# Annex 1

# Analysis of PNG ability to prevent incursions and to detect, monitor and control exotic pests and diseases of quarantine concern

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## Introduction

While the term "Papua New Guinea – Australia Quarantine Twinning Scheme" suggests the scheme was focussed toward strengthening the capabilities of NAQIA with respect to its quarantine mandate alone, a review of the RoU between AQIS and AusAID and the activities carried out under the scheme show a broader focus in strengthening the overall biosecurity system in Papua New Guinea.

With this in mind, the following discussion of NAQIA systems and its achievements through PAQTS are presented in the context of biosecurity capabilities rather than traditional quarantine capabilities, and is structured around some of the key generic activities of the three broad functional areas of a biosecurity system; pre-border, border, and post-border.

The area of legislative arrangements is critical to all three functional areas of a biosecurity system and is treated as a separate topic to the pre-border, border and post-border functional areas.

It is recognised that other agencies and sectors in Papua New Guinea have biosecurity responsibilities in relation to human health, the marine environment, and the natural environment, and reference to these systems will only be given in the context to which they apply to the mandate of NAQIA.

## Pre-border

### International agreements and standards

As a member of the World Trade Organization (WTO) Papua New Guinea is obligated to, and its rights are protected by, the WTO Agreement on Sanitary and Phytosanitary Measures. Papua New Guinea is also a contracting party to the International Plant Protection Convention (IPPC) and a member of the World Organisation for Animal Health (OIE).

The IPPC is an international treaty that aims to secure action to prevent the introduction and spread of pests of plants and their products, and to promote appropriate measures for their control. The IPPC is recognised by the WTO Agreement on Sanitary and Phytosanitary Measures as the body with responsibility for establishing standards that relate to the movement of plants and their products in international trade. As a party to this treaty Papua New Guinea is positioned to contribute to the development of these international standards and to share information on plant pests and available measures for their control.

The OIE is the intergovernmental organisation responsible for improving animal health worldwide. As with IPPC standards, the standards, guidelines and recommendations issued by the OIE are recognised as the international reference by the WTO. Papua New Guinea has recently become a member of the OIE which commits and positions it well to contribute to the development of international standards for animal health, and to share information with other members on global animal health status.

**Monitor and review globally emerging risks**

As a contracting party to the IPPC, and having recently become a member of the OIE, Papua New Guinea is well-positioned to take advantage of the information reporting and sharing provisions of these international bodies. Many other global (eg. Promed) and regional (eg. Pestnet) forums exist for sharing information on emerging risks, however, it is unknown to what extent Papua New Guinea takes advantage of these forums.

**Development of biosecurity policies and supporting standards**

The development of biosecurity policies, and notification of these to trading partners, domestic stakeholders and clients, and staff, is essential to the successful implementation of these policies. At present in Papua New Guinea biosecurity policies appear to be predominantly notified to these parties by way of import permits and sometimes through memoranda. While the import permit issuing process has now been documented as part of PAQTS, the use of import permits to notify import requirements is quite limiting to the aim of promoting import policies. There is a definite need to make biosecurity policy more readily accessible to trading partners, clients and staff.

Standards (and procedures) are generally used to document how biosecurity policy is implemented, both offshore and on arrival at the importing country. Standards provide both clients and quarantine staff a reference and level of consistency as to how biosecurity policy is implemented for regulated articles entering a country. There is an identified need in Papua New Guinea to develop further standards to detail its import processes and to review, and update where applicable, those that it already has.

A useful mechanism for promoting biosecurity policy and standards, and making them readily available to all interested parties, is the internet. NAQIA at the present time has minimal presence on the internet, although some level of internet documentation has been developed within NAQIA and is undergoing evaluation before making it live.

**Risk assessment**

Risk assessment is a critical component of a biosecurity system as it is used to identify the pathways and articles on which pests and disease may be introduced into the area at risk. The findings of risk assessments are used to justify the establishment of any measures that are used to manage the risks associated with pathways, and underpin the procedures and standards used to operationally manage imported risk articles. Risk assessments are also a valuable tool for making managerial decisions on the deployment of resources to address risks.

A Quarantine Risk Assessment (QRA) was undertaken in the first year of PAQTS which identified the risk pathways whereby pests and diseases may enter Papua New Guinea, resulting in their establishment and spread within the country. The Assessment also identified some of the pests and diseases that potentially present the greatest risk to Papua New Guinea, and documents the association of these pests with the various risk pathways identified in the course of the Assessment.

While the QRA essentially provided a list of priority commodities and pests and diseases that should be considered further, and imparted NAQIA with skills to undertake risk assessments for these and other potential risks, NAQIA has not as yet demonstrated a systematic and continuously improving approach to assessments.

**Offshore quarantine arrangements**

For some imported goods the level of risk presented may be considered too great to rely on conventional risk mitigation measures. For others inspection and/or undertaking contingency actions for nonconforming goods on arrival may be impractical. In both cases the implementation of offshore quarantine arrangements may be appropriate.

An example of the first case is the importation of nursery stock from countries where a high impact disease is known to occur. The importing country may seek to manage this risk through accreditation of growing facilities and testing laboratories in the exporting country to ensure the causal agent is excluded from the material. Confidence in these accreditation arrangements is often gained through an audit regime of the arrangement by the importing country. No such arrangements were identified for material imported into Papua New Guinea.

An example of the second case would be large machinery for which a pre-inspection arrangement may be entered into whereby the importing country's quarantine authority (or delegate) pre-inspects the equipment in the originating country prior to export. NAQIA has already explored pre-inspection as an approach to managing imports of heavy machinery for the Liquid National Gas Project that is underway there.

## Border

**Screening vessels, goods, people**

Many techniques are used to examine vessels, goods and people upon arrival at seaports, airports, land crossings and international mail exchanges. In order to manage large volumes of goods and numbers of people border quarantine systems can employ risk management techniques to efficiently allocate available resources. Risk management decisions must be based on significant underlying data. An example of risk management based decision making is the risk profiling of passengers at international airports to ascertain where best to deploy resources. Examination of historical seizure data at an airport can be used to determine which flights and types of passenger are most likely to pose a quarantine risk.

As with any system, quarantine activities require continued review to ensure they remain effective. For example, slippage rates may be ascertained from time to time to establish the relative rate of quarantinable goods that are crossing the border without being seized during quarantine interventions.

*Following is an overview of the quarantine import system in place at Lae Wharf*

Risk goods are identified through manual screening of shipping manifests. NAQIA requires manifests at least one week prior to arrival of the ship in order to schedule inspections. Where risk goods will be unloaded at a second port NAQIA will issue a "Hold for Quarantine" notice for the goods and the shipping agent will arrange for a transfer manifest to cover movement of the goods to the second port.

Once the goods have arrived NAQIA will reconcile appropriate documentation (including import permits) and inspect the goods, dunnage and packaging. Inspections are generally carried out in the wharf area as there are very few premises registered for quarantine inspections in Lae.

Once inspection is complete and if the goods conform a permit to land will be issued which allows the goods to be released to the importer. Where goods do not conform to import requirements the option to treat (where a treatment is available), clean (in the case of used vehicles/machinery) or reship are given to importers.

In the case of imported motor vehicles and machinery that are found to be contaminated with dirt or hitchhiker pests there is an option to have the vehicle cleaned at the port prior to being released. The cleaning is undertaken in an area designated for washing containers and is not suitably equipped to allow for thoroughly cleaning underneath motor vehicles. It is suspected that two separate incursions of *Parthenium sp* weed in the Lae port area and 10km outside of Lae City in 2002 may have originated from seed contamination on used motor vehicles.

**Post entry quarantine**

Post entry quarantine (PEQ) is used for high risk plants and animals. While the high risk material has 'entered' (ie. is physically located within) the country it technically remains at the border through security arrangements at PEQ facilities.

Dogs and cats by far comprise the majority of imported animals in Papua New Guinea. Dogs are predominantly imported from Australia and New Zealand for use in the security industry. Cats are also imported from Australia and New Zealand as companion animals. Given the relatively low risk status of cats and dogs from Australia and New Zealand they are housed for 48 hours at the Kilakila National Veterinary Laboratory outside of Port Moresby to undergo checks prior to release.

While there is also a PEQ facility for plant material located at Kilakila there does not appear to be any clear guidance on PEQ procedures for plant material. Discussions with government and industry stakeholders demonstrated perceived differences in levels of NAQIA intervention on planting material and control of the material in experimental growing facilities. NAQIA accreditation and monitoring of experimental growing facilities appears to be minimal.

## Post-border

**Biosecurity planning**

Biosecurity planning involves the identification and prioritisation of exotic threats, along with preparedness planning for the potential arrival of these threats. Preparedness planning is typically conducted as a joint exercise between both government and industry stakeholders and clients, and the complexity and time put into preparedness planning will generally reflect the economic value placed on a particular industry. That is, the level of preparedness planning for a particular pest or commodity will generally be proportional to the perceived level of risk to the industry. Preparedness planning may also include details of management options should eradication of the pest be found to be impractical.

The Quarantine Risk Assessment identified a number of pests and diseases for which further assessment may be necessary. The threats posed by the majority of these pests have yet to be fully qualified and prioritised, allowing for contingency plans to be developed for the highest risk pests. Only a small degree of industry biosecurity planning has been undertaken in Papua New Guinea to date. For example, the coffee industry has developed a contingency plan/strategy for the anticipated arrival of coffee berry borer in Papua New Guinea.

Pre-emptive breeding may also be incorporated into biosecurity planning. Pre-emptive breeding is used to incorporate cultivar resistance through selective breeding so that resistant varieties of crops are available should an incursion occur.

**Surveillance**

Structured surveillance activities underpin border quarantine activities by providing a mechanism to detect incursions of exotic pests before they are able to widely establish and spread. A secondary outcome of structured surveillance is that it provides confidence to trading partners in the pest free status with regard to high risk pests. The decision to undertake targeted or more general surveillance will depend upon the desired outcomes of the surveillance activity.

Achievements in the area of surveillance under PAQTS are readily evident, particularly with regard to animal health. NAQIA has demonstrated strengths in designing and undertaking surveys, along with collecting, packaging and posting samples for the purpose of identification.

Surveillance activities at high risk port areas appear to be less structured than animal health surveys, and there appears to be uncertainty as to who has responsibility for undertaking these surveys.

**Diagnostic capacity**

Diagnostic capacity underpins both quarantine and surveillance activities as it is essential to be able to identify and differentiate potentially exotic organisms from those already present in country. While NAQIA has limited capacity for diagnostics due to limited staff resources it is apparent that overall diagnostic capability within Papua New Guinea is reasonably strong given that other governmental resources with diagnostic capacity are available within country. Furthermore, NAQIA has arrangements with the Animal Health Laboratory in Geelong, Australia, expanding its capabilities to rapidly process and identify animal pathogens.

PAQTS activities provided general identification training for NAQIA and field agricultural staff, and complimented this with train-the-trainer training to enable these staff to share their knowledge and skills with colleagues and stakeholders in the regions. This has served to empower both staff and landowners to become a critical resource in tentatively identifying potentially exotic pests and disease symptoms in the field.

## Legislative arrangements

NAQIA and its Board were established by the National Agriculture Quarantine and Inspection Authority Act 1997 (subsequently referred to as “the Act” or “NAQIA Act 1997”). The 2007 NAQIA Capacity Review Final Report provides details of other legislation that may impact on the responsibilities of NAQIA and identifies areas of potential conflict, duplication and ambiguities in the respective Acts.

The Act is essentially a revision of the existing Quarantine Act 1953 with additional provisions to establish NAQIA and the NAQIA Board, and a revised penalty structure. Quarantine authority for the most part remains unchanged. As far as can be determined in this review the Quarantine Act 1953 has not been repealed.

The Act specifies the objectives and functions of NAQIA and provides authority for NAQIA staff to deliver these functions. In addition to this the Act details the apportioning of costs for quarantine activities and prescribes the penalties for committing offences against the Act. As detailed in the 2007 NAQIA Capacity Review Final Report, and ascertained again during the review of PAQTS, both government and industry stakeholders are concerned that the penalty provisions of the Act do not provide an adequate deterrent to prevent breaches against the Act.

As far as providing authority for quarantine officers to carry out their responsibilities in relation to quarantine the NAQIA Act 1997 appears to be appropriate, but could benefit from revision (as suggested in the 2007 NAQIA Capacity Review Final Report) to encompass risk management in the decision making processes.

With regard to providing authority for domestic surveillance, quarantines and pest management activities the language of the Act is not as clear. The Act specifies the following two functions of NAQIA that relate to surveillance and enforcing domestic quarantines...

> *(i) to regulate the movement of animals and plants from one part of the country to another to control and prevent the spread of pests, diseases, weeds, and any other symptoms; and*
>
> *(j) to undertake and maintain inspection and quarantine surveillance pertaining to pests, diseases, weeds, and any other symptoms on animals, fish and plants within and on the borders of the country...*

In addition, the Minister may, by notice in the National Gazette,…

> *(i) declare a part of the country to be a quarantine area in which a quarantinable disease or pest affecting animals or plants exists, or is suspected to exist;*

However, the Act does not make clear provisions for officers to carry out the functions listed above or to develop and undertake pest management activities in a quarantine area where pests are found to have been introduced into Papua New Guinea. Neither does it give clear authority to quarantine officers to access private property (other than vessels and aircraft) for the purpose of surveillance or pest management. These authorities can, however, be assumed to be captured under sections 30 and 31 of the Act.

Powers to undertake surveillance and pest management activities are perhaps more clearly provided for under the Animal Disease and Control Act 1952 and Plant Disease and Control Act 1953, and the subordinate Animal Disease and Control Regulation 1955 and Plant Disease and Control Regulation 1956 respectively. However, no reference to these Acts is made in the NAQIA Act 1997, nor is it clear whether NAQIA or the Department of Agriculture and Livestock hold responsibility for administering the older legislation. In addition, no reference is made in the NAQIA Act 1997 to equate (or differentiate) titles under this Act to those used in the older animal and plant disease and control legislation.

Therefore, the NAQIA Board is unable to appoint “Inspectors” under the older legislation in the manner that they are able to appoint “Officers” under the NAQIA ACT 1997. Only a person appointed by the Minister as a “Chief Stock Inspector” or “Chief Inspector of Plants” is able to appoint Inspectors under the older legislation for the purpose of surveillance and pest management.

The issue of providing clarification of administrative responsibilities under the respective acts, and of defining the relationship of the NAQIA ACT 1997 to other enactments, may be considered during any future amendments to these Acts.

# Annex 2

# PAQTS performance against ROU and twinning principles

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## PAQTS performance against ROU

This rapid appraisal of PAQTS performance is against Schedule 19 of the Record of Understanding 13848 between AQIS and AusAID dated 15 March 2007.

| AQIS - AusAID Record of Understanding (Schedule 19) Obligations | Observation by the ICR team |
|---|---|
| Outcomes<br>Strengthened institutional capacity through improved: organisational, human resource and technical capabilities (s3.3(1)) | PAQTS did not adequately consider or significantly contribute to strengthening NAQIA's organisational strategic and managerial capabilities (s2.2)<br>Through strengthening technical capabilities, PAQTS strengthened NAQIA's human resource base. PAQTS could have done more to strengthen NAQIA's strategic and management capabilities |
| Improved ability by PNG to prevent incursions of exotic pests and diseases of quarantine concern; detect exotic pests and diseases of quarantine concern; monitor and control exotic pests and diseases of quarantine concern (s3.3(2)) | PAQTS supported NAQIA to develop a cadre of technical and operational expertise that has capability to detect, monitor and control pests and deceases of quarantine concern.<br>PAQTS could have done more to support strategic and management capabilities to enable proactive prevention of incursions, e.g., better long term planning and preparedness, communication, building relationships, leveraging other resources such as in research institutions and provincial DAL's. |
| Improved quarantine capacity to support international market access and trade (s3.3(3)) | PAQTS improved international market access by introducing and providing training on AFAS and Australian standards. NAQIA is ill equipped to provide information or advice to PNG exporters on other countries' import requirements. |
| Transfer of skills from AQIS to PNG counterparts (s3.3(4)) | PAQTS has facilitated transfer of technical knowledge from AQIS to PNG on pests and diseases of quarantine concern. High level strategic and management skills were not transferred. Only limited IT and communication and business management capabilities were transferred. |
| Establishment of an inter-organisational partnership between AQIS and NAQIA in which there is on-going knowledge sharing and dialogue. (s3.3(5)) | An inter-organisational partnership between AQIS and NAQIA at a technical level exists. Limited partnership has been established at senior management (CEO/ Board) levels. |
| Achievements<br>Better understanding of NAQIA's development and capacity needs (s3.4(a)) | There is a good understanding of NAQIA's technical capacity needs.<br>Despite the benefit of a capacity review early in the implementation, PAQTS did not fully address the capacity needs that would shift NAQIA into an efficient and effective organisation. |
| An understanding of whether the twinning scheme is contributing to improved capacity of individual officers in NAQIA and achieving planned outcomes (s3.4(b)) | Individual technical officers who participated in PAQTS activities have improved technical capacity. This includes NAQIA staff as well as some Provincial DAL officers. |
| NAQIA officers working more efficiently in their roles after being twinned with an AQIS officer or participating in a PAQTS activity (s3.4(c)) | Considerable improvements at the technical level. Limited efficiency at strategic/management levels |
| NAQIA officers demonstrating a greater understanding of quarantine management principles, processes and organisational | Some officers have gained a greater understanding of quarantine issues but processes and organisational systems were not developed further, codified or institutionalised. Some application of principles and process |

| AQIS - AusAID Record of Understanding (Schedule 19) Obligations | Observation by the ICR team |
|---|---|
| systems and how to practically apply this understanding to their current work environment in PNG (s3.4(d)). | mostly by operational staff. |
| Effective networks between AQIS and NAQIA officers who have participated in the twinning scheme (s3.4 (e)) | Significant personal networks have been established mostly at the technical level. Less networks have been established at senior management levels |
| Indicative activities<br>Discrete activities agreed and costed annually and submitted to AusAID by 30 June (s4.1) | This was done in time. Activities were identified by AQIS and NAQIA using a structured process. NAQIA could have been more assertive in this process. AusAID could have helped focus on development needs of NAQIA and PNG. AQIS could have made better use of the 2007 Capacity Review and NAQIA Corporate Plan and Business and Operational Plan to select activities. |
| Activities conducted under PAQTS must respond to the needs indentified by NAQIA (s4.2) | This review identified that AQIS did not always respond to the needs of and requests from NAQIA. For example development of an Operational Manual or developing import risk assessments or pest risk analyses as follow-on from QRA would have added more value. |
| AQIS to conduct a review of NAQIA's operational systems in Year 1 including:<br>Review of current role of NAQIA (s4.3)<br><br>Port activities<br>Training needs assessment<br><br>Border inspection; and manual for inspections and treatment | <br><br>A capacity review was conducted that addressed NAQIA's role and capacity<br><br><br>A capacity review assessed NAQIA training needs. It mostly focused on technical skills needs<br>No evidence is available to suggest a review of surveillance border inspection – operations systems were conducted through PAQTS. However several training sessions covered issues of border inspection including disease reporting, investigation and data management and NAQS supported activities related to this area. |
| Prioritised list of activities to address capacity development needs of NAQIA (s4.4) | A Capacity Review recommended capacity development activities. The recommendations were prioritised. The priorities were mostly technical capacity even though 35 of the 73 recommendations made in the Capacity Review addressed management and strategic needs. |
| Other activities<br>Supporting NAQIA to plan, design, implement and evaluate training and development program (s4.5)<br><br>Inter-agency mentoring and providing facilitative work placements<br><br>Technical Assistance<br><br>PAQTS Annual Workplans to include needs and recommendations for activities and budget | <br>PAQTS has done well in terms of training NAQIA to deliver training. It could have done more mentoring in terms of developing programming capacity<br><br>Some placements were facilitated for operational and technical staff. NAQIA staff indicate that more could have been done. Limited senior management/corporate placements were offered to NAQIA<br><br>The twinning delivered good value for money<br><br>Adequate in terms of identifying technical needs |
| Significant events given priority | AQIS was able to identify, prioritise and act on significant events. For example the detection and response to pathogenic Varroa mites on European honey bees in the Eastern Highlands Province in 2007/2008 |
| Management and coordination (s5)<br><br>Joint responsibilities<br>Assessing PAQTS and making decision on extension (s5.1(a)) | <br><br><br>Both AQIS and AusAID assessed PAQTS and a decision to extend it was made and an extension agreed to 30 June 2010 |
| AQIS responsibilities (s5.2)<br>Timely implementation of the twinning scheme (s5.2(a)) | <br>At activity level, activities undertaken were delivered in a timely way.<br>In terms of strategic activities for organisational change, activities were not delivered during the duration of the program<br>M&E framework and implementation was inadequate socially in measuring and providing feedback on outcome/ goal level performance |

| AQIS - AusAID Record of Understanding (Schedule 19) Obligations | Observation by the ICR team |
|---|---|
| Planning, organising and funding the costs using the funds provided by AusAID (s5.2(b)) | There were no issues regarding planning, organising and funding the scheme. |
| Seeking AusAID approval of the PAQTS Annual Workplans and proposed changes (s5.2(c)) | AQIS was proactive in seeking AusAID approval of PAQTS Annual Workplans |
| Liaising with NAQIA to coordinate and manage twinning activities (s5.2(c)) | AQIS liaised closely with NAQIA on PAQTS activities, e.g., monthly meetings. However, AQIS did not always deliver what NAQIA wanted. |
| Keeping AusAID informed of activities (s5.2(c)) | AQIS kept the program officer in AusAID informed of activities.<br>Discussions at higher levels of the two organisation on progress and direction may have improved the focus on the need for NAQIA organisation change and leadership support |
| Providing all inputs for management, logistics (including security) training and capacity building, preparation of annual workplans, the development of and M&E framework, facilitating short-term placements of NAQIA staff to AQIS (s5.2(d) and s4.12) | Provision of inputs for management, logistics and training was adequate.<br><br>Inputs on M&E were inadequate. |
| M&E responsibilities (s8)<br>Develop an M&E framework for agreement with AusAID and NAQIA<br>Include an M&E component for each twinning activity<br>Remedy any deficiencies formally endorsed by AusAID as requiring attention, identified through evaluations | The M&E framework developed for endorsement by AusAID and NAQIA did not enable review of PAQTS output-to-purpose<br><br>Specific twinning activities included monitoring at input and activity level and some output level data but no outcome or purpose level monitoring was conducted.<br><br>No evaluation was planned or conducted beyond the 2007 Capacity Review, which served as a useful baseline evaluation of capacity. |
| AusAID responsibilities (s5.3)<br>Provide advise such as program implementation, development principles and capacity building to AQIS on request<br><br>Approving PAQTA Annual Workplans and Progress Reports and budgets<br>Disbursing funds against agreed milestones (from the Annual Workplans) | AQIS did not request, nor did AusAID provide, advice on development principles. This was a missed opportunity to orientate the program more towards higher level organisational development needs and PNG agricultural needs.<br><br>AusAID approved annual workplans and progress reports and budget in a timely way.<br><br>AusAID disbursed funds in a timely way. |

# PAQTS performance against twinning principles

This rapid appraisal of PAQTS performance is informed by twinning principles compiled by AusAID from an international literature review[1].

| Principles and Practices for Effective Twinning | |
|---|---|
| Principles/Practices | PAQTS Performance |
| Thorough pre-project analysis. Analysis of the recipient organisation's needs, together with what changes can reasonably be brought about by a twinning program is needed before embarking on one. | The 2007 Capacity Review and Quarantine Risk Assessment did this well. |
| Selection of appropriate partners. This should be organisations with similar mandates and societal responsibilities. Features to consider are:<br>- Similar field of functions, tasks, and structure<br>- Technology/system compatibility<br>- Competence and capacity of the supplier<br>- Supplier's experience with development issues. | AQIS was an appropriate twinning partner for NAQIA but needed support to compensate for limited experience with development issues. |
| Support from top management. | It is not clear that AQIS top management supported PAQTS for other than financial reasons. Top management from NAQIA supported PAQTS. |
| Commitment. | AQIS technical staff are committed to PAQTS. Some NAQIA managers and most staff are committed to change and improvement. |
| Partnership and exchange. The 'supplying' organisation should also see benefits for itself, not just for the 'receiving' organisation. There should be the potential for an equal partnership and a two way exchange. | AQIS sees clear benefits for Australia as well as the financial support for a small number of technical officers so there is potential for a two way exchange. The organisational arrangements did not allow an equal partnership. |
| Attitudes and values. | The attitudes and values governing the PAQTS relationship included: mutual respect, honesty, professionalism, recognition and valuing of differences. |
| Duration. The relationship and program should be long term; the relationship is expected to continue once the program ends. | Although PAQTS was relatively short, it built on earlier partnerships (eg NAQS). There are clear reasons to continue some sort of partnership. |
| Flexibility. Work plans should be flexible, able to adapt to unpredicted factors and to match the recipient's needs as their capacity evolves over time. | Work plans were developed annually but seem to have been driven by AQIS. NAQIA staff and Board complained that many of their requests were not actioned in the work plans. |
| Modes of activity. Various modes of activity should be available to ensure sustainability. | More than 75% of the PAQTS budget was invested in activities conducted as training. No true twinning took place. Some reciprocal visits were funded. |
| Availability of professional and logistical support. Resources are needed both in PNG and Australia to support short term advisers and placements. | Professional and logistical support was available in NAQIA and AQIS as well as from AusAID. |
| Tailored solutions. The purpose should be to help the 'receiving' partner develop their own solutions; not to copy the developed country partner. | Most solutions were tailored to PNG circumstances but the problems they addressed were not always a priority for NAQIA. |
| Professional and coordinated operational practices. Practices such as developing terms of references for activities, reports upon completion etc should all be agreed between the partners and become standard operating tools. | Operational practices such as activity proposals, reports and budgets were mostly prepared by AQIS. The Varroa surveillance activity is a good example prepared by NAQIA. |
| Advisers need a blend of technical and interpersonal skills. Twinning partner staff acting as advisers need a blend of technical and interpersonal skills. | AQIS technical staff were competent advisers for the activities they selected. The activities selected were not always a priority for NAQIA. |
| Transparency of selection. Both advisers and people for work placement in Australia should be selected in a transparent and equitable way. | NAQIA participants in training were sometimes selected at the last minute and without strategic consideration of how they could use the learning. |
| Clearly defined expectations. The recipient institution needs a clear idea of what it wants from a twinning relationship and the supplying institution should be clear on what it is able and willing to offer. | The NAQIA Corporate Plan and Business and Operational Plan 2008-2012 sets out needs. The 2007 Capacity Review set out opportunities. None of these resources informed the prioritisation of activities for support by PAQTS. |

[1] AusAID (2009) Principles and practices for effective twinning.

# Annex 3
# SWOT Analysis

# Annex 3: SWOT Analysis

| Strengths | Weaknesses |
|---|---|
| • Organisational governance in place with NAQIA Act and related budget measures<br>• Corporate Plan and Business/Operational Plan (2008-2012) provides sound basis for growth<br>• 2007 Capacity Review led to new staffing plan, recruitment and increased staff complement<br>• Quarantine Risk Assessment as foundation for strategic planning and import risk assessment<br>• Capacity to raise own revenue and proactive implementation of cost-recovery mechanisms<br>• Strong relationship between AQIS and NAQIA<br>• Technical skills strengthened within current staffing limitations<br>• Animal health technical team competent and decentralised<br>• Responsive to incursions and able to engage & maintain cooperative relationships with affected parties (eg. Newcastle disease outbreak)<br>• Reasonable level of engagement with non-paying stakeholders (ie. other government agencies)<br>• Ability to develop well-reasoned and justified technical submissions<br>• Ability to plan and manage logistics for field work<br>• Established mechanisms for recruiting and training potential staff in final year university programs (use of on-the-job training for students to attract new graduates for recruitment to NAQIA) | • Strategic and managerial capacity remains weak and limits NAQIA influence at national level<br>• Staff numbers significantly less than what is needed<br>• Lack of proactive customer focus<br>• Lack of systematic and skilled communication, awareness-raising and outreach<br>• Limited outreach to engage with industry (fumigators, customs agents, other GoPNG agencies)<br>• Business procedures and systems improving but still below international good practice<br>• Centralised permit system can disadvantage importers<br>• Limited use of information technology to increase efficiency and outreach<br>• Uneasy relationship between NAQIA and DAL<br>• Focus on first mission (animal, plant and human life) at expense of second mission (supportive trade facilitation services)<br>• Limited focus on prevention and response planning<br>• Limited engagement and direction provided to NAQIA staff (eg. not advising them in advance of training)<br>• Minimal procedural direction for staff<br>• Limited relationship with NARS<br>• Poor reach at provincial and district levels |
| **Opportunities** | **Threats** |
| • Strengthen management capabilities<br>• Strengthen strategic capabilities<br>• Strengthen procedural capabilities further<br>• Use information technology to increase efficiency and enhance stakeholder outreach/communication<br>• Establish operational manual and streamlined procedures to increase efficiency<br>• Lead development and trial of proactive response plans for priority threats such as coffee berry borer<br>• Recruit new staff and provide in-service training to retain good staff<br>• Create and foster a professional environment that values and rewards staff to increase staff integrity<br>• Decentralise plant protection team to ensure proactive prevention and early warning of incursions<br>• Work with NARS to develop pest risk analyses for priority crops and pests/diseases<br>• Co-regulation – reduction in fees, promote industry ownership and responsibility, increased flexibility for industry, complements human resource constraints<br>• Review all biosecurity legislation to make sure it is appropriate for PNG economic context<br>• Develop export controls (legislation) to protect existing and new markets<br>• Develop Quarantine Entry notification system to help automate the identification and scheduling of inspections | • Significant gap between current staffing and human resources needed to deliver functions<br>• Inability to recruit and retain suitably qualified staff<br>• Uncompetitive costs for permitting<br>• Incursion of high risk pests of social significance including Coffee Berry Borer<br>• Distrust between DAL and NAQIA<br>• Retirement of current management team before effective succession is planned and implemented<br>• Corrupt practices relating to issue of permits may undermine biosecurity and erode public perceptions of NAQIA integrity<br>• Potential to over regulate exports thereby not performing a facilitation role<br>• Use of AFAS as a substitute for good practice, and a move away for support of the Montreal Protocol |

# Annex 4

# Evaluation schedule and stakeholders consulted

# Annex 4: Evaluation schedule and stakeholders consulted

| Day / Date | Time | Details / Venue |
|---|---|---|
| Port Moresby | | |
| Friday 13th | 08:00 – 09:00 | Briefing with AusAID PNG Quality Branch, review Evaluation Plan |
| | 09:30 – 11:30 | AQIS and DAFF: Wendy Lee – Program Coordinator SPS, Dr Andrew Moss – Senior Policy Advisor, Nathan Reid – Offshore Development, Dr Bart Rossel – Senior Plant Scientist, Dr James Wallner – Senior Veterinary Officer |
| | 13:30 – 15:00 | ACIAR Research Program Managers: Dr Gamini Keerthisinghe and Dr C. Lemerle. |
| Wednesday 18th | 8.00 - 8.30 | Mukii's Security Brief with Sue Watts |
| | 08.30 – 09.30 | AusAID Briefing – Andrea Cole |
| | 10.00 – 11.30 | Agricultural Research Development Support Facility - Dr Miok Komolong, Jacqui Wright; Maxie Dominic; Peter Ross |
| | 1.30 – 2.30 | Karl Davis, Branch Manager, Agility Logistics and Nigel Baloiloi, President of the PNG Customs Broker Association |
| | 3.30 – 4.00 | Mr Ron Glanville QDPI |
| | 4.00 – 3.30 | Dr Robert Hedlefs QDPI / ACIAR |
| Thursday 19th | 08.00 – 08.30 | Cath Gill, DPM and Policy Coordinator, AusAID |
| | 09.00 – 10.30 | NAQIA, Managing Director Andrew Yemanea |
| | 10.30 – 11.30 | Mr Pere Kokoa, Chief Plant Protection Officer, NAQIA |
| | 11.30 – 12.30 | John Susub, Operations Manager, PNG Pest Control |
| | 3.00 – 4.00 | Roy Peni, General Manager, Operations, Civil Aviation Authority |
| Friday 20th | 08.30 – 9.30 | Vele Kagena, Deputy Secretary Corporate Services and Francis Daink Deputy Secretary Technical Services both of Dept of Agriculture & Livestock |
| | 10.00 – 10.30 | Alphonse Bannick, Chief Plant Protection Officer, NAQIA |
| | 11.00 – 12.00 | David Kanawi, General Manager Operations/Technical, NAQIA |
| | 1.30 – 2.30 | Veronica Mangi at NARI Plant Health Laboratory Kilakila |
| | 3.00 – 4.30 | Dr Peter Wai'in, Animal Health Laboratory Manager, Kilakila |
| Goroka | | |
| Monday 23rd | 08.30 – 9.30 | Paskalis Ominipi, Animal Health Inspector |
| | 10.00–11.00 | Mr R. Lutulele, Manager Production & Supply, Fresh Produce Development Agency |
| | 11:30 – 12:30 | Coffee Industry Corporation leaders |
| | 1.00 – 2.00 | Moizor Warigi, Daisy Kiniafa, Provincial Cash Crop Officers, DAL |
| | 2.30 – 3.30 | Bubia Muhuzu, Provincial DAL Advisor |
| Tuesday 24th | 9.30 | Leave GKA and drive to Ramu |
| | 11.00 - 12.00 | Jonny Wemin, a/Head of Research, Ramu-Agri Industries |
| | 3.30 - 4.30 | NARI - Dr Birte Komolong and Dr Workneh Ayalew |
| | 4.30 - 5.00 | Travel from NARI to Lae |
| Lae | | |
| Wednesday 25th | 9.00 – 9.45 | Meeting with Mathias Geoctau, a/Port Manager, PNG Ports |
| | 10.00 – 11.00 | Meeting with Leka Gure, Director and Wally Gure, Olkain Pest Management |
| | 11.15–12.00 | Meeting with Ottu Giria, DAL Provincial Program Advisor & Amos Buieba, Food Crops Coordinator, Provincial Dept of Primary Industries |
| | 1.00 – 2.00 | Meeting with Martin Paina and Heni Nigani, Snr Animal Health Inspectors, NAQIA |
| | 2.00 – 3.00 | Meeting with William Sawang, A/Snr Agriculture Quarantine Officer, NAQIA |
| | 3.00 – 4.00 | Meeting with Dr Gibasa Asiba, Regional Veteran Officer, NAQIA |
| Thursday 26th | 9.00 – 10.00 | Meeting with Lae Chamber of Commerce Executive Council. Alan McLay President Lae Chamber of Commerce |
| | 10.30 - 11.30 | Meeting with Geoff Fahey, Agri-business Manager, Trukai Industries |
| | 1.30 – 2.30 | Meeting Gariba Dunbao, Unitech |
| | 1630 - 1945 | Depart Lae for POM |
| Port Moresby | | |
| Friday 27th | 9.00 - 10.00 | AusAID Debrief – Andrea Cole, Peta Mills |
| | 10.30 - 11.30 | NAQIA debrief – David Kanawi, Alphonse Bannick |
| | 11.30 – 13.00 | AusAID discussion to complete mission and prepare ICR report |

| Institution | Person | Location |
|---|---|---|
| DAFF/AQIS | Wendy Lee – Program Coordinator SPS | Canberra |
| | Dr Andrew Moss – Senior Policy Advisor<br>International Programs and Disease Intelligence, Office of Chief Veterinary Officer | |
| | Nathan Reid – Offshore Development, Import Clearance | |
| | Dr Bart Rossel – Senior Plant Scientist<br>Northern Australia Quarantine Strategy | |
| | Dr James Wallner – Senior Veterinary Officer<br>International Programs and Disease Intelligence, Office of CVO | |
| ACIAR | Dr Gamini Keerthisinghe, Research Program Manager<br>Soil Management and Crop Nutrition | Canberra |
| | Dr Caroline Lemerle, Research Program Manager<br>Agricultural Systems Management | |
| Q DPI | Ron Glanville, Biosecurity Chief Veterinary Officer | Brisbane |
| | Robert Hedlefs, Principal Project Officer - Tropical Biosecurity | |
| NAQIA | Andrew Yamanea, Managing Director | Port Moresby |
| | David Kanawi, General Manager - Operations/Technical | |
| | Alphonse Bannick, Chief Agriculture Quarantine Officer | |
| | Pere Kokoa, Chief Plant Protection Officer | |
| | Peter Wai'in, Manager National Veterinary Laboratory | |
| ARDSF | Jacqui Wright, Team Leader Agricultural Research Development Support Facility | |
| | Miok Komolong ARDSF | |
| | Maxie Dominic ARDSF Fresh Food Advisor | |
| | Peter Ross AIGS Coordinator | |
| AusAID | Dave Vosen, Counsellor Policy and Coordination | |
| | Andrea Cole, First Secretary Rural Development | |
| | Catherine Gill, First Secretary Strongim Goverman Program | |
| | Hazel Mamae, Senior Program Officer, Rural Development | |
| Agility Logistics | Roy Lindsay, General Manager PNG/Pacific Islands | |
| | Karl Davis, Branch Manager | |
| TNT | Nathaniel Baloiloi, Customs Manager TNT (and President PNG Customs Brokers Association) | |
| PNG Pest Control | John Susub, Group General Manager | |
| | Sam Nimagu, Operations Manager | |
| DAL | Vele Kagena, Deputy Secretary - Corporate Services | |
| CAA | Roy Peni, General Manager Operations, Civil Aviation Authority | |
| | Peniel Pitalot, Special Projects Manager | |
| NAQIA | Paskalis Ominipi, Animal Health Inspector | Goroka |
| FPDA | Robert Lutulele, Manager Production and Supply | |
| CIC | Ellison Pidik, General Manager Industry Operations Division | |
| | Abel Philemon, Planning M&E Unit | |
| | Sam Menanga, Manager – Industry Regulations and Compliance | |
| EHP DAL | Bubia Muhuzu, Provincial DAL Advisor | |
| | Moizor Warigi, Provincial Cash Crop Officer | |
| | Daisy Kiniafa, Provincial Cash Crop Officer | |

| | | |
|---|---|---|
| Ramu | Kaile Korowi, Agronomic Research Ramu Agri-Industries | Lae |
| | Andy ??, Chief Plant Protection Officer Ramu Agri-Industries | |
| NARI | Birte Komolong, Plant Physiologist | |
| | Workneh Ayalew, Animal Production Specialist | |
| PNG Ports | Mathias Geoctau, Acting Port Manager PNG Ports Corporation Lae | |
| Olkain | Wollie Gure Director Olkain Pest Management | |
| DAL Lae | Ottu Giria DAL Provincial Program Advisor Provincial DPI | |
| | Amos Buieba, Food Crops Coordinator Provincial DPI | |
| NAQIA Lae | Martin Paina, Senior Animal Health Inspector | |
| | Heni Nigani, Senior Animal Health Inspector | |
| | Martin Pachichi, Regional Agriculture Quarantine Officer | |
| | William Sawang, A/Senior Agriculture Quarantine Officer | |
| | Gibasa Asiba, Regional Veterinary Officer | |
| CIC | Marie Kiliawi, Senior Export Control Officer | |
| | Rose Kalua, Senior Quality Control Officer | |
| Lae Chamber of Commerce | Alan McLay, President Lae Chamber of Commerce | |
| | Geoff Fahey, Chair NAQIA Board and Trukai Agribusiness Manager | |
| | Doug Preston, Operations Manager Milling Tablebirds | |
| UniTech Lae | Dr Gariba Dunbao, Animal Husbandry Agriculture Department | |

# Annex 5

# Terms of reference

# Annex 5: Terms of reference for MTR

## 1. THE SERVICES

The Contractor shall, as team leader, provide the following Services:

(a) participate in consultations including:
  i. briefing with AusAID in Canberra and Port Moresby;
  ii. meetings with key interlocutors including relevant partner government representatives, the PNG National Agriculture Quarantine and Inspection Authority (NAQIA), Australian Department of Agriculture Fisheries and Forestry (DAFF), Biosecurity Services Group and Northern Australia Quarantine Strategy team, Queensland Primary Industries and Fisheries (QPIF), Australian Centre for International Agricultural Research (ACIAR), PNG Department of National Planning and Monitoring, PNG Department of Agriculture and Livestock, PNG's primary agricultural research and development organisations, Rural Industries Council and other relevant private sector stakeholders; and
  iii. evaluation briefing with AusAID at the completion of an Independent Completion Report (ICR).

(b) undertake a desk study of all (but not limited to) documents listed in the Reference Documents in the ToRs;

(c) manage the development of an Evaluation Plan for AusAID approval. The Evaluation Plan will:
  i. be in accordance with the ICR ToRs;
  ii. specify the evaluation approach;
  iii. detail the proposed evaluation questions and audience. The evaluation questions will need to capture relevant information to meet outputs Clause (d) and Clause (e);
  iv. include a feasible timeline for undertaking the ICR; and
  v. specify team member roles and responsibilities.

(d) evaluate the Papua new Guinea – Australian Quarantine Twinning Scheme (PAQTS). The evaluation will:
  i. be undertaken in accordance with the AusAID approved Evaluation Plan in Clause (c);
  ii. assess to what extent the PAQTS has achieved its objectives;
  iii. assess PAQTS against the eight evaluation criteria defined in AusAID's Guideline: *Manage the Independent Evaluation of an Aid Activity*, which includes the five OECD/DAC criteria of relevance, effectiveness, efficiency, impact and sustainability, and the three additional AusAID criteria of monitoring and evaluation, gender equality and analysis and learning; and
  iv. consider:
    - lessons learned of relevance to future options for Australian support;
    - the adequacy of the existing RoU with respect to priorities and resourcing;
    - technical support options, including from both the federal and Qld state quarantine agencies and other aid program activities such as the Strongim Gavman Program; and
    - integration of NAQIA into the Agricultural Research and Development Support Facility (ARDSF).

(e) lead the preparation of an aide memoire following the evaluation mission and prior to leaving PNG presentation to government stakeholders and the Minister Counsellor for consideration;

(f) draw on the above to lead and manage the drafting process for the draft ICR for PAQTS, including the redrafting of documents after feedback from AusAID and stakeholders. The report will:

  i. be written in accordance with the reporting requirements outlined below; and

  ii. synthesize and discuss the results of the evaluation of PAQTS.

(g) present the ICR at a peer review as per AusAID requirements and finalise documents with feedback from peer review;

(h) produce a final ICR for acceptance by AusAID. The final ICR will revise the draft ICR in Clause (f) to include comments from AusAID as per Clause (g); and

(i) be responsible for the overall management and direction of the evaluation's activities, representing the evaluation team and leading consultations with government officials and other stakeholders.

## 2. REPORTING REQUIREMENTS

The Contractor must provide the following reports within the stated timeframes and in the format indicated:

(a) an *Evaluation Plan* for agreement by AusAID submitted to AusAID electronically in word format after Canberra briefing and before the mission commencement;

(b) an Evaluation Mission Aide Memoire – to be presented to AusAID and GoPNG before departure from PNG;

(c) Draft Independent Completion Report for consideration by AusAID within seven working days of completion of the mission to PNG to the Evaluation Officer, Performance Quality and Review Section, AusAID Canberra. Feedback from AusAID will be provided within two weeks of receiving the draft report, followed by a peer review at which the team leader will present the ICR;

(d) Independent Completion Report (final document incorporating advice from the peer review) to be provided by 31 January 2009 to the Evaluation Officer, Performance Quality and Review Section, AusAID Canberra; and

(e) the draft and final ICR will be submitted electronically in Microsoft Word 2003 format and be in accordance with AusAID's Guidelines for independent Completion Reports. The main body of the report will be a maximum of 25 pages. Key contents of the report are:

  (i) an executive summary (should be able to be read as a stand alone document);

  (ii) background on the aid activity;

  (iii) an outline of the evaluation objectives and methods;

  (iv) findings against the evaluation questions;

  (v) evaluation criteria ratings; and

  (vi) conclusions and recommendations.

All reports must:

(b) be provided in accordance with the specification under Standard Conditions clause headed **Reports**;
(c) be accurate and not misleading in any respect;
(d) be prepared as directed by AusAID;
(e) be provided in the format and on the media approved or requested by AusAID;
(f) not incorporate either the AusAID or the Contractor's logo;
(g) be provided at the time specified in this Services Order; and
(h) incorporate sufficient information which allows AusAID to monitor and assess the success of the Services in achieving the objectives of AusAID's policy framework.