

THE ENHANCED PACIFIC BIOSECURITY PARTNERSHIP PROGRAMME: MID-TERM REVIEW

Final Report
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About Future Partners and the Team

Future Partners Limited is a Wellington-based consultancy firm, owned and managed by Kirsty Burnett. Future Partners has extensive international experience in designing activities, implementing, monitoring and reviewing development assistance, and providing institutional capacity building for public sector and economic reform programs primarily in Asia and the Pacific. Future Partners is a client focussed organisation and values its reputation and modus operandi. It sees its primary clients as the people and organisations who will be impacted by their interventions. To respond to specific Terms of References (ToR) we assemble teams from amongst our associates, individuals and organisations we sub-contract.

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Key Acronyms

BA	Biosecurity Australia
BAF	Biosecurity Authority Fiji
BNZ	Biosecurity New Zealand, New Zealand
DAFF	Department of Agriculture, Fisheries and Forestry, Australia
DFAT	Department of Foreign Affairs and Trade, Australia
EPBP	Enhanced Pacific Biosecurity Partnership
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMD	Foot and mouth disease
HTFA	High Temperature Forced Air
IATA	International Air Transport Association
IDC	International Development Cooperation (MFAT)
IPPC	International Plant Protection Convention
KRQs	Key Review Questions
MERL	Monitoring, Evaluation, Research and Learning
MTR	Mid-term review
MFAT	Ministry of Foreign Affairs and Trade, New Zealand
MPI	Ministry for Primary Industries
OECD DAC	The Organisation for Economic Co-operation and Development's Development Assistance Committee
PACER Plus	Pacific Agreement on Closer Economic Relations expanded program.
PHAMA Plus	Pacific Horticultural and Agricultural Market Access Plus Program
PHEL	Plant Health and Environment Laboratory, MPI, New Zealand
PHOVAPS	Pacific Heads of Veterinary and Animal Production Services
PIC	Pacific Island Country
PPLD	Pacific Pest List Database
PPPO	Pacific Plant Protection Organization
RAT	Rapid Antigen Tests
RMD	Remote Microscopy Diagnostics system
SPC	the Pacific Community, formerly the Secretariat for the Pacific Community and prior to that the South Pacific Commission.
ToR	Terms of Reference
WOAH	World Organisation for Animal Health

Executive Summary

The Enhanced Pacific Biosecurity Partnership Programme

The Enhanced Pacific Biosecurity Partnership (EPBP) programme, phase 2, was initiated to build the capacity of Pacific government biosecurity agencies in Cook Islands, Fiji, Niue, Samoa, Tonga, and Vanuatu. The programme aims to strengthen Pacific partners' capacity to manage plant and animal pest and disease risks. Activities are split into three sub-components, 1) plant health, 2) animal health - diagnostics, surveillance, and incursion investigation and response, and 3) training, offshore in biosecurity border clearance systems to reduce the risk of invasive species crossing the border, and to enhance the market access from these countries to New Zealand.

As New Zealand's regulator for New Zealand's border, it is appropriate for the Ministry for Primary Industries (MPI) to provide this support. It has experienced biosecurity staff, processes, and intelligence that can be used to enhance the Pacific's biosecurity capabilities. MPI's objective is to protect New Zealand from biological risk and, as implementer of the EPBP programme, to assist partner countries to strengthen their biosecurity systems. Its biosecurity expertise also aligns with the Ministry of Foreign Affairs and Trade's (MFAT's) development mandate to achieve a stable and prosperous Pacific.¹ The EPBP programme design phase and implementation period is December 2021-November 2025.² Its budget is NZD6,999,000 and funding is from Vote Foreign Affairs for International Development Cooperation (IDC).

Purpose of the Mid-Term Review

This mid-term review (MTR) provides an independent analysis that will be used by MFAT to assess the relevance, efficiency, effectiveness, coherence, impact, and sustainability³ of the EPBP programme, and to identify recommendations for the remaining period of the programme.

The report is based on the following key review questions (KRQs):

KRQ1	To what extent does the EPBP programme remain a priority for partner countries and New Zealand's International Development Cooperation Programme?
KRQ2	What progress has been made to the EPBP programme's outputs, and short and medium-term outcomes?
KRQ3	How efficiently is the EPBP programme using its resources?

Review Approach

Seventy-five stakeholders participated in the MTR from 13 February to 10 March 2024. In-country visits were undertaken in the Cook Islands, Fiji, Tonga, and Vanuatu. Samoa is preparing for the Commonwealth Heads of Government Meeting (CHOGM) and requested that interviews be undertaken remotely. Niue's interview was also undertaken via videoconference. These interviews and a document review were used to answer the KRQs.

¹ EPBP Business Case.

² Mid-term Review Terms of Reference: Enhanced Pacific Biosecurity Partnership.

³ The OECD DAC evaluation criteria (coherence, relevance, effectiveness, efficiency, impact and sustainability) provide a framework to determine the merit and worth of the project and serves as the basis on which evaluative judgements are made.

This MTR was undertaken in conjunction with the Enhanced Pacific Market Access Partnership (EPMAP) programme. The rationale for a joint MTR was largely focused on reducing interview fatigue for stakeholders, who are mostly the same for both programmes, and financial efficiencies for the client. The timeframe and available data for these reviews lent itself to a rapid review approach.

Key findings

Despite a slow start due to the COVID-19 pandemic all aspects of the EPBP programme have made significant progress towards the overall outcomes. Laboratory equipment and training have been delivered to the plant and animal diagnostic laboratories in Cook Islands, Fiji, Samoa, Tonga, Vanuatu, and for Niue the Animal Programme only. For Samoa and Tonga, the plant health activities are due to begin this year. Staff in these laboratories are now more confident to identify endemic pests and diseases and provide feedback on pests intercepted at the border.

All countries have expressed strong satisfaction with the equipment, information and knowledge provided, this has given them confidence to identify common plant pests. It also allows them to confidently take blood samples from a range of farm animals, prepare these samples (using equipment provided) for dispatch to overseas laboratories for diagnosis, and to have some knowledge of what action to take when the results are received.

Accurate identification of pests and diseases enables speedy and effective implementation of control measures targeted at the specific pest or disease.

Pacific Island Country (PIC) staff have all spoken very highly of the MPI technical staff and have built up significant rapport and respect for their inputs to date.

Below is a further summary of the overall key findings that answer the KRQs for the EPBP programme MTR:

1. Relevance and Coherence

- The EPBP programme remains a firm priority for partner countries and New Zealand's IDC programme. The activities and outputs will have a long-term impact on the partner countries' ability to quickly detect and manage incursions of new pests and diseases of plants and animals, plus inspect and manage cargoes and passengers to ensure they do not constitute a pathway for the import and export of pests.
- There is good coherence with other donors. The programme is focused on the right areas with the right partners, it fits with other activities implemented, and there is a strong level of interest in, and commitment to, the programme from PIC key stakeholders.
- Fiji, Samoa, and Tonga have more than one pest diagnosis laboratory. Consolidating them into one facility would be a cost-efficient way to manage limited resources.
- Fiji is a significant outlier in most aspects of biosecurity operations, for example, numbers and education standards of staff, and scale and quality of facilities.

2. Effectiveness

- Biosecurity training in New Zealand for border staff from most countries has achieved many of its outcomes. Definite progress has also been made to other programme outputs, and short and medium-term outcomes.
- The training in plant pest identification is progressing well and surveys for animal diseases are being carried out. For plant health, surveillance needs to be undertaken regularly. This would produce plenty of specimens for practice in identification in-country, or processing for sending offshore as appropriate. Animal health surveillance (post the baseline work nearly completed) will transition to ongoing passive surveillance using routine livestock officer/paravet visits and follow-up investigation of animal health events.
- It is not clear how much of the plant or animal pest and disease survey data is being permanently recorded and used by the individual countries. The scale of this problem is different for plants and animals. Plant pests and diseases amount to several 10s per plant species, whereas animal disease data amounts to only a few per animal species. The current animal health baseline survey is formatted as laboratory reports which will shortly be consolidated into an Access database and, to ensure national ownership, will be provided to each country.
- Most PICs do not hold up-to-date lists of the pest organisms present, additionally what data exists is now quite old (25+ years for animal data and 40+ years for plant pest data). For plant pests countries rely on the PPLD maintained by SPC, however it is compromised by making only limited lists of data publicly available.
- Training of Pacific-based staff in the extraction of DNA from animal disease-causing organisms and supplying the equipment needed is currently being undertaken in selected PICs. Shortly training will also be provided in PCR and serology, and the use of 'DNA shield' to inactivate live organisms in specimen samples.
- One issue that has arisen is that there is uncertainty over the ongoing ability of the MPI animal health laboratory to diagnose animal health samples. This is an issue as Pacific countries do not have the laboratory capacity to diagnose key diseases, some of which are important for trade. We understand that MFAT and MPI are in discussions about this issue.
- Although Samoa initially saw the EPBP programme as an important initiative they temporarily opted out of the plant health component of EPBP as they considered they did not have staff of sufficient calibre to be trained in pest identification.
- The MERL framework has not been documented as clearly as was envisaged at the beginning of this programme; MERL needs to be operationalised and adequately resourced.
- There are governance and operational issues that are impacting the programme's effectiveness, and it is unclear if programme management and financial management is fit-for-purpose.

3. Overall Impact:

- Plant health staff in Cook Islands, Fiji, Tonga (early stages only) and Vanuatu are now better positioned and are more confident to identify pests and diseases of crops in their country.

Training for Biosecurity Border Operations

- It is difficult to measure the impact of the biosecurity border operations training. It will commonly only be observed through incremental improvements in the efficiency and effectiveness of the staff. We have not been told of any large interceptions of dangerous cargoes, just that the system seems to be operating more smoothly than previously.
- The procedures and systems needed to deal with thousands of tonnes of cargo per day in New Zealand are different in scale and sophistication to those needed to manage hundreds of tonnes per week. There may be merit in considering, for the final years of the EPBP programme, that the biosecurity border operational training be done in-country rather than offshore in New Zealand.

4. Efficiency

Plant Health

- After a slow start due to COVID-19 pandemic the plant health team has made good progress and has delivered equipment and training in Cook Islands, Fiji, and Vanuatu. A familiarisation visit has already been made to Tonga and work is set to begin there shortly. As regards to Samoa, the team leader visited there recently and now believes MPI will be able to start the training later this year. Niue was not included in the plant health training.

Animal Health

- The animal health operational team has done high quality work in all the countries, despite COVID-19 travel restrictions and the operational constraints mentioned above. They have done paravet training and carried out surveys in most countries and trained staff in taking blood samples, processing, and preparing them for dispatch to IATA standards, and screening tests in-country. For example, using RAT tests, and knowing what to do when results come back in. In addition, DNA extraction, PCR and serology testing training have been completed in Fiji and Vanuatu.

Training for Biosecurity Border Operations

- Several PIC border officials have attended the Biosecurity New Zealand (BNZ) border operations courses in New Zealand, as well as the subsequent experiential learning attachments. The sessions have gone well, and feedback has been positive. All the trainees have returned to use their new knowledge including encouraging colleagues, who have not been trained, to 'up their game'.

5. Sustainability

Plant Health

- By the end of the project, PIC officials will be confident to identify common endemic pests and diseases. Remote microscope systems have been provided and this will give local staff the ability to call up experts elsewhere to discuss and assist with the identification of difficult, unfamiliar, or recently arrived organisms.

Animal Health

- Changes to the delivery of the EPBP programme discussed above could impact the sustainability of the programme. While MPI management time has not been included in the EPBP budget, the recent New Zealand public service economy drive may mean that MPI will revisit their ability to absorb this cost.
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Lessons

We identified several lessons from our interviews with stakeholders.

Overall Lessons

1. Effective project implementation in the Pacific region requires an empathetic, flexible management style that focuses on pragmatic, cost-effective delivery.
2. Maintenance and management of one diagnostic laboratory is expensive; to operate more than one in a small Pacific Island country is not cost effective.
3. Biosecurity in Fiji is significantly different to all the other countries in terms of organisation, capabilities, and workforce.
4. The current New Zealand Government economy drive may affect the implementation of EPBP. The Governance Group will need to discuss the impact of the MPI restructuring on delivery of the EPBP and agree on what changes will be required to the Programme. Once these have been agreed between the two agencies, they will need to communicate these changes to EPBP staff and participating countries where appropriate.

Plant Health

1. Accurate and quick identification of plant pests and diseases is an essential component of effective biosecurity and is best done in-country.
2. A mechanism must be found that supports PICs with funds for pest and disease identifications in the medium-term.
3. Regular surveillance of crops is essential to monitor current national pest status and intercept new pest incursions as early as possible.

Animal Health

1. Regular surveillance of animals through day-to-day frontline work of livestock officer/paravets and rapid investigation of animal health events are essential to monitor current national disease status and intercept new disease incursions as early as possible.
2. Accurate and quick identification of animal diseases is an essential component of effective biosecurity and is best done in-country. This requires foundational training in investigation technique, sampling (including post-mortem), and use of in-country screening tests such as Rapid Antigen Tests, or development of serology and molecular techniques.
3. A mechanism must be found that supports PICs with funds for animal disease identifications over the medium-term.

4. Supporting animal health in PICs where there is no in-country veterinarian can be assisted by real-time remote veterinary support, in particular when implementing measures after a new incursion is confirmed.

Training for Biosecurity Border Operations

1. Biosecurity staff value both in-country and off-shore training.

Recommendations

Overall

We recommend that:

1. MPI management, technical staff, and MFAT work to resolve issues arising from the MPI restructuring as well as address operational issues , so that the programme is able to achieve its end-of-project outcomes.
2. Countries with more than one pest identification facility be encouraged to amalgamate them. (We note this is outside the scope of the EPBP programme).
3. EPBP programme activities in Fiji be reviewed and adjusted to better fit needs, and any savings returned for distribution to other countries.
4. The EPBP MERL framework is re-assessed to determine if the outcomes, outputs, and activities remain relevant and revised where needed. Responsibility for operationalising is to be confirmed by the EPBP Governance Group.
5. There are issues in the governance and operational structure of EPBP that impact implementation. It is timely to refresh the ToRs, so that the membership of the MPI/MFAT Governance Group and the scope of its mandate are discussed and agreed to.

Plant Health

We recommend that:

1. Future EPBP programme activities emphasise national routine surveillance of plant pests and diseases in selected crops, and use organisms collected for training in identification.
2. More emphasis be given to digitising all pest and disease records, existing and new (including interceptions on cargo etc.), to develop accurate and up-to-date lists of pests and diseases present in each country.
3. Mechanisms be developed for long-term support for fees associated with the validation of plant pest and disease identifications.
4. The potential use of DNA and barcode technology be examined as a potentially less expensive method of validating plant pest and disease identifications.

Animal Health

We recommend that:

1. EPBP programme activities emphasise national passive surveillance for animal diseases (through day-to-day frontline work of livestock officer/paravets and investigation of animal health events), and the specimens collected used for training in sample preparation, in-country screening testing, or overseas submission.
2. Mechanisms be developed for long-term support for fees associated with the validation of animal disease identifications, especially as it relates to investigation of animal health events in the PICs.

Training for Biosecurity Border Operations

We recommend that:

1. The training of Pacific biosecurity border staff offshore in New Zealand needs to continue, but also with a new emphasis on in-country training to better fit the nature and scale of local operations, and thus be more relevant to the trainees.
2. This in-country training would be led by seconded BNZ border officers supported by national biosecurity officers who have already received training in New Zealand (i.e. 'train the trainers'). The duration of each in-country training course be dependent on the size of the agency, the number of international seaports and airports, and the volume of trade and numbers of passengers.

1 Introduction, Review Purpose and Objectives

1.1 Introduction

Future Partners Ltd was contracted by the Ministry of Foreign Affairs and Trade (MFAT) to undertake a joint mid-term review (MTR) of the Enhanced Pacific Market Access Partnership and the Enhanced Pacific Biosecurity Partnership (EPBP) programmes.

The implementing partner for both programmes is the Ministry for Primary Industries (MPI), through a Memorandum of Understanding (MoU) with MFAT for each programme. The funding for these programmes is funded from Vote Foreign Affairs for IDC.

The rationale for a joint MTR was largely focused on reducing interview fatigue for stakeholders, who are mostly the same for both programmes, and financial efficiencies for the client. The timeframe for these reviews and available data lent itself to a rapid review approach.

This report is for the MTR of the EPBP programme.

A statement of work (SoW) for this MTR was signed on 30 January 2024 and the fieldwork was undertaken from 13 February to 8 March 2024. More detail on this phase and other evidence gathered for the review is in Section 3. Overall, 75 stakeholders were consulted either in person or via video conference.

The report starts with the purpose and objectives for the MTR, as outlined in the Review's terms of reference (ToR) and scope. Section 2 provides a brief contextual overview of factors that will have informed the EPBP programme's objectives, its outputs, and outcomes. Section 3 outlines the review's key review questions (KRQs) and the MTR design approach. Section 4 focuses on the Findings, and Section 5 discusses Lessons and Recommendations. The EPBP programme's Monitoring, Evaluation Research and Learning (MERL) Framework (Theory of Change and MERL table) is in Appendix A.

1.2 MTR Purpose

As outlined in the Terms of Reference (ToR) the MTR provides an independent analysis that will be used by MFAT to:

- Assess the relevance, efficiency, effectiveness, coherence, impact, and sustainability of the EPBP programme.
- Identify recommendations for the remaining period of the Programme.

1.3 MTR Objectives

The objectives are based on the MTR ToR, and are the basis for the key review questions and sub-questions.

Objective 1. To assess the extent to which the programme remains a priority for partner countries and NZ's International Development Cooperation Programme.

- Are the intended outcomes of the programme still relevant?
- Is the programme focused on the right areas with the right partners?

- How well does the programme fit with other activities implemented in the following context:
 - within MPI
 - between New Zealand agencies, including Crown Research Institutes (CRIs)
 - within the context of the New Zealand and Australia relationship and government departments
 - within the context of the relevant multilateral agencies, both regional and international?
- What is the level of interest in, and commitment to, the programme from the key stakeholders?

Objective 2. To examine the progress being made in achieving the outputs and outcomes of the programme.

- To what extent has the EPBP programme supported partners to manage plant and animal pests and disease risks at the various stages of the biosecurity system?⁴
- Have outputs been of high quality and to cost and time?
- To what extent has each programme's MERL systems been operationalised?
- Is the governance and operational structure of each programme effectively supporting implementation and ensuring transparency and collaboration while reducing overlaps and inefficiencies?
- Is each programme management and financial management fit-for-purpose?

Objective 3. To review the value of the programme.

- Has the programme achieved good value for the investment and effort?
- How is sustainability (e.g. of capability and capacity building) for the programme being considered?

Objective 4. Lessons learned for improvement – to identify the key learnings to increase positive impact in the future.

- What do we need to start, stop, continue, or change during the remainder of the programme?

1.4 MTR Scope

The MTR scope involves:

- Time period being reviewed is December 2021-November 2025. The review involves December 2021 to January 2024.⁵

⁴ The OECD DAC evaluation criteria (coherence, relevance, effectiveness, efficiency, impact and sustainability) provides a framework to determine the merit and worth of the project and serves as the basis on which evaluative judgements are made.

⁵ Mid-term Review Terms of Reference: Enhanced Pacific Biosecurity Partnership.

- Geographic focus – Cook Islands, Fiji, Niue, Samoa, Tonga, and Vanuatu. In-country visits included Cook Islands, Fiji, Tonga, and Vanuatu.
- Stakeholder engagement – included MPI and MFAT officials, programme governance group members, in-country and regional partners.

Outside of the review scope:

- Phase 1 of the programme.

2 Background

2.1 Context

Agriculture

In all six of the programme countries agriculture is primarily a semi-subsistence activity. That is, most families plant crops for their own consumption with any excess being given to relatives and friends, or going to the local fresh produce market (except perhaps around major urban areas). Up to 70 percent of Pacific peoples depend on agriculture, fisheries, or associated activities for their livelihoods.⁶ In all countries only a relatively small number of families are commercial growers with production going primarily to the domestic market or to an even smaller extent to the export market. Currently Fiji accounts for almost 80 percent of the horticulture products imported to New Zealand from PICs with most of the remainder coming from Tonga. Despite this, all countries have for many years (30+) aspired to grow the fresh produce export sector and this desire is recorded in all government plans for the agriculture sector.⁷

Movement of plants and animals across borders (i.e. in trade and with passengers) commonly exposes the importing country to the risk of accidentally introducing new pests and diseases. To manage these risks importing countries impose restrictions and treatments that often constrain trade.

However, under the International Plant Protection Convention (IPPC) countries have agreed that all restrictions and treatments must be scientifically justified, i.e. they can only be imposed to the extent necessary to manage quarantine pests.⁸ To determine which pests might be quarantine pests it is necessary for the exporting country to provide a list of pests recorded on the commodity being exported. As part of the negotiation, the trading countries agree that the list is accurate and agree on what treatment might be needed, if any, to reduce the risk of pest introduction. In this regard, PICs are at a disadvantage as their plant pest and disease data is held in the Pacific Pest List Database (PPLD) at the Pacific Community (SPC). The foundation of this database is the FAO/UNDP Pacific Plant Pest Survey done in the 1960s and 70s, but by decision of the PICs it does not contain older data and it is not a public document. All the data on PPLD, and very much more, is publicly available on worldwide databases and in scientific literature. Importing countries use this data to compare with the pest list supplied by the exporting PIC. Market Access negotiations become difficult when there are substantial differences between the two lists as will occur if countries do not have access to accurate information.

⁶ Remarks by FAO Sub-Regional Coordinator for the Pacific, Xiangjun Yao, at the Opening of the Seventh Regional Meeting of Pacific Heads of Agriculture and Forestry Services, Apia, 25 August 2021.

⁷ Hazelman, M. and Pilon, B. The Importance of Fresh Fruit and Vegetables in the Pacific Region. P15, in: Ailwood, A.J. and Drew, R.A.J. 1997. Management of Fruit Flies in the Pacific. A regional symposium, Nadi, Fiji 28-31 October 1996. ACIAR Proceedings No. 76. p. 267

⁸ A pest of potential economic importance to the area endangered thereby and not yet present there. Glossary of phytosanitary terms (as adopted by CPM-17, 2023). https://assets.ippc.int/static/media/files/publication/en/2023/07/ISPM_05_2023_En_Glossary_Pos tCPM-17_2023-07-12_Fixed.pdf

Environment

The climate for the countries in the programme is warm temperate to subtropical, and the natural vegetation has been highly modified due to human activity of housing, tourism, farming or forestry and logging. Very little native forest exists except perhaps in pockets especially in Fiji and larger, more remote, areas in Vanuatu.

Biodiversity of plants and animals of all these island countries declines as you move eastwards through the region from Papua New Guinea.⁹ This makes the environment, including agriculture and forests in all the countries vulnerable to the introduction of exotic species of plants and animals. Perhaps the most dramatic examples come from Fiji where the introduced small Indian mongoose (*Urva auropunctata*) has decimated the indigenous ground dwelling snakes, lizards, and birds,¹⁰ and where the African tulip tree (*Spathodea campanulata*) has taken over tracts of forest,¹¹ natural and disturbed. Other recent examples of new pest introductions that affect both the natural environment and agriculture include the giant African snail (*Lissachatina fulica*), the little fire ant (*Wasmania auropunctata*) and the rhinoceros beetle (*Oryctes rhinoceros*) both the Pacific strain and the Guam strain.

2.2 Programme Objectives

The EPBP programme, phase 2, was initiated to build the capacity of Pacific government biosecurity agencies in Cook Islands, Fiji, Niue, Samoa, Tonga, and Vanuatu. The EPBP programme aims to strengthen Pacific partners' capacity to manage plant and animal pest and disease risks. Activities are split into three sub-components, 1) plant health, 2) animal health - diagnostics, surveillance, and incursion investigation and response, and 3) training, offshore in New Zealand, in biosecurity clearance systems to reduce the risk of invasive species crossing the border, and to enhance the market access from these countries to New Zealand.

As New Zealand's regulator for New Zealand's border, it is appropriate for MPI to provide this support. It has experienced biosecurity staff, processes, and intelligence that could be used to enhance the Pacific's biosecurity capabilities. MPI's objective is to protect New Zealand from biological risk and, as manager of the EPBP programme, to assist partner countries to strengthen their biosecurity systems. Its biosecurity expertise also aligns with the MFAT's development mandate to achieve a stable and prosperous Pacific.¹²

The EPBP programme design phase and implementation period is December 2021-November 2025. Its budget is NZD6,999,000, and funding is from Vote Foreign Affairs for IDC.

Table B1 in Appendix B shows the six programme outputs and activities that are aligned to the Theory of Change (ToC). The activities are from the 'Detailed Business Case Final' document. Table B2 in Appendix B shows the short and medium-term outcomes, and long-term impacts, based on the ToC set out in Appendix A.

⁹ Jupiter, S, S Mangubhai, S and Kingsford, RT. 2014. Conservation of Biodiversity in the Pacific Islands of Oceania: Challenges and Opportunities. Pacific Conservation Biology Vol. 20(2): 206–220. Surrey Beatty & Sons, Sydney.

¹⁰ <https://naturefiji.org/new-species-of-mongoose-in-fiji/>

¹¹ <https://pasifika.news/2022/03/african-tulip-a-major-threat-to-biodiversity-in-fiji/>

¹² EPBP Business Case.

3 Key Review Questions and MTR design approach

3.1 Key Review Questions

The Key Review Questions (KRQs) below align to MFAT’s objectives in Section 2 and the OECD DAC criteria that have been used as an assessment tool for the Enhanced Pacific Biosecurity Partnership (EPBP) programme.

KRQ1	To what extent does the programme remain a priority for partner countries and NZ’s IDC programme?	Coherence (How well does the intervention fit?) and Relevance (Is the intervention doing the right things?) Objective 1
KRQ2	What progress has been made to the programme’s outputs, and short and medium-term outcomes?	Effectiveness (Is the intervention achieving its objectives?) and Impact (What difference does the intervention make?) Objective 2
KRQ3	How efficiently is the programme using its resources?	Efficiency (How well are resources being used?) and Sustainability (Will benefits or interventions last?) Objective 3
	Lessons learned and recommendations for improvement (Objective 4)	<p>The lessons learned and recommendations’ section is based on findings from the KRQs and sub-questions:</p> <ul style="list-style-type: none"> • What are the key learnings to increase positive impact in the future? • What do we need to change (if anything) during the remaining phase of the programme?

3.2 MTR Design Approach

This section provides a brief overview of our approach. More detail of our methodology is in Appendix C where we outline our information collection method to answer the KRQs and sub-questions.

Our overall approach is participatory, and utilisation focused. This entailed working closely with MFAT to ensure the MTR provides findings and recommendations to support evidence-based decisions for the completion of the programme.

Formative evaluation approach to this rapid review

We applied a formative evaluation methodology, as this is a learning and improvement tool aimed at improving, revising, or modifying an activity’s design to improve performance. The rationale for this is to allow the implementers to adjust as necessary before the initiative is completed. The MERL Framework has not been operationalised as intended (including the annual joint country reviews) and this meant the review focused on the responses from the 75 stakeholders we interviewed and MPI/MFAT documents

shared with the Review Team. The timeframe to complete the two reviews was tight and so required a rapid review approach.¹³

3.2.1 Methods

Empirical information and data were collected and analysed using different qualitative methods, as outlined below. The purpose of this approach is to increase the reliability of data, the findings, and recommendations, and improve our understanding of how outcomes are being achieved in the context the programme is being implemented in.¹⁴ For validity, we mostly used two reviewers for each interview session to ensure notes are representative of responses given. In addition to the Review Team’s analytic workshop, the team also undertook an initial findings presentation workshop with the MTR steering group.

Desk-based review of relevant documents and monitoring data

In the absence of EPBP programme monitoring data, the MTR used programme-related progress reporting documentation (Appendix D).

Semi-structured interviews

Interviews were undertaken from 13 February to 10 March 2024. In-country visits were undertaken in the Cook Islands, Fiji, Tonga, and Vanuatu. Samoa is preparing for the Commonwealth Heads of Government Meeting (CHOGM) and requested that interviews be undertaken remotely. Niue’s interview was also undertaken via videoconference. A list of organisations that participated in the interviews is in Appendix E. Table 3 shows the number of key stakeholder interviews from 48 interview sessions.

Table 3. Number of stakeholders interviewed

Stakeholders	No. of interviews	Type of engagement
Cook Islands	6	visit 6-10 March
Fiji	18	visit 26 February-1 March
Niue	1	videoconference
Samoa	6	videoconference
Tonga	13	Visit 4-8 March
Vanuatu	13	Visit 6-10 March
Other	18	in-person or via videoconference
Total	75	

¹³ <https://libguides.jcu.edu.au/rapidreview>.

¹⁴ Qualitative evaluations provide the ability to gain an in-depth understanding of a programme or process. It involves the “why” and the “how”, and allows a deeper look at issues of interest and to explore nuances. Qualitative data can provide a more detailed, and more holistic understanding (in this case) of the programme being reviewed. It explores the perspectives and behaviours of the participants being interviewed, and documents being reviewed. Qualitative methods also help identify issues, and provide a basis for decision-making. <https://ppe.cw.wsu.edu/qualitative-evaluation/#:~:text=Qualitative%20evaluation%20provides%20you%20with,interest%20and%20to%20explore%20nuances>.

The Review Team used an interview guide based on the KRQs and sub-questions. This allowed the Team to ensure questions or topics were appropriate to the interviewee's role and knowledge of the programme. The Review Team worked closely with MFAT and MPI to identify a list of key stakeholders to be interviewed (either face-to-face or via video conferencing, as individuals or in groups). An introduction letter from MFAT was emailed in advance inviting stakeholders to participate in the independent MTR. Following these introductions, stakeholders were provided with an information sheet and a consent form (Appendix F) by Future Partners, either by email or in person.

Observations

Qualitative observation is the act of gathering information for research or evaluation. It depends heavily on researchers/evaluators gathering very specific data and report on characteristics in place of measurements. As part of the in-country visits, evaluators visited various sites including the HTFA facilities in Nadi and Port Vila, and laboratories in Suva and Port Vila.

Analytical Framework

Thematic analysis was used for data analysis, alongside the OECD DAC criteria (Appendix C). Our approach ensured there was rigour through triangulation and that insights emerging from the data analysis were valid and credible. This approach allowed the reviewers to assess merit and to make evaluative judgements of the project to date.

Ethical Considerations

Participation was voluntary and consent was provided either in writing or verbally before the interview commencing. Participants were briefed about being able to stop the interview at any time, and that they did not have to respond to any questions asked. Key informant stakeholders were told that responses would remain confidential to the Evaluation team, and they will not be identified in the report. Where we use a quotation to illustrate a finding, an identification number has been applied.

3.2.2 Limitations

Although this is a MTR, the implementation of the programme has not progressed as far as had been envisaged at this mid-point. However, the main limitation to this MTR is the lack of application of the MERL Framework, and the resulting lack of monitoring data.

4 Findings

The Enhanced Pacific Biosecurity Partnership Programme

To achieve the MTR objectives (Section 1.3), the review focused on three key review questions (KRQs). As discussed in Section 3.2, the review findings are based on in-depth interviews with 75 key stakeholders and a documentation review and are analysed against the OECD DAC criteria (see Appendix C).

In Section 4, we present key findings by KRQ and sub-questions. Section 5 discusses Lessons and outlines Recommendations for the remainder of the programme based on these findings and lessons discussed.

4.1 Relevance and Coherence

KRQ1: To what extent does the programme remain a priority for partner countries and NZ's IDCP?

This question and sub-questions¹⁵ relate to Objective 1. It focuses on relevance (whether the programme's approach is doing 'the right things' and the extent to which its objectives and goals are meeting partner country priorities), and on coherence (how well the programme fits with partner country priorities, and other development partners' interventions).

Box 4.1 KRQ1 key findings

Relevance

- The EPBP programme remains a firm priority for partner countries and New Zealand's IDC Programme. The activities and outputs will have a long-term impact on the partner countries' ability to quickly detect and manage incursions of new pests and diseases of plants and animals, plus inspect and manage cargoes and passengers to ensure they do not constitute a pathway for the import and export of pests.

Coherence

- There is good coherence with other development partners. The programme is focused on the right areas with the right partners, it fits with other activities implemented, and there is a strong level of interest in, and commitment to, the programme from PIC key stakeholders.
- Fiji, Samoa, and Tonga have more than one pest diagnosis laboratory. Consolidating them into one facility would be a cost-efficient way to manage limited resources.

¹⁵ KRQ1 sub-questions are: 1.1 Are the intended outcomes of the programme still relevant? 1.2 Is the programme focused on the right areas with the right partners? 1.3 How well does the programme fit with other activities implemented in the following context: within MPI; between New Zealand agencies, including Crown Research Institutes (CRIs); within the context of the New Zealand and Australia relationship and government departments; within the context of the relevant multilateral agencies, both regional and international? 1.4 What is the level of interest in, and commitment to, the programme from the key stakeholders?

- Fiji is a significant outlier in most aspects of biosecurity operations, for example, numbers and education standards of staff, and scale and quality of facilities.

4.1.1 The EPBP programme remains a priority for partner countries, and the intended outcomes of the programme are still relevant

All countries need effective biosecurity systems to protect them from new pest introductions. All participating countries indicated that they appreciate the concept and delivery of the Plant Health and the Animal Health pest and disease identification programmes, and the biosecurity operations training programme, and these remain a significant priority for them.

4.1.2 The programme is focused on the right areas with the right partners

In all countries the correct partner remains the biosecurity agency although there is some confusion in countries where there are two pest diagnosis laboratories. Fiji is the outlier with two laboratories, essentially on the same campus, but run by two separate organisations one of which is commercial and non-government. In other countries the separation is vague as all belong to government organisations. Whatever the situation, two pest diagnosis laboratories are a luxury that no PIC can afford in infrastructure maintenance, operations, and workforce.

Only Fiji has staff with adequate educational backgrounds (degree and postgraduate level). In the other countries there is a range of educational levels from degree down to school leavers with experience. All these staff are benefiting from the equipment and training supplied. However, as mentioned, Fiji (following several years contact with MPI) already had trained staff and well-equipped laboratories. Samoa took the step with the plant health programme of advising that they had no staff with the educational background capable of taking on the knowledge of diagnostic techniques and opted out of the training until positions for staff with the appropriate qualifications have been approved by the Government of Samoa.

From the technical perspective the New Zealand's MPI is the natural partner for the EPBP programme, it has a world leading biosecurity agency, BNZ, and first-class diagnostic laboratories for the identification of pests and diseases of animals and plants.

The BNZ training courses attended by the PIC biosecurity staff were the same commencement courses attended by BNZ staff, and the PIC staff also gained the same workplace experience as did the new BNZ staff. However, the procedures and systems needed to deal with thousands of tonnes of cargo per day are different in scale and sophistication to those needed to manage hundreds of tonnes per week. There may be merit, now that there is a cadre of national staff with BNZ training, in considering for the final years of EPBP programme, that the biosecurity operational training be done in-country rather than offshore in New Zealand.

The EPBP programme animal health identifiers and trainers are based at the National Centre for Biosecurity and Infectious Disease at Wallaceville, Upper Hutt¹⁶ where disease diagnosis is done, and MPI has built a new high-level biocontainment laboratory. This

¹⁶ <https://www.mpi.govt.nz/dmsdocument/10178/direct>

new facility is not permitted to hold live samples of foot and mouth disease (FMD), and the laboratory website advises:

If a serious disease is suspected we need to know as soon as possible so the case can be resolved, if negative, or, if positive, the affected animals can be isolated and treated and any potential outbreak managed. Sending samples overseas for testing often slows down our ability to respond and could have devastating consequences for New Zealand.

Samples can be lost, destroyed, or delayed for days in transit. Results can be further delayed if the testing is not a priority for the overseas laboratory.¹⁷

The services and the limitations provided by this laboratory for New Zealand are exactly the services required by, and the limitations felt by the countries within the EPBP programme.

The plant health trainers come from the MPI Plant Health and Environment Laboratory (PHEL)¹⁸ where all New Zealand plant pest and disease identifications are done. This laboratory is New Zealand's premier internationally accredited laboratory for identifying domestic and exotic plant pests and diseases. PHEL tests samples of suspected exotic pests or diseases and provides diagnostic services for MPI, such as confirming the identity of a pest or disease and providing advice for MPI's response work. PHEL shares the, Auckland, Tamaki Makaurau campus with Manaaki Whenua - Landcare Research,¹⁹ New Zealand's foremost organisation for the identification of all indigenous animals, diseases, and plants. It is the custodian of the Pacific Arthropod Collection which was created following the FAO/UNDP pest and disease surveys of the 1960s and 70s of largely the same countries now in the EPBP programme.

4.1.3 The programme fits with other activities implemented

Australia/New Zealand collaboration is excellent and beneficial

Throughout our interviews it has been refreshing to see how well the Australian and New Zealand technical agencies collaborate and cooperate. For example, through the provision of paravet²⁰ trainers to share the load on SPC paravet training courses. DAFF staff noted that *"the partnership with MPI was extraordinary (5 star)"* (010).

The Australian Department of Agriculture, Fisheries and Forestry (DAFF) staff were aware of the threat to the MPI diagnostic services and advised that these services had been hugely valuable for decades and if they are lost due to budget savings *"there will be a huge gap"* (010). In this regard they also noted that SPC's MoU on identifications and the role of the Pacific Plant Protection Organisation (PPPO) needed strengthening, which the Review Team agrees with.

MPI/BNZ collaborates whenever possible with its counterpart in Australia, i.e. Biosecurity Australia (BA) of DAFF and the Department of Foreign Affairs and Trade (DFAT). These

¹⁷ <https://www.mpi.govt.nz/dmsdocument/10178/direct>

¹⁸ <https://www.mpi.govt.nz/science/laboratories/plant-health-and-environment-laboratory/>

¹⁹ <https://www.landcareresearch.co.nz/>

²⁰ A paravet or paraveterinary worker is a professional of veterinary medicine who performs procedures autonomously or semi-autonomously, as part of a veterinary assistance system. The job role and scope of practice varies between countries, with some allowing suitably qualified paraveterinary workers a scope of autonomous practice, including minor surgery, whilst others restricting their workers as assistants to other professionals.

Australian agencies operate in the Pacific region, primarily in Papua New Guinea, Solomon Islands and Timor-Leste, and to a limited extent in the South Pacific but not in the Realm countries of Cook Islands, Niue and Tokelau, or the French and American territories.

Links with other relevant agencies are positive

Several multilateral agencies also provide assistance with biosecurity issues in the region, most notably SPC/PPPO, the European Union (EU), FAO, PHAMA Plus and PACER Plus. Cooperation with these has been good, for example: 1) the EPBP programme through MPI has played a significant role in leading regional FMD and other transboundary disease simulation exercises with FAO, DAFF, SPC; and 2) through EPBP, MPI, has worked with PHAMA Plus on Fall Army Worm (FAW) response. PHAMA Plus are supporting the coordination of the FAW working group in Vanuatu.

Potentially these agencies could provide support with funding of pest and disease diagnosis but as these programmes are mostly time bound this solution is not truly sustainable. SPC and the PPPO are the only Pacific agencies that are not time bound and serve the region regarding biosecurity (specifically plant protection, including biosecurity, for the PPPO). For animal disease diagnosis the WOA²¹ and the PHOVAPS can provide similar services.

The Pacific Plant Protection Organisation (PPPO) is embedded within the organisation of the SPC and assists PIC National Plant Protection Organisations (NPPOs) to develop biosecurity legislation, carry out pest risk and import risk assessments, biosecurity surveillance, early detection and response and national reporting obligations.²²

SPC staff interviewed were very positive about their interactions with MPI. They provided examples how MPI provides support, such as reaching out to SPC when they have training courses for BAF, so colleagues from other PIC laboratories and SPC can be included. *"It provides an opportunity for SPC to reach the Pacific more widely"* (037). Another example includes the opportunity for SPC, during University of the South Pacific (USP) semester breaks, to borrow USP and BAF's microscopes. This increases the number of technicians that can be properly trained.

4.1.4 There is a strong level of interest in, and commitment to, the programme from key stakeholders

Each Head of Agriculture in all six participating countries strongly endorsed the EPBP programme; both the training and supply of equipment for pest and disease identification for plants and animals, and the operational training for biosecurity border inspectors (see Table 4 below).

All countries stressed the importance they give to the availability of pest and disease identification services and were concerned that this service by MPI may no longer be available to them.²³

²¹ <https://www.woah.org/en/home/>

²² NPPOs shall "cooperate in the exchange of information on plant pests, particularly the reporting of the occurrence, outbreak or spread of pests that may be of immediate or potential danger, in accordance with such procedures as may be established by the Commission;" Article VIII of the IPPC. <https://www.fao.org/3/cd0175en/cd0175en.pdf>

²³ For example, interviews C071, F034, S040, T084, V053.

Training in pest and disease identification

All participating countries provided strong indications that they are happy with the concept, delivery, and content of both the Plant Health and the Animal Health pest and disease identification programmes within the EPBP. Each country stressed its commitment to the programme, and additional detailed comments on the activities are given in Table 4 below.

Table 4: Country comments on relevance and coherence

Relevance – Plant Health	
Cook Islands	A key part of the programme included upgrading the laboratory with equipment and training. The laboratory was re-established in 2018 and there is an extensive photo library of pest specimens but there is still room for improvement. The remote imaging work is going well.
Fiji	Following the MPI training, BAF laboratory staff are now able to respond more quickly to pest interceptions. Fiji has two established diagnostic laboratories, at BAF and at the Ministry of Agriculture and Waterways (BAF charges for its services but the Ministry, which works with farmers, does not).
Niue	Did not participate in the plant health component of EPBP.
Tonga	The training for operational border biosecurity officers is much appreciated, so much so that Tonga would like to see it happen twice a year rather than one.
Samoa	Samoa has delayed participation with the plant health component of the EPBP programme as they do not have staff with the right educational background to make use of the training.
Vanuatu	The remote microscopy system is regularly in use to identify pests they are uncertain of, and the Vanuatu staff have built an important rapport with MPI.
Relevance – Animal Health	
Cook Islands	Stakeholders found working with MPI has been excellent. There is a huge benefit to the local community of pig, chicken and goat farmers. MPI came twice in 2022 and twice in 2023 and went out to work, hands-on, with farmers. They have taught surveillance skills and blood sample processing, and packaging to International Air Transport Association (IATA) standards to enable samples to be sent to overseas laboratories such as the National Biocontainment Laboratory (NBL) in New Zealand ²⁴ .
Fiji	The BAF laboratory is well set up and can do DNA extraction, PCR and serology from pest or disease organisms. DNA samples can also be sent to laboratories in South Korea for confirmation as well testing to identify organisms. Testing of samples in South Korea is less expensive than elsewhere.
Niue	General training on surveillance, disease investigation and practical paravet skills has also taken place. A real-time example of assistance

²⁴ <https://www.mpi.govt.nz/science/laboratories/national-animal-health-laboratory/national-biocontainment-laboratory/>

	was when a viral infection was detected in imported day-old chicks. MPI was in-country at the time so helped make the decision to stop imports for several months until the situation was stabilised.
Tonga	Training has been on collection of blood samples, processing, and IATA packaging to send samples to overseas laboratories such as NBL in New Zealand. Training workshops on surveillance have also been provided. Tonga now believes that officials have more confidence and can do more information gathering. They have developed surveillance plans including prioritising what samples to collect and what diseases of interest to focus on.
Samoa	Very relevant from the livestock perspective and for updating animal health disease lists for Samoa, this was last done over 25 years ago. Most animal health officers don't have backgrounds in sample collection, so the MPI training is helping them do their work more effectively and to do things properly. The refresher training has been very helpful to those who had not collected samples for a long time. Training has been on collection of blood samples, processing, and IATA packaging to send samples to overseas laboratories such as NBL in New Zealand. Training workshops on surveillance have also been provided.
Vanuatu	Before the EPBP programme approximately 100+ samples were routinely sent to MPI every year. The first EPBP programme samples were sent in 2022 from pigs, cattle, and goats. In 2023, 400+ samples were sent. Training has been on collection of blood samples, processing (including DNA extraction) and IATA packaging to send samples to overseas laboratories such as NBL in New Zealand. Training workshops on surveillance have also been provided.
Coherence – Plant Health	
Cook Islands	There is a good relationship with MPI's Plant Health and Environment Laboratory (PHEL) and Cook Islands' Biosecurity acknowledges the benefits it has received from the laboratory with training and capacity development.
Fiji	The support from MPI under the EPBP programme to facilitate the plant diagnostic laboratory has been exceptional.
Niue	Is not included in the Plant Health component of the EPBP programme.
Samoa	Samoa has delayed participation with the plant health component of the EPBP programme as they do not have staff with the right educational background to make use of the training. <i>"We want to get it right, but we don't want to lose the funds or the connections, just want to be proud of our work" (040).</i>
Tonga	Only an initial fact-finding visit of the pest identification team has taken place. Tonga is looking forward to the training activity starting in May 2024.
Vanuatu	MPI undertook training on entomology and plant pathology over five visits. During the second visit they helped identify the incursion of FAW.

Coherence – Animal health	
Cook Islands	The Ministry of Agriculture is very positive about the programme and appreciated the hands-on support from MPI when concerns were raised about an issue of chickens dying.
Fiji	The BAF laboratory staff no longer must rely on external support and can now take blood samples, PCR testing, and surveillance. This means reaction time to an outbreak or incursion is faster than prior the training.
Niue	No lab is present but there is a small animal health clinic for dogs (run in collaboration with a New Zealand charity 'Rockvets' ²⁵). Stakeholders are very positive about the training received and are happy with the excellent relationship with MPI. While in-country, MPI was able to help with an import risk assessment for eggs from Samoa and Fiji.
Tonga	The EPBP programme is helping to build capacity and develop capability through its training and workshops for animal health officers.
Samoa	The EPBP programme is very relevant from a livestock perspective and for updating animal health disease lists for Samoa, for the first time in over 25 years. There were three training visits on blood sampling for paravets that were undertaken on Savai'i, Upolu, and outer islands, improving confidence to take blood samples.
Vanuatu	The Vanuatu animal health team were very disappointed by the MPI policy decision to no longer accept animal samples from Vanuatu as they rely on the results to validate Vanuatu disease status, especially their FMD free status which allows beef exports.

Training for biosecurity border operations

BNZ is one of the premier biosecurity services worldwide, its systems and methods are copied internationally. Most EPBP programme countries have received training for a small number of staff each year of the programme. All heads of biosecurity services in each of the countries said they have noticed significant improvement in the efficiency, effectiveness, and enthusiasm of their staff. Staff did in all cases return home and implement what they had learnt, passing the new systems to other staff while on-the-job.

Many BNZ staff are Māori or Pasifika which makes interaction and training flow much more easily and effectively. However, the scale and sophistication of biosecurity systems in New Zealand are many times greater than any of the PICs in the EPBP programme. Consequently, while there is no doubt that training of Pacific nationals in New Zealand with BNZ staff is beneficial, it is open to question how relevant it is to operations in countries where there are only relatively small quantities of cargo arriving each week. There may be merit in now considering for the final years of the EPBP programme that the operational biosecurity training be done in-country rather than offshore in New Zealand.

²⁵ <https://www.facebook.com/TheRockVets/>; <https://pakurangavets.co.nz/charity-work/niue-spaw/>

4.2 Effectiveness and Impact

KRQ2: What progress has been made to the programme's outputs, and short and medium-term outcomes?

This question and sub-questions²⁶ relate to Objective 2. It focuses on effectiveness (is the intervention achieving its objectives?) and impact (what difference does the intervention make?)

Box 4.2 KRQ2 key findings

Effectiveness

- Biosecurity training in New Zealand for border staff from most countries has achieved many of its outcomes. Definite progress has also been made to other programme outputs, and short and medium-term outcomes.
- The training in plant pest identification is progressing well and surveys for animal diseases are being carried out. For plant health, surveillance needs to be undertaken regularly. This would produce plenty of specimens for practice in identification in-country, or processing for sending offshore as appropriate. Where potential invasive (transboundary) pests or diseases are amenable to trap, monitoring these might be also established. Animal health surveillance (post the baseline work nearly completed) will transition to ongoing passive surveillance using routine livestock officer/paravet visits and follow-up investigation of animal health events.
- It is not clear how much of the plant or animal pest and disease survey data is being permanently recorded and used nationally. The scale of this problem is different for plants and animals. Plant pests and diseases amount to several 10s per plant species, whereas animal disease data amounts to only a few per animal species. The current animal health baseline survey is formatted as lab reports which will shortly be consolidated into an Access database and, to ensure national ownership, will be provided to each country.
- Most PICs do not hold up-to-date lists of the pest organisms present, additionally what data exists is now quite old (25+ years for animal data and 40+ years for plant pest data). For plant pests countries rely on the PPLD maintained by SPC, however it is compromised by making only limited lists of data publicly available. For trade negotiations with importing countries, it is important that PICs do not have to rely on pest and disease lists provided by the importing country as is the case currently.
- Training of Pacific-based staff in the extraction of DNA from animal disease-causing organisms and supplying the equipment needed is currently being undertaken in selected PICs. Shortly training will also be provided in PCR and

²⁶ KRQ2 sub-questions are: 2.1 To what extent has the Enhance Pacific Biosecurity Partnership supported partners to manage plant and animal pests and disease risks at the various stages of the biosecurity system? 2.2 Have outputs been of high quality and to cost and time? 2.3 To what extent has each programme's MERL systems been operationalised? 2.4 Is the governance and operational structure of each programme effectively supporting implementation and ensuring transparency and collaboration while reducing overlaps and inefficiencies? 2.5 Is each programme management and financial management fit-for-purpose?

serology, and the use of 'DNA shield' to inactivate live organisms in specimen samples. This latter technique requires relatively low skill and imposes negligible risk for imports of specimens into countries like New Zealand. This is immediately relevant for animal diseases. DNA samples could then readily be sent anywhere for diagnosis; or ultimately it could be done in-country.

- One issue that has arisen is that there is uncertainty over the ongoing ability of the MPI animal health lab to diagnose animal health samples. This is an issue as Pacific countries do not have the laboratory capacity to diagnose key diseases, some of which are important for trade. We understand that MFAT and MPI are in discussions about this issue.
- Although Samoa initially saw the EPBP programme as an important initiative they temporarily opted out of the plant health component of EPBP as they considered they did not have staff of sufficient calibre to be trained in pest identification, and therefore it would be an inefficient use of EPBP resources if they participated. However, they have recently reviewed that opinion and plant health training will begin later this year. Additionally, Niue is not a partner country for plant health activities under the EPBP programme.
- The MERL framework has not been documented as clearly as was envisaged at the beginning of this programme; MERL needs to be operationalised and adequately resourced.
- There are governance and operational issues that are impacting the programme's effectiveness, and it is unclear if programme management and financial management is fit-for-purpose.

Impact – Plant Health

- Plant health staff in Cook Islands, Fiji, Tonga (early stages only) and Vanuatu are now better positioned and are more confident to identify pests and diseases of crops in their country.
- This improved knowledge of Pacific pests has significant impacts on the ability of New Zealand to be aware of and respond to pest threats from overseas, i.e. the outcomes of the EPBP programme will have a positive impact on New Zealand's own biosecurity.

Impact – Animal Health

- Uncertainty over the ongoing ability of the MPI animal health lab to diagnose animal health samples may constrain the current baseline disease survey work and, importantly, any investigation work into animal health events going forward. It is imperative that a way forward is identified to manage this constraint.

Training for biosecurity border operations

- It is difficult to measure the impact of the biosecurity border operations training. It will commonly only be observed through incremental improvements in the efficiency and effectiveness of the staff. We have not been told of any large interceptions of dangerous cargoes, just that the system seems to be operating more smoothly than previously.

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- The procedures and systems needed to deal with thousands of tonnes of cargo per day in New Zealand are different in scale and sophistication to those needed to manage hundreds of tonnes per week. There may be merit in considering, for the final years of the EPBP programme, that the biosecurity border operational training be done in-country rather than offshore in New Zealand.
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4.2.1 The EPBP programme is supporting partners to manage plant and animal pests and disease risks at various stages of the biosecurity system

The EPBP programme covers all parts of the biosecurity system (pre-border, border, and post-border). *Pre-border* largely focusses on risk analysis and what pests are present in an exporting country. A knowledge of what pests you have ensures you are better able to analyse risks of importing pests from another country. Routine surveillance of animals and plants in-country maintains and improves this knowledge.

At the *border* the EPBP programme is training participating country border staff to better deal with risks as they cross the border in cargoes or with passengers and in ships or aircraft. The EPBP programme supports knowledge of and action on *post-border* issues of field pest control, plus detecting and responding to new pest incursions through accurate knowledge of the pests a country has, and speedy and accurate identification of any pest and diseases detected in trade or during surveillance.

4.2.2 Outputs have been of high quality

Pest identification training activities

The MPI plant and animal health pest and disease technical staff who have implemented the pest identification training activities of the EPBP programme are all highly qualified and experienced in their subject matter. The PIC staff we have interviewed have all spoken very highly of the MPI technical staff and have built up significant rapport and respect for their inputs to date. The equipment, literature and training provided have all been of the best quality, suitable for the activities and the situation.

The technology of remote microscopy is worthy of mention. This is intended to enable PIC staff to call up, via the internet, an overseas expert anywhere and show them features of a new pest allowing the expert to help firm up the identity of the pest. The value of this technology will grow with improved internet services and regular use. However, the technology is predicated on the availability of experts elsewhere who have the time and are willing to help.

The EPBP programme supposes that the staff of the MPI, PHEL and the MPI, Animal Health Laboratory at Wallaceville will be able to continue the service they have provided over the past several decades. However, it is now unclear whether this will continue for the remaining two years of the programme. The technical staff are willing to help the PICs, as they see it as helpful to officials working in the same sector in the Pacific;

. Additionally, it will be further assisted if, in the final years of the EPBP programme, help is given to PICs to establish their own national reference collections and pictures of specimens of indigenous pests. One reason why MPI's PHEL can do its

work so efficiently is that it has such a collection in-house, and it also has access to the Pacific Arthropod Collection next door at Landcare Research.

There is no doubt that while the MPI staff were in-country they had a significant impact on the working practices of the PIC laboratory staff. Both Fiji and Vanuatu said that they now routinely identify pests intercepted on incoming cargoes and can get identities and advice back to the border officials in a few days. This was not a common occurrence in either country prior to the EPBP programme.

The EPBP programme mentions surveillance/monitoring as being helpful to domestic biosecurity, and that information and data management is a component of the programme. We envisage that they become priorities for the remaining years of the programme as a component of the training. It is important that survey information is recorded either in official records or on a national list/database of pests, and efforts are made to permanently record all new pest and disease occurrences (both of plants and animals) in each country to build up national lists of pests.

As members of the IPPC, countries are required to make these lists public as part of their national reporting obligations.²⁷ Some PICs have been wary of these obligations, and consequently the pest lists published by SPC has restricted access and some older, but still valid data, is not displayed.²⁸

The unsatisfactory nature of the Pacific pest lists is counterproductive to trade negotiations between countries which are based on transparency and trust. If an importing country cannot trust the pest list provided by an exporting country, then negotiations will be difficult, and the importing country may impose unnecessarily harsh conditions on imports. Equally the exporting country should not be required to rely on the pest list of its own country provided by the importing country, as is the case currently.

Training for biosecurity border operations

There is no doubt as regards to the quality of the training biosecurity border operations provided. It has been of the highest standard and all who have returned home have influenced other staff to 'up their game'.

Training of PIC biosecurity staff in border operations in New Zealand has worked well for the staff involved and has influenced other staff to 'up their game'. However, there may now be merit in considering, for the final years of the EPBP programme, that some operational biosecurity training be done in-country rather than in New Zealand.²⁹

Costs and time

As regards cost and time for any on the activities under the EPBP programme this is very difficult to estimate, firstly because few of the reports we have sighted have this kind of detail and secondly because travel around the region is notoriously expensive and slow.

²⁷ Biosecurity issues and systems are similar the world over and all adhere to the policies and principles of the International Plant Protection Convention (IPPC). This is a multilateral treaty overseen by the United Nations Food and Agriculture Organization (FAO) that aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products. IPPC promulgates International Standards for Phytosanitary Measures (ISPMs) which provide recommendations for operational systems. New Zealand is a major influencing country at the IPPC.

²⁸ The data in the SPC lists is based on plant pest surveys done in the late 1960s and early 1970s. The animal surveys were done more than 25 years ago.)

²⁹ Note from the principal author's experience in Solomon Islands the best training of staff was achieved through the attachment of BNZ border staff in-country for longer periods, e.g. 3-4 weeks or preferably 1-2 months.

For example, for much of the first two years of the EPBP programme there was only one flight a week to Niue and their government only worked a four-day week.

4.2.3 The programme's MERL systems have not been operationalised as intended

The MPI reports provide very little understanding of how they are operationalising and resourcing the MERL requirements of the EPBP programme. For example, there are no joint annual country reviews (a key element of the MERL framework), nor have there been any regular surveys of PIC stakeholders to gather qualitative and quantitative data that could be used to support adaptive management.

There are issues in the governance and operational structure of the programme that impact on implementation, and the programme financial management in some areas constrain timely delivery of inputs. A refresh to the ToR for the Governance Group is therefore recommended.

4.2.4 There are governance and operational issues that are impacting the programme's effectiveness

While MPI operational staff have not changed throughout the project, MPI management oversight of the programme has, and the current New Zealand government has imposed budgetary constraints on the whole public service.

There is a joint Governance Group covering both the EPMAP and the EPBP programmes and there is representation from both MFAT and MPI.³⁰ Governance Group meetings are held quarterly and focus on the strategic direction of the MPI/MFAT partnership relating to the two programmes, the political context, and significant biosecurity concerns.

The current public service economy drive in New Zealand is likely to affect the programme. The Governance Group will need to discuss the impact of the MPI restructuring on delivery of the EPBP and agree on what changes will be required to the Programme. Once these have been agreed between the two agencies, they will need to communicate these changes to EPBP staff and participating countries where appropriate.

4.2.5 It is unclear if programme management and financial management is fit-for-purpose

The financial reports that have been provided indicate that the EPBP programme is significantly underspent. The reasons given are various, ranging from the constraints to travel during COVID-19 restrictions, the late arrival of planned equipment supplies to the cancellation of some training due to the non-availability of PIC personnel.

³⁰ MFAT: Unit manager and the lead agriculture advisor. MPI: Director of diagnostic and Surveillance Services, Director of Animal and plant health and the Principal Advisor International Relations. Observers include: MFAT; Programme Development Manager, Activity Manager. MPI Manager Plant Health and Environment Laboratory.

The underspend of the programme can be seen positively as there is still ample time to correct this over the next two years, in particular the need for more surveillance and training of border staff in-country.

Knowledge of the pests or diseases present in a country is a prerequisite for determining how to manage pests that might have just arrived. For example:

- In Vanuatu, it was important to distinguish the newly arrived (2019) coconut rhinoceros beetle (*Oryctes rhinoceros*) from the closely related, but endemic, beetle *Oryctes centaurus*, which causes similar but lesser symptoms. The fact that there was a small insect reference collection in Port Vila saved several days of investigation and considerable time and effort in hunting for *O. rhinoceros* on Espiritu Santo, which as of last month was still not on Espiritu Santo.
- During the EPBP programme pest identification training in Vanuatu a new moth was collected, it was morphologically similar to but different from an endemic species. The moth was identified as the invasive fall armyworm (*Spodoptera frugiperda*) which has spread from the Americas via Africa and Asia to Papua New Guinea, Solomon Islands, Australia, and New Zealand. It is believed to have been carried by wind from Australia to New Zealand. Delimitation surveys were quickly carried out in Vanuatu to determine how widespread it was and what actions were needed or possible. The moth primarily attacks grass type crops such as maize and sugar cane. Fiji was alerted and has, with the help of the FAO, put in place pheromone traps to detect *S. frugiperda* as soon as it arrives. Quick action soon after arrival increases the chances of eradication. This quick sequence of identification and action was only possible because surveillance was being carried out and an insect taxonomist was available.
- No newly introduced animal diseases were detected during the animal health training done by EPBP programme staff. MPI staff provide ongoing remote assistance with animal health events supporting the day-to-day work of the paravets in-country, for example, those staff were able to help Cook Islands and Samoa with advice on the management of imports of animal products when a new poultry disease was reported in a nearby country.
- This remote but real-time support pathway is exactly similar to what should happen if unusual disease symptoms were detected on an animal in a PIC. With trust between the country officials and MPI personnel, symptom pictures and specimens from the animals could be sent to MPI for rapid diagnosis and advice (after initial screening in-country using Rapid Antigen Tests (RAT)) for follow-up actions. Such a system provides PICs with invaluable advice and BNZ with quick knowledge of the changing disease status of the PICs.
- MPI technical staff are highly professional and have delivered high quality technical outputs while operating under the constraints mentioned above.

4.3 Efficiency and Sustainability

KRQ3: How efficiently is the programme using its resources?

This question and sub-questions³¹ relate to Objective 3. It examines efficiency (How well are resources being used?) and sustainability (Will benefits or interventions last?)

Box 4.3 KRQ3 key findings

Efficiency

Plant Health

- After a slow start due to COVID-19 pandemic the plant health team has made good progress and has delivered equipment and training in Cook Islands, Fiji and Vanuatu. A familiarisation visit has already been made to Tonga and work is set to begin there shortly. As regards to Samoa, the team leader visited there recently and now believes MPI will be able to start the training later this year. Niue was not included in the plant health training.

Animal health

- The animal health operational team has done high quality work in all the countries, despite COVID-19 travel restrictions and the operational constraints mentioned above. They have done paravet training and carried out surveys in most countries and trained staff in taking blood samples, processing, and preparing them for dispatch to IATA standards, screening tests in-country, for example, using RAT tests, and knowing what to do when results come back in. In addition, DNA extraction, PCR and serology testing training has been completed in Fiji and Vanuatu.

Training for biosecurity border operations

- Several PIC border officials have attended the BNZ border operations courses in New Zealand, as well as the subsequent experiential learning attachments. The sessions have gone well, and feedback has been positive. All the trainees have returned to use their new knowledge including encouraging colleagues, who have not been trained, to 'up their game'.

Sustainability

Plant Health

- Training in plant pest and disease identification has gone well and by the end of the project, PIC officials will be confident to identify common endemic pests and diseases. Remote microscope systems have been provided and this will give the local staff the ability to call up experts elsewhere to discuss and assist with the identification of difficult, unfamiliar, or recently arrived organisms.

Animal Health

- Changes to the delivery of the EPBP programme discussed above could impact the sustainability of the programme.

³¹ KRQ3 sub-questions are: 3.1 Has the programme achieved good value for the investment and effort? 3.2 How is sustainability (e.g. of capability and capacity building) for the programme being considered?

-

Training for Biosecurity Border Operations

- The training of Pacific biosecurity border staff offshore in New Zealand needs to continue, but with a new emphasis on in-country training.
-

4.3.1 The programme is achieving a positive impact, but recent changes to MPI's operations put at risk the sustainability of EPBP's achievements

We are in no doubt that if the EPBP programme is able to continue as originally envisaged then the outcomes, short, medium and long term, will justify New Zealand's investment. The efforts by MPI technical staff and the cooperation provided by the national biosecurity agencies, along with the strong relationships built between them, have been excellent.

That said, there is uncertainty over the ongoing ability of MPI's animal health laboratory to continue to carry out the testing of animal samples from the Pacific. This may constrain the current baseline disease survey work and, importantly, any investigation work into animal health events going forward. We understand that MFAT and MPI are in discussions about this issue. We would note that animal health specimens from the Pacific and elsewhere have been going to MPI for decades with no published cases of problems with the samples

4.3.2 Staff training provides sustainability to the outcomes of the programme, but capacity building is still a challenge for PICs

The sustainability of outputs, even during the life of the programme, relies on regular surveillance for pests. Vanuatu maintains WOH FMD free status; this status can only be maintained through regular surveys of susceptible animals in-country. The same applies to bee diseases.

Establishing routine national animal disease surveillance through day-to-day frontline work of livestock officer/paravets and quick investigation of animal health events, is required to reinforce the reported disease status of a country. It is also one of the primary purposes of the animal health programme of EPBP. For countries wishing to export animal products such as Vanuatu (beef) and Cook Islands (bee products) it keeps export markets open.

MPI, in particular with BNZ, is New Zealand's natural source of information and support for biosecurity issues. MPI/BNZ is respected worldwide for its harmonised and transparent operation and has internationally recognised technical staff. The EPBP programme envisaged that the pest and disease identification experts would be at MPI and given MPI's experience in the Pacific, this makes them an appropriate source for assistance.

Be that as it may it should be possible to link the remote microscopy system (supporting plant health diagnosis) through the internet to any expert anywhere in the region or the world. This would make the system sustainable.

There are other organisations in New Zealand capable of implementing the EPBP programme but none with all the technical staff required in one organisation. Universities, Crown Research Institutes (CRIs), private veterinarians or/and laboratories could each implement elements of the programme, and some have expertise in managing international development projects. If MPI can no longer fully implement the remaining two years of the programme, serious consideration could be given to bringing other organisations in who may, for selected elements, enable the EPBP programme to continue as planned.

5 Lessons, Conclusions, and Recommendations

This section discusses lessons, our conclusions based on the overall findings, and identifies recommendations to inform the next phase of the EPBP programme.

5.1 Lessons

We identified several lessons from our interviews with stakeholders.

Overall Lessons

- Effective project implementation in the Pacific region requires an empathetic, flexible management style that focuses on pragmatic, cost-effective delivery.
- Maintenance and management of one diagnostic laboratory is expensive; to operate more than one in a small Pacific Island country is not cost effective.
- Biosecurity in Fiji is significantly different to all the other countries in terms of organisation, capabilities, and workforce.
- The current New Zealand Government economy drive may affect the implementation of EPBP. The Governance Group will need to discuss the impact of the MPI restructuring on delivery of the EPBP and agree on what changes will be required to the Programme. Once these have been agreed between the two agencies, they will need to communicate these changes to EPBP staff and participating countries where appropriate.

Plant Health

- Accurate and quick identification of plant pests and diseases is an essential component of effective biosecurity and is best done in-country.
- A mechanism must be found that supports PICs with funds for pest and disease identifications in the medium-term.
- Regular surveillance of crops is essential to monitor current national pest status and intercept new pest incursions as early as possible.

Animal Health

- Regular surveillance of animals through day-to-day frontline work of livestock officer/paravets and rapid investigation of animal health events are essential to monitor current national disease status and intercept new disease incursions as early as possible.
- Accurate and quick identification of animal diseases is an essential component of effective biosecurity and is best done in-country. This requires foundational training in investigation technique, sampling (including post-mortem), and use of in-country screening tests such as Rapid Antigen Tests, or development of serology and molecular techniques.
- A mechanism must be found that supports PICs with funds for animal disease identifications over the medium-term.

- Supporting animal health in PICs where there is no in-country veterinarian can be assisted by real-time remote veterinary support, in particular when implementing measures after a new incursion is confirmed.

Training for Biosecurity Border Operations

- Biosecurity staff value both in-country and off-shore training.

5.2 Conclusions

Biosecurity systems consist of several components divided into functional groups: pre-border, border, and post border (including on-farm biosecurity). The components represent risk management activities aimed at reducing, but are not likely to eliminate, the number of pest introductions, i.e. entry of hazards. Biosecurity also seeks to ensure trade in animals, animal products, plants and plant products is safe such that pests and diseases are unlikely to follow import and export pathways.

There is no doubt that all the countries in the programme need effective biosecurity systems to protect them from accidental new pest introductions, but the extent to which they each need assistance with market access issues varies with their ability and need to export fresh produce. The EPBP programme deals primarily with the former - firstly, by improving local access to quick and accurate identification of pests and diseases and secondly, by providing training for biosecurity operational border officials.

All the technical goals of the EPBP programme are on their way to being achieved despite the slow start due to the COVID-19 pandemic. Laboratory equipment and training have been delivered to the plant and animal diagnostic laboratories in Cook Islands, Fiji, Samoa, Tonga, and Vanuatu. Staff in these laboratories are now more confident to identify endemic pests and diseases and provide feedback on pests intercepted at the border. Plant health activities are due to begin this year in Tonga and Samoa.

The intended outcomes of the EPBP programme are still relevant for all countries. However, Fiji is such a significant outlier in their level of training, organisation and workforce compared to the other countries, that the degree of its involvement in the programme should be reviewed.

The sustainability of biosecurity and crop and livestock development programmes rely on accurate and up-to-date information of pest and disease status, along with the efficient transfer of this information with trading partners. They also rely on regular, cost-efficient, and accessible tools to enable identifications to be confirmed as quickly as possible. For identification of both plant and animal pests and diseases over the medium-term it is important that PICs have ready access to assistance to cover these costs.

All countries have expressed strong satisfaction with the equipment, information and knowledge provided, this has given them confidence to identify common plant pests. It also allows them to confidentially take blood, swab, and tissue samples from a range of farm animals, prepare these samples (using equipment provided) for dispatch to overseas laboratories for diagnosis or test in-country using screening kits, and to have some knowledge of what action to take when the results are received. Accurate identifications of pests and diseases enable speedy and effective implementation of control measures targeted at the specific pest. PIC staff have all spoken very highly of the MPI technical staff and have built up significant rapport and respect for their inputs to date.

5.3 Recommendations

Overall

We recommend that:

1. MPI management, technical staff, and MFAT work to resolve EPBP programme operational issues mentioned above to ensure the programme is able to achieve its end-of-project outcomes.
2. Countries with more than one pest identification facility be encouraged to amalgamate them (We note this is outside the scope of the EPBP programme).
3. EPBP programme activities in Fiji be reviewed and adjusted to better fit needs, and any savings returned for distribution to other countries.
4. The EPBP MERL framework is re-assessed to determine if the outcomes, outputs, and activities remain relevant and revised where needed. Responsibility for operationalising is to be confirmed by the EPBP Governance Group.
5. There are issues in the governance and operational structure of EPBP that impact on implementation. It is timely to refresh the ToRs, so that the membership of the MPI/MFAT Governance Group and the scope of its mandate are discussed and agreed to.

Plant Health

We recommend that:

1. Future EPBP programme activities emphasise national routine surveillance of plant pests and diseases in selected crops, and use organisms collected for training in identification.
2. More emphasis be given to digitising all pest and disease records, existing and new (including interceptions on cargo etc.), to develop accurate and up-to-date lists of pests and diseases present in each country.
3. Mechanisms be developed for long-term support for fees associated with the validation of plant pest and disease identifications.
4. The potential use of DNA and barcode technology be examined as a potentially less expensive method of validating plant pest and disease identifications.

Animal Health

We recommend that:

1. EPBP programme activities emphasise national passive surveillance for animal diseases (through day-to-day frontline work of livestock officer/paravets and investigation of animal health events), and the specimens collected used for training in sample preparation, in-country screening testing, or overseas submission.
2. Mechanisms be developed for long-term support for fees associated with the validation of animal disease identifications, especially as it relates to investigation of animal health events in the PICs.

Training for Biosecurity Border Operations

We recommend that:

1. The training of Pacific biosecurity border staff offshore in New Zealand needs to continue, but also with a new emphasis on in-country training to better fit the nature and scale of local operations, and thus be more relevant to the trainees.
2. This in-country training would be led by seconded BNZ border officers supported by national biosecurity officers who have already received training in New Zealand (i.e. 'train the trainers'). The duration of each in-country training course be dependent on the size of the agency, the number of international seaports and airports, and the volume of trade and numbers of passengers.

Appendices

Appendix A: EPBP MERL Framework: Theory of Change and MERL Table Summary

Appendix B: EPBP Outputs, Activities and Outcomes

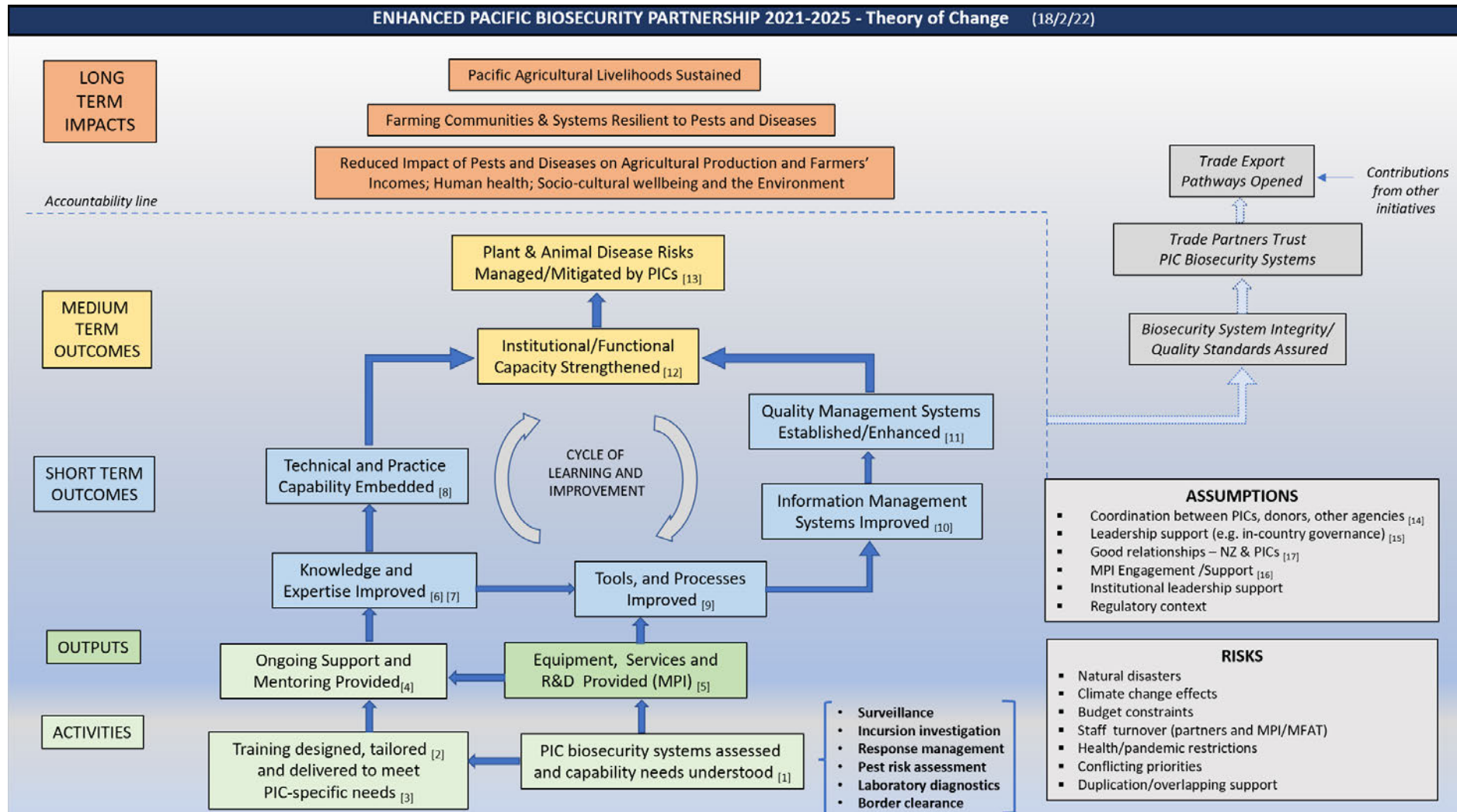
Appendix C: MTR Methodology and Analytic Framework

Appendix D: Relevant Source Documents

Appendix E: Organisations Consulted

Appendix F: Information Sheet and Consent Form

Appendix A. EPBP MERL Theory of Change and revised MERL Table Summary



MFAT/MPI Enhanced Pacific Biosecurity Partnership

Monitoring, Evaluation, Research and Learning Framework (MERL) -- based on key elements from the Theory of Change (Version 1 - 18/2/2022)

	Theory of Change	Purpose	Intended use/users	Assessment criteria and indicators		Methods		
<i>See corresponding numbers in Theory of Change</i>	TOC Components	Information use	Information users	MEL criteria (DAC)	Indicators (Qual/Quant)	Data Source	Data collection & analysis methods	Frequency
	ACTIVITIES						Programme Administrative Data	
1	Assessment of PIC biosecurity systems and development needs	Training design & Progress tracking	Programme manager and delivery partners / PICs	Relevance	Needs assessments	Programme documents	Baseline review and follow up	Annually
2	Tailored plans for each PIC	Work planning	Trainers/PIC partners	Relevance	Training plans	"	Document analysis and discussions	Annually
3	Training delivery	Progress reports	Programme Mgmt; Training providers	Efficiency	Training sessions delivered	"	Project reporting	Quarterly
4	Ongoing follow-up support (mentoring/coaching)	Progress reports	Mentors/Mentees	Effectiveness	# people receiving support/quality of support	Training providers/mentors/mentees	"	Quarterly

Appendix B. EPBP Outputs, Activities and Outcomes

Table B1. The Enhanced Pacific Biosecurity Partnership programme (Phase 2) outputs and activities

Outputs	Activities
Plant Health	
1. Assistance to enhance the functional capabilities of the plant health diagnostic laboratory and plant health surveillance, and response management systems in Fiji.	<ol style="list-style-type: none"> 1. Continuous capability development to the plant health diagnostic laboratory attached to the Biosecurity Authority Fiji (BAF). 2. Continuous capability development in plant health surveillance, investigations and response management programme in Fiji.
2. Assistance to the plant health diagnostic laboratory and plant health surveillance, and response management capability development programme in Vanuatu.	<ol style="list-style-type: none"> 1. Functional capability development assistance to the plant health diagnostic laboratory in Vanuatu. 2. Plant health surveillance, incursion, and response management capability development programme in Vanuatu.
3. Capability development in offshore clearance systems in passenger and cargo pathway for quarantine inspectors from the Cook Islands, Fiji, Niue, Samoa, Tonga and Vanuatu.	<ol style="list-style-type: none"> 1. Attach to the New Zealand Quarantine Officer - two-week residential training. 2. Nine-week site specific on job training. 3. Diploma in Border and Biosecurity. 4. Follow-up mentoring & coaching. 5. X-Ray training.
4. Development of diagnostic tools and establishment of remote microscopy systems in the Cook Islands, Fiji, Niue, Samoa, Tonga and Vanuatu.	<ol style="list-style-type: none"> 1. Extension of Plant Health and Environment Laboratory (PHEL) diagnostic training programme to Cook Islands biosecurity. 2. Assistance to establish basic plant health diagnostic laboratories in Samoa and Tonga. 3. Capability development in incursion investigation and response management systems in Samoa and Tonga. 4. Extension of PHEL's 'Symptom recognition training programme' to quarantine inspectors in Samoa and Tonga.

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5. Development of diagnostic tools and establishment of Remote Microscopy Systems Work stream I - Diagnostic tool development Work stream II – Establishment of Remote Microscopy Diagnostic (RMD) System.
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Animal Health

5. Capability development in the Cook Islands Fiji, Niue, Samoa, Tonga and Vanuatu, and in animal biosecurity focusing on laboratory diagnostics.

1. Biosecurity system facilitated self-review.
 2. Laboratory needs assessment
 3. Training on identification of herpetology specimens.
 4. Laboratory core skills.
 5. Advanced skills (bacteriology, molecular PCR, serology ELISA).
 6. Laboratory review and follow up.
 7. Training on data management and basic analyses.
-

6. Capability development in the Cook Islands Fiji, Niue, Samoa, Tonga and Vanuatu, and in animal biosecurity focusing on investigation, surveillance, and response.

1. Surveillance needs assessment.
 2. Training on general surveillance.
 3. Training on outbreak investigation.
 4. Plan and initiate baseline surveillance.
 5. Review and workshop results from baseline.
 6. Training on developing risk assessments and import health standards.
 7. Biosecurity systems border inspection, quarantine services.
 8. Training Para-veterinarians on core veterinary skills.
 9. Risk communication and raising community awareness.
 10. Bee Health Needs assessment.
 11. Bee Health Review and follow up.
-

Table B2. The Enhanced Pacific Biosecurity Partnership programme (Phase 2) outcomes

Outcomes	
Short-term	<ul style="list-style-type: none"> • Knowledge and Expertise Improved • Technical and Practice Capability Embedded • Tools, and Processes Improved • Information Management Systems Improved • Quality Management Systems Established/Enhanced
Medium-term	<ul style="list-style-type: none"> • Institutional/Functional Capacity Strengthened • Plant & Animal Disease Risks Managed/Mitigated by PICs
Long-term impacts	<ul style="list-style-type: none"> • Pacific Agricultural Livelihoods Sustained • Farming Communities & Systems Resilient to Pests and Diseases • Reduced Impact of Pests and Diseases on Agricultural Production and Farmers' Incomes; Human health; Socio-cultural wellbeing and the Environment.

Appendix C. Methodology and Analytic Framework

MFAT-commissioned evaluations and reviews apply the OECD DAC evaluation criteria to provide a framework to determine the value of programmes, policies, or activities. It is an assessment tool and not all criteria need to be covered – evaluations should be customised to the needs of the relevant stakeholders and the context of the evaluation or review. The objectives and KRQs are based on these criteria.

This MTR used these evaluation criteria, site visits, stakeholder interviews (including group sessions), and desktop review of monitoring data and relevant reports to assess progress to date.

Diagram C1: OECD DAC criteria



Source: OECD DAC

'Relevance' examines whether the programme is doing 'the right things' – the extent to which its objectives and goals are delivering outcomes and impact.

'Coherence' looks at how well the programme fits with in-country governments' priorities, and other development partners' interventions.

'Effectiveness' focuses on whether the programme is achieving its objectives. Here we examine the extent to which the programme is achieving (or is expected to achieve) its objectives, and the sustainability of any impact.

'Efficiency' examines how well the resources are being used; the extent to which the programme interventions deliver (or is likely to deliver) results in an economic and timely way.

'Impact' looks at what difference the programme interventions are making, and whether the extent to which they have generated (or are expected to generate) significant positive or negative, intended or unintended, higher-level effects.

'Sustainability' looks at whether the benefits will last and the extent to which any net benefits are likely to continue.

Diagram C2: MTR Analytic framework

MTR Objectives	Key Review Questions	Review sub-questions	OECD DAC Assessment Criteria	Qualitative/Quantitative data and information
<p>Objective 1: To assess the extent to which the programme remains a priority for partner countries and NZ's International Development Cooperation Programme.</p>	<p>KRQ1: To what extent does the programme remain a priority for partner countries and NZ's IDC Programme?</p>	<p>1.1 Are the intended outcomes of the programme still relevant?</p> <p>1.2 Is the programme focused on the right areas with the right partners?</p> <p>1.3 How well does the programme fit with other activities implemented in the following context?</p> <p> 1.3.1 Within MPI</p> <p> 1.3.2 Between New Zealand agencies (incl. CRIs)</p> <p> 1.3.3 within the context of the New Zealand and Australia relationship and government departments</p> <p> 1.3.4 within the context of the relevant multilateral agencies, both regional and international</p> <p>1.4 What is the level of interest in, and commitment to, the programme from the key stakeholders?</p>	<p>Relevance and Coherence</p>	<p>Key stakeholder interviews:</p> <ul style="list-style-type: none"> - In-country partner govt officials - MFAT/Post officials.

MTR Objectives	Key Review Questions	Review sub-questions	OECD DAC Assessment Criteria	Qualitative/Quantitative data and information
<p>Objective 2:</p> <p>To examine the progress being made in achieving the outputs and outcomes of the programme</p>	<p>KRQ2:</p> <p>What progress has been made to the project's outputs, and short and medium-term outcomes?</p>	<p>2.1 To what extent has the <u>Enhanced Pacific Biosecurity Partnership</u> supported partners to manage plant and animal pests and disease risks at the various stages of the biosecurity system?</p> <p>2.2 Have outputs been of high quality and to cost and time?</p> <p>2.3 What impact is the programme having on working practices?</p> <p>2.4 To what extent has the programme's MERL systems been operationalised?</p> <p>2.5 Is the governance and operational structure of the programme effectively supporting implementation (and ensuring transparency and collaboration while reducing overlaps and inefficiencies)?</p> <p>2.6 Is the programme management and financial management fit-for-purpose?</p>	<p>Effectiveness and Impact</p>	<p>Relevant reporting/progress documents</p> <p>Key stakeholder interviews:</p> <ul style="list-style-type: none"> - MFAT officials - MPI implementing officials - In-country partners – incl. senior leaders, working level representatives from biosecurity agencies - Agricultural exporters - other relevant stakeholders.
<p>Objective 3:</p> <p>To review the value of the programme</p>	<p>KRQ3:</p> <p>How efficiently is the Project using its resources?</p>	<p>3.1 Has the programme achieved good value for the investment and effort?</p> <p>3.2 How is sustainability (e.g. of capability and capacity building) for the programme being considered?</p>	<p>Efficiency and Sustainability</p>	<p>Relevant reporting/progress documents</p> <p>Key stakeholder interviews:</p> <ul style="list-style-type: none"> - In-country partner govt officials - MFAT and MPI officials.

MTR Objectives	Key Review Questions	Review sub-questions	OECD DAC Assessment Criteria	Qualitative/Quantitative data and information
<p>Objective 4</p> <p>Lessons learned for improvement – to identify the key learnings to increase positive impact in the future.</p>	<p>Lessons learned and Recommendations</p>	<p>4.1 What do we need to start, stop, continue or change during the remainder of the programme?</p>		<p>Review findings from responses to objectives 1-3</p> <p>Key stakeholder interviews:</p> <ul style="list-style-type: none"> - Governance group members - MFAT officials - MPI officials - In-country partners – incl. senior leaders, working level representatives from biosecurity agencies - Agricultural exporters - Regional partners - Australian government - Multilateral development agencies.

Appendix D. Relevant Source Documents

Enhanced Pacific Biosecurity Partnership programme (Phase 2) 2021-2025

A practical approach to the assessment of biosecurity system function within developing countries – a case study of the Pacific. AMJ McFadden, T Rawdon, S Rosanowski. May 2021

Biosecurity Authority of Fiji Surveillance and Diagnostic Assessment Report. In-country workshop MPI / Fiji Action Plan – No: 2022/1.

Baseline disease survey of Rarotongan shelter dogs – building biosecurity knowledge and skills across the Pacific. *Surveillance* 50 (1) 2023

Business Case. PDG Detailed Business Case for the Enhanced Pacific Biosecurity Partnership

Cook Islands facilitated self-review: In-country workshop. Cook Islands facilitated self-review In-country workshop. 10 September 2021. MPI

Cook Islands facilitated self-review In-country workshop MPI / Cook Islands Action Plan – No: 2021/1

Cook Islands Surveillance Workshops. In-country animal surveillance workshops, field & laboratory training. MPI / Cook Islands Action Plan – No: 2022/1

Cook Islands – Biosecurity workshop & baseline survey. In-country animal biosecurity workshop, and initiate baseline surveillance: field & laboratory training. MPI / Cook Islands Action Plan – No: 2022/2

Cook Islands – Biosecurity workshop & Baseline survey 2 In-country animal biosecurity workshop, and follow-up baseline surveillance work: field & laboratory training MPI / Cook Islands Action Plan – No: 2023/1

Enhanced Pacific Biosecurity Partnership. Final Report Animal Biosecurity programme. For the period of 01/09/2020 – 30/11/2021 Inception Phase.

Enhanced Pacific Biosecurity Partnership. Animal Biosecurity programme Workplan for the period of Jan – June 2022 Delivery Phase.

Governance Group meeting minutes. 17 April 2022

Governance Group meeting minutes 1 August 2023

Governance Group meeting minutes. 23 November 2023

Initiation of baseline surveillance for animal disease status. Cook Islands. Ministry of Agriculture September 2022

MERL Framework. Enhanced Pacific Biosecurity Partnership

MPI Pacific Partners Programme. Annual reports from Ministry for Primary Industries. *Surveillance Annual Report* 50 (3) 2023

MTR Terms of Reference: Enhanced Pacific Biosecurity Partnership

Partnership towards sustainable Animal Health and Biosecurity in the Pacific. *Surveillance* 49 (4) 2022.

Progress Report Year 2. For the period of 01/07/2022 – 30/06/2023. July 2023

Progress Report. Quarterly Progress Report: Animal Health and Biosecurity – Pacific Partnership. 30 June 2023

Progress Report. Quarterly Progress Report: Jul-Oct 2023. Phase 2 – Plant Health Pacific Biosecurity Partnership

Progress Report. Quarterly Progress Report: Animal Health and Biosecurity – Pacific Partnership. 1 November 2023

Research. A practical approach to the assessment of biosecurity system function within developing countries – a case study of the Pacific by AMJ McFadden, T Rawdon, S Rosanowski Developing a tool to assess a biosecurity system.

Theory of Change. Enhanced Pacific Biosecurity Partnership (18/2/22)

Tonga Livestock Impact Survey Post Tonga – Hunga eruption by Ana Pifeleti, Charles Kato, Tom Rawdon, Andy McFadden. Tonga Animal Health Impact Final April 2022

Vanuatu Report: Technical assistance to support MALFFB’s livestock recovery efforts following Cyclones Judy and Kevin. 3 October 2023. MPI

Workplan. EPBP Plant Health Costed Workplan. Expenditure for period of 1 July 2023-30 June 2024

Appendix E. Organisations Consulted

- Australia Department of Foreign Affairs and Trade (DFAT)
- Australia's Department of Agriculture, Fisheries and Forestry (DAFF)
- Biosecurity Authority of Fiji (BAF)
- Biosecurity Vanuatu (BV)
- Cook Islands Ministry of Agriculture
- Fiji Ministry of Agriculture and Waterways
- Growers Federation of Tonga
- Lotopoha Export Trading
- Nature's Way
- New Zealand Ministry of Foreign Affairs and Trade including High Commissions in Cook Islands, Fiji, Niue, Samoa, Tonga, and Vanuatu
- New Zealand Ministry for Primary Industries
- Nishi Trading Limited
- Niue Department of Agriculture, Forestry and Fisheries (DAFF)
- Niue Ministry of Foreign Affairs
- Pacific Community (SPC)-LRD
- Pacific Plant Protection Organisation (PPPO)
- PACER Plus
- PHAMA Plus, Fiji, Samoa, Tonga
- Samoa Ministry of Agriculture and Fisheries (MAF)
- Tonga Ministry of Agriculture, Food and Forests (MAFF)
- Tonga Ministry of Trade and Economic Development

Appendix F. Information Sheet and Consent Form

Information sheet

Mid-term Review of the Enhanced Pacific Biosecurity Partnership programme

The New Zealand Ministry of Foreign Affairs and Trade has commissioned Future Partners to undertake an independent Mid-term Review of the Enhanced Pacific Biosecurity Partnership (2021-2025) programme.

WHY is the initiative being reviewed?

The review objectives are:

Objective 1. To assess the extent to which the programme remains a priority for partner countries and NZ's International Development Cooperation Programme.

Objective 2. To examine the progress being made in achieving the outputs and outcomes of the programme.

Objective 3. To review the value of the programme.

Objective 4. Lessons learned for improvement – to identify the key learnings to increase positive impact in the future.

WHAT will the review entail?

A review of relevant documents, data, and key stakeholder interviews.

HOW can you contribute to the mid-term review?

You and other key stakeholders will be invited to meet the reviewers in person or via video conferencing. They will use an interview guide and focus on questions relevant to your role or connection with the programme.

Do you have to take part?

Participation in this mid-term review is voluntary.

You can agree to take part but you still have the option to stop taking part at any time. However, your views and experiences are highly valuable to inform the review and remaining phase of the programme, **and we value your input.**

While your name and role will remain confidential to the reviewers, and you won't be identified in the reports, what you say may be used to inform the review findings. Your information will be used for this review only and by the Review Team.

WHO is conducting the review?

The mid-term review is being conducted by Aotearoa New Zealand consulting firm Future Partners Ltd. If you have any questions about the review, please contact either:

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Consent

I have read the information above, or it has been translated to me, and all my questions have been answered.

My responses can be used as part of the Enhanced Pacific Biosecurity Partnership Mid-term Review report.

I understand that I will not be identified in the report.

I agree to take part in an audio recorded interview. Yes No

I agree to take part in an unrecorded interview. Yes No

Name (print):
