lime, sweetcorn, cardamom, other vegetables.

pest list information has been uploaded on the IPPC/APPPC website and shared with regional trading partners.

67. The Animal Health Component Outcome Indicators are, *“improved animal disease outbreak response using variety of controls (vaccination, movement restrictions, quarantine etc) in 2 provinces; 200 visits and 4 responses per year on average”* and *“GMS trading partners regard Lao PDR plant, animal and food SPS data and practices as more reliable (timeliness and quality of reporting to partners and international organizations)”*. An indication of improved animal disease outbreak response was evident in the successful management of FMD outbreaks that occurred in 2 districts of Vientiane Capital in 2016, along with some minor occurrences in 2017 and LSD outbreak in year 2020. Ring vaccination programs were conducted in the areas surrounding the outbreak areas to prevent further spread of FMD. These FMD outbreaks were reported to the OIE and to counterparts in neighboring countries, which is an indication of Lao PDR’s reliability in reporting such occurrences. Surveillance activities continued into 2022 with the collection of 9,595 samples from cattle and buffalo to be tested for FMD, and another 585 samples from pigs for CSF.

68. The Food Safety Component Outcome Indicators are, *“improved food hazard response capacity (product, violation, dispossession, compliance, enforcement knowledge gained through attendance at 16 courses, 5 study tours)”* and *“improved food safety (on GHP and GMP-based grading) in 724 tourist and food processing enterprises in 6 major centers”*. An indication of improved food hazard response capacity was previously reported with the successful management of food poisoning outbreaks in 2015 and 2016, and a Typhoid outbreak in 2017. FDD also issued notices to the Public through INFOSAN Alerts on contaminated imported food, which is an indication of Lao PDR’s reliability in reporting such occurrences.

69. The DMF does not explicitly include any verifiable indicators for the achievement of the Project Outcome under the academic education component. Nevertheless, ongoing training for faculty and students continued, which is a long-term program that will ultimately enhance the SPS management system in Lao PDR. However, an indicator of this is the increased capacity created under the Project that enabled the three departments that were supported to more than double their first year student enrollments from 43 to 120. 3rd Batch of 29 students (12 female) enrolled in academic year 2016-17 under the Plant Protection a 4 years programme have been completed bachelor degree in December 2021.

70. 3rd Batch of 32 students (15 female) enrolled in academic year 2016-17 under the Rural Economy and Food Science a 4 years programme have been completed bachelor degree in December 2021. 1st Batch of 38 students (27 female) enrolled in academic year 2015-16 under the Doctor of Veterinary Medicines (DVM) a 6 years programme have been completed bachelor degree in December 2021. Graduated students from Plant Protection and Rural Economy, Food Sciences and Doctor of Veterinary Medicines (DVM) have started working with various organizations.

71. FA-NUOL is conducting the assessment for the status of graduated students working with various organizations and their further studies. Student follow up is key performance to know ability of graduates who finished from university and plan to develop new syllabus and curriculum, therefore team evaluation was conducted this activity for survey stakeholder satisfaction by created interview forms and delivered to stakeholders to full fill the form and collected for data analysis.

72. Regional cooperation has been improved. CIU Animal Health Actively participating in Southeast Asia China Food and Mouth Disease project, International Food Safety Authorities Network and ASEAN Rapid Alert System for Food and Feed by sharing data and annual reporting.

Lao PDR continues to regularly share/report updated information on pest-related activities with IPPC and APPPC; animal health information measure with ASEAN networks (South East Asia and China Foot and Mouth Disease), ASEAN Rapid Alert System for Feed, and World Organization for Animal health (OIE); food safety surveillance with International Food Safety Authorities Network and ASEAN Rapid Alert System for Food

73. 17 bilateral working group meetings on Plant Health were conducted, 8 with the PRC, 4 with Thailand and 5 with Vietnam to exchange pest lists, pest reports and pest outbreak control. On Animal Health, 15 bilateral working group meetings were conducted, 6 with Thailand, 6 with Vietnam and 3 with PRC to discuss and agree on TAD control measures along the borders and improve technical collaboration, including simplification of measures to facilitate animals and animal products cross border trade.

74. On Food Safety, 12 bilateral working group meetings were conducted (3 with Vietnam, 6 with Thailand and 3 with PRC) to facilitate bilateral cooperation and trade, and information sharing on surveillance activities

75. Under the institutional Twinning, there has been close co-operation with Khon Kaen University, especially with veterinary science ever since inception of the Project. Furthermore, activities have been conducted for vocational training to involve university staff and students in applied research, surveillance, testing and diagnostics. The collaboration was extended to Kasetsart University for plant protection and Chiang Mai University for food safety science. Guest lecturers, including some from MAF, were brought in to teach on special topics related to plant protection, veterinary medicine and food safety. All CIUs are continuously coordinating with the NUOL. Guest lecturers are being mobilized to build the capacity for selected topics. CIUs are coordinating with OIE, IPPC, Food and Drug Department of adjoining countries, universities located in the regions for the institutional twinning. Information sharing on food safety surveillance activities with International Food Safety Authorities Network and ASEAN Rapid Alert System for Food has been undertaken annually.

76. The DMF also does not explicitly include any verifiable indicators for the achievement of the Project Outcome under the project management and monitoring component. Nevertheless, effective management and continued monitoring of project components with verifiable indicators to achieve the Project Outcome was a significant contributing factor. In other words, success in achieving the Project Outcome indicators by the main project components (plant and animal health, and food safety) reflected the effective project management needed to facilitate this achievement. Gender targets of 30% participation by women in project management were exceeded.

D. Assessment of Gender-Related Results/Achievements:

77. Project has given high attention for the gender during the implementation. Summary of the gender mainstreaming under the project given below:

- i. Under the food safety component four study tours to Thailand, Vietnam and China on food safety control systems and risk categorization were undertaken. Total 37 participants of which 16 or 43% were female.
- ii. 43 training courses on food safety, covering hazard response and enforcement were conducted on import handling/first-time market access. Total 1,525 participants of which 784 or 51% were female.
- iii. Total of 38 trainings have been organized in which 1,499 FBO of which 891 or 61% were female.

- iv. Project provided scholarship to 10 faculty members of FA-NUOL for Master degree programme in Thailand of which 4 or 40% were female.
- v. Short course on transboundary diseases has been organized at Faculty of Veterinary Medicine, Khonekaen University from 26-11-2018 to 3-12-2018. 6 staff (3 female) from FA-NUOL have participated in this course. Short course on prevention and control of disease and insect pests of cross border plant in China with Yunnan Agriculture University has been organized from 9 – 30 June 2018. Total 2 staff members from FA-NUOL participated in the training. 6 staff (3 women) have been attended short course on Quality Control and Safety in Food from Animal Origin from 24-28 June 2019 at Chiangmai, Thailand. 7 Staff (2 female) FA has coordinated with Suranaree University of Technology to conduct a short training course on Application of Microorganism of SPS. Tentative dates for the short course is 1-7 August 2019. 7 Staff (1 female) have been participated in short course on Post Harvest Management for Perishable Crops and Food Safety in Chiangmai University from 26-30 August 2019.
- vi. Under the new curricula of FA-NUOL, during the current academic session 59% of the students enrolled were female.
- vii. Project supported 18 Students of which 11 or 61% were female students of final years from the new SPS degree programme of Plant protection, veterinary science and food safety have been mobilized to work with CIUs as interns. Out of 18 interns, 8 interns (4 female) have been mobilized to work with CIU Plant Health, 6 interns (3 female) with CIU Animal Health and 4 interns (4 female) with CIU Food Safety.
- viii. Project has supported total 8 batched of English language training in which 120 staff (55 female) 46% have been trained. Under the PMU 57% of project staff were female.
- ix. Under the civil work construction contracts for the construction on FA-NUOL and construction of laboratory building and PEQ greenhouse, total 18 female members have worked with 2 contractors. There was no discrimination in the remuneration of the female members and female members were equally paid by the contractors. Contractors have made provision of separate toilets for the female members and there was no report of any sexual assault of the female members.

IV. EVALUATION OF THE PROJECT

A. Relevance

78. Overall, the Project is considered *relevant*, and its expected impact of “*Lao PDR agriculture, food and forest products become safer, more efficiently produced, and traded in greater quantities*” remains highly relevant. The project’s intended outcome, “*enhanced SPS management system in Lao PDR*”, is strategically aligned with the Lao Government’s development priorities. By strengthening institutions and operational and management capacities in SPS along with providing measures for operating cost-effective SPS systems to facilitate trade and protect health, Lao PDR’s trade in agriculture, food and forest (AFF) products have and will further increase in volume and value. It is also in line with ADB’s strategy in Lao PDR for a more efficient utilization of natural resources by strengthening agricultural value chains and adding value to agricultural products by promoting GAP and post-harvest handling, capacity development, and technologies suitable for enhancing plant health, along with animal health and food safety.

79. The project design was appropriate for achieving the intended outcome. No major change of scope occurred. Minor changes in scope and implementation arrangements were necessary, but mainly attributed to adverse movement of the value of the loan, which was denominated in SDRs, and changes in government cost norms. Project activities responded well to challenges faced by project beneficiaries, including several outbreaks of food poisoning, insect pests and Foot and Mouth Disease (FMD), all of which were successfully controlled by the agencies supported under the Project. Relevant indicators and targets at various levels were laid down for CIUs and PMU, which lent themselves well to effective monitoring and evaluation.

B. Effectiveness in Achieving Outcome

80. Overall, the Project was effective in achieving the expected outcome, which is an “*Enhanced SPS management system in Lao PDR*”. The Plant Health Component Outcome Indicators are, “*crop- or product-specific market access agreements based on new pest/disease information (3 - corn, rice, one other)*” and “*GMS trading partners regard Lao PDR plant, animal and food SPS data and practices as more reliable (timeliness and quality of reporting to partners and international organizations)*”. The Plant Health component completed the indicators towards meeting the project outcome with five market access agreements with People’s Republic of China (PRC), along with similar agreements with Thailand and Vietnam. Under these market access agreements, Lao rice exports to PRC have increased 400% from 2015 to 2017. Other AFF products, including corn and cassava, have also experienced export growth by 67% and 328%, respectively.

81. The Animal Health Component Outcome Indicators are, “*improved animal disease outbreak response using variety of controls (vaccination, movement restrictions, quarantine etc) in 2 provinces; 200 visits and 4 responses per year on average*” and “*GMS trading partners regard Lao PDR plant, animal and food SPS data and practices as more reliable (timeliness and quality of reporting to partners and international organizations)*”. FMD outbreaks were controlled and vaccination programs were conducted to prevent further spread of FMD. These FMD outbreaks were reported to the OIE and to counterparts in neighboring countries, which is an indication of Lao PDR’s reliability in reporting such occurrences.

82. The Food Safety Component Outcome Indicators are, “*improved food hazard response capacity (product, violation, dispossession, compliance, enforcement knowledge gained through attendance at 16 courses, 5 study tours)*” and “*improved food safety (on GHP and GMP-based grading) in 360 tourist and food processing enterprises in 3 major centers*”. Food poisoning

outbreaks were controlled and awareness programs conducted to prevent further outbreaks. FDD also issued notices to the Public through INFOSAN Alerts on contaminated imported food, which is an indication of Lao PDR's reliability in reporting such occurrences.

83. One of the major conclusions of this Impact Assessment is that the highest impact has been achieved in the strengthening of surveillance and SPS inspection programs¹², through project results like annual surveys of pest and disease information for priority crops, surveillance of transboundary animal diseases, annual food safety surveys and inspection. Province of Luangprabang (Food & Drugs) scored very high, with well above Considerable on average (4.4) and with many respondents indicating the highest score of "Very substantial". The provinces of Oudomxay (Plant Sector), and Xayabouly (Plant Sector) scored relatively lowest, with still an overall assessment towards Considerable. The least impact has been achieved in improved regional cooperation and harmonization, through active participation in regional and international gremia, and bilateral working groups. In particular, the province Oudomxay (Plant Sector) scored relatively low.

C. Efficiency in Achieving Outcome and Outputs

84. Although discounted cash flow analysis of costs and benefits was not performed (either during preparation and appraisal or at the end of physical implementation) the Project is considered efficient in achieving the intended outcome and outputs. As discussed in the RRP, the Project is typical of many SPS investments, in that (i) it comprises a number of heterogeneous activities and delivers somewhat differentiated outputs; (ii) the created and enhanced physical capacities (e.g., laboratories) may only be a part of wider systems that undertake other tasks (i.e., beyond performing SPS functions alone); and (iii) major elements of information exchange (between various domestic agencies and across borders—with trading partners) and technical skills upgrading are very hard to quantify in terms of impact. In short, clear identification and quantification of the linkages between the project investments (i.e., the various types of activities undertaken and outputs delivered) and identifiable economic impacts is especially difficult for SPS investments.¹³ Nevertheless, a least-cost approach was adopted and followed with choices of technology that were appropriate for the country and its current stage of development.

D. Preliminary Assessment of Sustainability

85. The Project is considered most likely sustainable. The executing agency and implementing agencies will continue to work toward further enhancement of the SPS systems in Lao PDR, initially through the additional financing made possible through a \$10 million grant to scale up project activities, include additional provinces for support under the Project and commence nationwide rollout of the food safety management system. The additional financing will scale up activities in the three main outputs: (i) surveillance and inspection for plant health, animal health, and food safety; (ii) enhanced education levels and university training of SPS specialists; and (iii) regional cooperation and harmonization for SPS measures and practices.¹⁴

86. A risk of public financial management was identified during preparation of additional financing, specifically a potential lack of sustainability of project achievements after completion owing to insufficient government budget allocation to operations cost and system maintenance. However, the Government of Laos made assurances that it will allocate annual budgetary resources to cover recurrent costs related to the operation and maintenance of the surveillance,

¹² Source: Project Impact Assessment Report

¹³ ADB. 2012. RRP Appendix – Economic and Financial Analysis.

¹⁴ ADB. 2017. *Report and Recommendation of the President to the Board of Directors: Proposed Grant for Additional Financing Lao People's Democratic Republic: Trade Facilitation: Improved Sanitary and Phytosanitary Handling in Greater Mekong Subregion Trade Project*. Manila

inspection, and monitoring systems for plant health, animal health, and food safety. The grant agreement includes a covenant requiring the Government to allocate budget for sustaining SPS systems beyond the project implementation period.

E. Impact

87. The Project's development impacts are considered satisfactory. It achieved nearly all of its physical implementation targets, which resulted in positive results on all aspects of its design. An increase in exports of rice, corn and other AFF products can be attributed to the success of the Plant Health Component, which also strengthened systems and procedures for the control of insect pest and disease outbreaks.

88. The Animal Health Component was successful in strengthening testing and laboratory procedures for the testing of veterinary drugs, animal feed and contaminants in animal food products. It also strengthening systems and procedures for the control of TAD, particularly FMD, and vaccinations programs to counter their spread.

89. The Food Safety Component also strengthened systems and procedures for the control of food poisoning outbreaks, along with awareness campaigns to prevent future outbreaks. It's program of food testing showed a significant decline in the presence of contaminants, and its Tourist Industry Support program was so successful that it was extended to a fourth province (Savannakhet) during the initial phase of project implementation and will be rolled out to another three provinces with additional financing.

90. The Academic Education Component successfully incorporated SPS into the curricula of the three relevant departments, and this has facilitated an increase in first year enrollments from 43 students to 120, which will provide the source for SPS-related professionals to manage these systems in the future.

91. The Project Management Component was effective in assisting with the implementation of the other components thereby facilitating the achievement of positive impacts by those components.

92. Realism and sense of priority for SPS Handling management seems present in Lao PDR. Assessment of project implementation shows considerable differences, by province, by sector. The Plant Sector Food Safety, Animal sector and Education sector were satisfied with the project. However, these sectors need more support to upscale the SPS work for keeping in view the current circumstance to further increase the trade. This goes especially for the Plant Health sector. This is an important finding, since the Plant sector is overwhelmingly the most important sector in exports of AFF products from Lao PDR to the GMS region, and remains the main sector in imports of AFF products.

93. Overall, the project has been assessed relevant to SPS Handling, fitting in a national program, for achieving sustained outputs, and to cost-effectiveness and committed national resources. The project design was most clear and relevant on beneficiaries, outputs, linkages, and risk identification, least on available funds and project management. Project management did well on maintaining and operating the PMU, the need for improvement of English proficiency of staff was emphasized and requires improvement.¹⁵

94. Project duration should be extended (score: less than satisfactory), while the Project size assessed merely adequate. The cost-effectiveness of the Project scored lowest of the project

¹⁵ Source: Project Impact Assessment Report

arrangements. Most improvement is needed on participation, performance and sustainability, while there is room for improvement on effective project selection, within the Project.

V. EVALUATION OF THE ASIAN DEVELOPMENT BANK'S PERFORMANCE

A. ADB's Performance

95. ADB's performance in supervising project implementation was generally good and improved significantly once the project was delegated to the Lao Resident Mission. However, occasional delays in timely advice on financial matters, including delays in approval of loan and grant reallocations, impacted physical implementation of some programs. Nevertheless, ADB staff were always available to provide assistance and effectively resolve implementation problems.

B. ADB's Procedures

96. Project has adopted all procedures of the ADB including financial management, procurement of goods, works and recruitment of consultant services. ADB has agreed to use the MOF procurement documents for the NCB and also advised to use the simplified procurement procedures including more access to shopping procedures and direct purchases which helped in effective in expediting procurement needed to match the implementation plan and schedule for better overall effectiveness of project activities and outputs. ADB has provided training to the project staff for the various aspects of financial management and procurement which help the project to complete the tasks without any issue.