

Secretary of the Pacific Community
Pacific Plant Protection Organisation

PPPO ePhyto Implementation Plan
2020 - 2022

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Project Title

Implementation of the International Plant Protection Convention (IPPC) Generic ePhyto National System (GeNS) in the Pacific Countries.

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Scope

This activity will provide funding for two financial years to employ a Regional ePhyto Coordinator, who will be located in Fiji, to provide expert advice and support to Pacific countries in implementing GeNS. Funding will be arranged through the Secretary of the Pacific Community (SPC)/Pacific Plant Protection Organisation (PPPO) secretariat. Work Plans will be developed for each participating country and workshops, industry awareness/training sessions and staff development will be conducted to support the country implementing the GeNS. The prospective Pacific countries for GeNS implementation are listed in Appendix 1.

Business need

Many developed countries have expressed interest in electronic phytosanitary certification because they have the resources required for setting up infrastructure and the capacity development to implement the ePhyto solution. However, developing countries similar to those in the Pacific are often at a disadvantage when it comes to adopting these technological advances and continue to rely on paper certificates. Support for Pacific countries to implement GeNS effectively can help Australia and New Zealand to open up efficient market access opportunities at a reduced operational cost.

ePhyto enables governments to share phytosanitary data well in advance of a commodity's arrival. Importing countries save time in determining compliance and can address any biosecurity or documentary issues directly with the exporting authority. This will help to pre-plan their inspections, logistics and testing.

The pre-planning of on-arrival activities of a commodity before the arrival of goods will help to identify the National Priority Plant Pests of concern in advance and arrange mitigation measures. The alignment of GeNS against national biosecurity concerns will mitigate pest risks associated with plant health thereby managing such risks offshore.

Furthermore, ePhyto removes the process of validating a paper certificate's authenticity, which results in holding the goods at the port of arrival for several hours or days. For perishable goods, such time delays could mean the difference between a tradable commodity and spoiled produce. The use of ePhyto will facilitate the release of goods with minimal delays (faster clearance) thus fulfilling importing country requirements by safeguarding of goods. The faster clearance of goods from the port of import will also help to regulate the transport of goods to warehouses in a timely manner and better manage the supply chain of partner countries in parallel with domestic capabilities.

The IPPC started to engage with the second tranche of countries for ePhyto implementation in 2020. The Pacific countries have significant potential for the implementation of GeNS in the future as they currently use paper phytosanitary certificates to facilitate trade.

Problem Statement

The IPPC has initiated an innovative project called the ePhyto Solution. The ePhyto solution aims to modernise the global phytosanitary certification process and holds significant potential for trade facilitation.

ePhyto is the electronic version of a phytosanitary certificate in XML format produced in accordance with the International Standards for Phytosanitary Measures (ISPM) 12. All the information contained in a paper phytosanitary certificate is also included in the ePhyto. ePhytos can be exchanged electronically between countries or alternatively printed on paper.



Of the total exporters in the Pacific, exporters conducting business within the Pacific countries amount to 7% with exporters outside the Pacific Islands is 32% (Agricultural Exporters are 43% of this). The major export destinations are Australia, New Zealand North America, Central & South America, Europe, Asia, Japan and China. SPC provides technical, advisory, statistical and information support to its member governments and administrators.

Developing countries in the Pacific are often at a disadvantage when it comes to adopting technological advances and continue to rely on paper certificates. Many Pacific countries share common hurdles such as funding, infrastructure, personnel and training. The successful implementation of GeNS in the Pacific will require a consolidated approach by Australia and New Zealand to support the ePhyto Solution. This approach may lead to better regulation of plant exports and imports across the Pacific by being able to send the phytosanitary certificates to countries in advance before the consignments have arrived. This process will also provide efficient market access opportunities at a reduced operational cost.

ePhyto enables government to government exchange of phytosanitary consignment data prior to arrival of consignments. Importing countries save time in determining compliance and can address any biosecurity or documentary issues directly with the exporting authority. This will help to pre-plan their inspections, logistics and testing.

Objectives

This project will implement GeNS; expand trade potential; minimise phytosanitary risks and regulate uniformity of trading processes in the Pacific countries. The project will seek financial support for the PPPO from the Department of Foreign Affairs and Trade (DFAT), Australia and the Ministry of Foreign Affairs and Trade (MFAT), New Zealand.

The high-level objectives of this project are to:

- Introduce GeNS to Pacific countries that do not have national systems to produce and receive ePhytos.
- Develop and deliver operational training and capacity-building programs for implementation of GeNS in the Pacific to ensure countries are able to exchange phytosanitary certificates in an innovative, cost effective and globally harmonised way with all the countries connected to Hub.
- Improve opportunities for Pacific farmers and exporters to trade within the Pacific, potentially under the Pacific Island Countries Trade Arrangement (PICTA), and access markets in Australia, New Zealand and other countries, thereby boosting incomes of rural communities.
- Reduce non-compliance for Pacific countries when accessing international markets, reducing wastage and remedial costs, and boosting the return to rural communities and small exporter businesses through targeted activities in collaboration with NPPOs by regulating challenging import pathways.
- Ensure issues related to agricultural market access and biosecurity of Pacific countries are appropriately coordinated, prioritised and addressed via GeNS implementation.
- Develop capacity in the Pacific countries for the exchange of phytosanitary certificates electronically in an innovative, cost effective and globally harmonised way with all the countries connected to the Hub via GeNS.
- Undertake benefit analysis of GeNS before and after implementation. The benefits need to be measured across all the countries.



Strategic Organisational Objectives of SPC / PPPO linking with impact of ePhyto

a. *Strengthen engagement and collaboration with members and partners.*

ePhyto will provide opportunity to SPC to initiate and coordinate partnerships between members to facilitate intra-regional collaboration with Australia and New Zealand, and sharing skills in key areas. It will also strengthen the existing trading partnerships of member countries, including with the Council of Regional Organisations in the Pacific (CROP) agencies; build new relationships, and contribute to strengthening regional mechanisms to secure efficient trade.

b. *Strengthen technical and scientific knowledge and expertise*

SPC will engage with the Pacific countries in the capacity development of scientific and technical strengths in phytosanitary certification in accordance with the International Standards for Phytosanitary Measures (ISPM) 12. The IPPC and the United Nations International Computing Centre (UNICC) will directly engage in enhancing technical expertise of its members by holding ePhyto workshops and training programs in various regional areas. This approach will help members to enhance their export and import capabilities by facilitating trade through a secure, uniform, multinational trade platform; there by improving efficiency and productivity. For instance, exports via GeNS will help Pacific countries to engage in trade with all the countries that are connected to the Hub by providing them with an opportunity to explore and establish ePhyto networks in other regional areas of the world.

c. *Address members' development priorities through multi-disciplinary approaches.*

ePhyto will provide better advantage for the development of food security in the region by minimising spoilage; spread of pests and diseases through strengthened export and import processes. It may also help to utilise youth to engage in Information and Communications Technology (ICT) projects linked to GeNS and equally engage both men and women (gender equality) in electronic phytosanitary certification.

d. *Improve planning, prioritisation, evaluation, learning and innovation.*

The implementation of ePhyto in the Pacific will provide capability to participating pacific countries for better management of their trade. It will strengthen the early planning, prioritisation, evaluation of efficiencies associated with the risk assessment of export and import consignments sent via GeNS to regulate resources, staff etc. Such action will improve the effectiveness of SPC's work with members on multinational trade.

e. *Enhance the capabilities of our people, systems and processes.*

The improved management of trade via GeNS will assure the sustainability of SPC's functions relating to agriculture, food security and gender equality. The GeNS will also help to manage phytosanitary risks in advance to organise support services before consignments arrive, which will improve financial and risk management aspects of member countries that underpin efficient service delivery and organisational sustainability.

Outcomes

The anticipated outcomes resulting from the project delivering implementation of GeNS in the Pacific are listed below in the order of priority:

- Increase harmonisation, sustainability, uniformity in exchange of phytosanitary certificates.
- Minimise domestic and regional biosecurity concerns of countries by monitoring and managing trade in advance before the arrival of consignments.
- Enhance efficient trade with minimal phytosanitary risks by hosting workshops on the ePhyto Solution to foster an environment of trade co-operation between the Pacific countries.



- Regulate business processes of participating countries in the Pacific to maximise efficient trade.
- Enhance future potential to tap into new markets by Pacific countries with the use of ePhyto thereby improving international market access and trade.

Outputs

The above outcomes will lead to the following outputs after project initiation:

1. To implement GeNS with the Pacific countries to modernise trade.
2. To facilitate organising and better planning of trade expansion in the region by evaluating statistical GeNS reports of import/export trade.

Milestones

The Project Manager appointed by the SPC has to finalise the detailed milestones of the GeNS implementation plan for the Pacific countries after engagement.

Key milestones	Due Date	Progress Payment	Progress as at December 2020
Secure funding from DFAT/MFAT	July 2020	Not applicable	DFAT has approved AUD 220,000 for SPC. MFAT also organised funds
Endorsement of Pacific ePhyto Proposal from SPC Ex-Co	June 2020	Not applicable	The proposal has been endorsed by the PPPO in June 2020 but the milestones need to be further reviewed after the appointment of the Regional ePhyto coordinator.
Commence the project	December 2020	Applicable	Sent to SPC by DFAT for the first year in December 2020.
Recruitment of Regional ePhyto Coordinator	January 2021	Not applicable	In progress.
Develop a regional project plan and prioritise four new countries to implement GeNS within the first year (2021)	February 2021	Not applicable	Not yet undertaken.
Contact NPPOs of participating countries and conduct readiness assessments to identify their infra-structure, training and capacity building requirements	February 2021	Not applicable	Not yet undertaken.



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Key milestones	Due Date	Progress Payment	Progress as at December 2020
Develop GeNS training and capacity building packages with feedback from DAWE and MPI	April 2021	Not applicable	Not yet undertaken.
Set up GeNS in the first set of countries after checking their suitability in the readiness assessments	June 2021 ¹	1 July 2020	Not yet undertaken.
Conduct Benefit analysis surveys of exporters, importers and NPPOs of Pacific countries before GeNS implementation	June 2021	Not applicable	Not yet started
Deliver GeNS training and capacity building to NPPO staff & exporters of participating countries	July - August 2021	Not applicable	Not yet started
Exchange test ePhyto via GeNS UAT with New Zealand, Fiji, Samoa and Australia	September 2021	Not applicable	Not yet started
Collate a report after testing GeNS to identify enhancements/technical issues from countries	October 2021	Not applicable	Not yet started
Identify PPPO member countries to roll out GeNS in 2022	October 2021	Not applicable	Not yet started
First set of 4 countries to exchange ePhyto certificates in GeNS production	November 2021	Not applicable	Not yet started
Final report to PPPO Exco and DFAT	December 2021	Not applicable	Not yet started
Pacific ePhyto Workshop	2022	Not finalised	Not yet planned
Implement GeNS in other ten countries (second group)	January 2022	1 July 2021	Not yet started
Conduct Benefit analysis surveys of exporters, importers and NPPO of Pacific countries after GeNS implementation.	30 June 2022	Applicable	Not yet started



United Nations Sustainable Development Goals (SDG)

The countries in the South West Pacific region continues to experience significant economic challenges. Over 20 per cent of people in most Pacific Island Countries live in hardship and are unable to meet their basic needs (World Bank, 2014). Unfortunately, the economic growth is not keeping pace with population growth in much of the Pacific. Distance and weak infrastructure make international trade expensive, but small domestic markets and narrow production bases mean countries rely on them for income and consumption. Inefficient and burdensome regulation, weak contract enforcement, limited access to finance, and low skilled workers make the business environment challenging. Economic gains can also be eroded by the impacts of climate change and disaster events.

The Pacific Regional Program for DFAT and Pacific Reset Program for MFAT complement both Australia and New Zealand's Pacific bilateral programs in support of a stable, secure and prosperous Pacific. The Programs support regional approaches to address a range of regional development and economic growth challenges.

The cultural diversity of participating countries using ePhyto will be managed by creation, dissemination and preservation of ePhyto content (e.g. training) with its user interface allowing for translation into different languages (NFRQ-56) to build an inclusive information platform to achieve the following SDGs.

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Pacific countries that do not have their own national system can use the GeNS to connect to the Hub to produce and exchange ePhytos. The IPPC ePhyto Solution facilitates strong management of pest spread by being able to pre-plan phytosanitary inspections before the consignments arrive in importing countries, which consequently helps minimize crop loss and increase food security. The project also brings greater efficiency to the process of trade, increasing access to quality food.

The active participation in industry due to low costs associated with ePhyto will benefit and enhance agricultural trade and e-business in the Pacific. This may minimise poverty and hunger, as expansion of agricultural exports is critical for economic growth in rural areas to address afore-stated issues.

This SDG is linked to the Development Goal 3 of the Pacific Community Strategic Plan (2016-2020) titled "Pacific people reach their potential and live long and health lives" by improving food security via less wastage and pest risks.

Achieve gender equality and empower all women and girls

The use of GeNS will provide a sharper geographic focus in the Pacific region to complement future trade activities and promote opportunities for effective "Gender Equality" by supporting initiatives for equal employment of men and women. In addition, the populace in participating countries will be exposed to opportunities to be employed in agricultural and ePhyto (ICT systems) activities.

This SDG is linked to the Development Goal 2 of the Pacific Community Strategic Plan (2016-2020) titled "Pacific communities are empowered and resilient" by advancing social developments through the promotion of opportunities for Gender equality and participation of young people (linked to job opportunities).

¹ Timeline for this activity has to be decided after the appointment of the regional ePhyto coordinator. The countries need to send the Readiness assessments with the details on funding to SPC. SPC could not source this information from the Pacific countries since June 2020. In this context, the implementation of GeNS in six countries in 2021 may be delayed.

Promote inclusive and sustainable economic growth, employment and decent work for all

The IPPC ePhyto Solution has significant economic benefits both for governments (NPPOs) and for industry in the Pacific. For example, The GeNS will support planning of inspections as ePhytos are received before the arrival of consignments. The use of ePhyto will indirectly contribute to sustainable economic growth by better managing pest risks in the Pacific. For example, the arrival of world's most devastating pests such as fire ant (*Solenopsis invicta*), Asian gypsy moth (*Lymantria dispar*) etc. could have a notable impact on the social life of population over the following aspects.

- Employment and income opportunity – loss of crop, income etc.
- Human, health and safety – incursion of diseases,
- Indigenous people's ways of life in the Pacific.

In addition, the electronic nature of the system facilitates the exchange and verification of the ePhyto in a quick and effective manner, removing existing paper phytosanitary certificate related trade delays. Example of these include, but are not limited, to reduce costs associated with sorting, distributing and retrieving paper certificates; reduction of costs on certificate delays, staff time; and eliminating costs associated with negotiating bilateral arrangements. This process can facilitate faster movement of goods, and is a system that gives the importer greater assurance in light of phytosanitary risks. It will also help to facilitate economic growth by reducing the impact of climate change; and food insecurity derived from pest distribution.

In order to quantify these cost benefits a series of case studies are currently being conducted by the IPPC ePhyto Industry Advisory Group (IAG). The progress on the outcomes and outputs after implementation of this project will be measured by conducting an ePhyto benefit analysis in the Pacific countries. This will be measured by an econometric analysis combined with an ePhyto industry survey before and after implementation of the GeNS. The benefit analysis will target financial (quantitative) and in-kind (qualitative) benefits of ePhyto after implementation.

The project also has explored innovative approaches to project financing; improve the regulatory environment for private sector by being able to electronically lodge export applications via ePhyto; and assist in enhancing economic growth of participating countries. ePhyto will promote economic growth and safety in trade through lower costs of certification, and to connect with economies with their own electronic certification systems (e.g. National systems). Therefore, ePhyto will eventually promote inclusive and sustainable economic growth in participating Pacific countries.

This SDG is linked to the Development Goal 1 of the Pacific Community Strategic Plan (2016-2020) titled "Pacific people benefit from sustainable economic development" by improving pathways to international markets and sustainable management of natural resources (agriculture).

Reduce inequality within and among countries

Better communication and engagement during the use of ePhyto by Pacific countries in different regional areas will reduce inequality in adopting the ePhyto Solution. The implementation and use of open, interoperable, non-discriminatory and demand-driven application such as ePhyto take into account needs of users and consumers; provides more affordable access of ICTs to within and among countries, particularly in Pacific countries.

The investments in infrastructure, trade facilitation, and competitiveness achieved by ePhyto will also reduce the cost of doing business in developing economies thereby reducing inequality. Also trade facilitation ensures that small businesses could take advantage of international trade opportunities.

This SDG is linked to the Development Goal 2 of the Pacific Community Strategic Plan (2016-2020) titled "Pacific communities are empowered and resilient" by advancing social development through the promotion of human rights, gender equality, cultural diversity and opportunities for young people.



Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

The temperature and precipitation patterns will have a significant impact on the spread of pests and diseases into new areas, with potentially devastating effects on biodiversity loss, the environment, and trade. The IPPC ePhyto Solution provides increased efficiency in the process of certificate exchange and significantly minimizes the possibility of fraudulent certificates getting through to customs. This function which once again help improve the management of pests and diseases by reducing their spread, and further contributing to this SDG.

Better management and prevention of pests crossing the borders helps minimize the harm to forests and the environment, helping combat the impacts of climate change and simultaneously helping to preserve the land and prevent biodiversity loss. ePhyto will play a central role in preventing the risk of exotic pests by initiating more effective phytosanitary control before the consignments are received.

From all the wood extracted around the world's forests, 11% is used directly by the paper industry (FAO Statistics, 2007). ePhyto will limit paper use for phytosanitary certification as countries will stop printing certificates. By minimising the current use of paper certificates for phytosanitary certification ePhyto will have a positive impact on biodiversity and climate change due to minimising deforestation thus enhancing natural resource management and land productivity. This will help the environment by minimising deforestation and control paper pollution caused by the paper mills.

This SDG is linked to the Development Goal 1 of the Pacific Community Strategic Plan (2016-2020) titled "Pacific people benefit from sustainable economic development" by strengthening sustainable management of natural resources (fisheries, forestry, land use, agriculture, minerals, water).

Revitalize the global partnership for sustainable development

The development of the ePhyto project has taken place with significant collaboration with multiple organizations and industry partners. Working together to develop a system not only for government representatives but also for industry and future use by various organizations who would join the electronic certification world will enhance the global partnership sustainable development.

Improved biosecurity systems and capability by implementing GeNS in the Pacific would ensure Pacific countries to effectively capitalise on market access and export opportunities using information for better risk assessment and participation in the global agricultural value chains. GeNS will also provide the opportunity for other potential funding agencies to recognise and support to the greater vision of safe and improved trade from and within the Pacific for sustainable development.

This SDG is linked to the Development Goal 1 of the Pacific Community Strategic Plan (2016-2020) titled "Pacific people benefit from sustainable economic development" by improving pathways to international markets (mobility, private enterprises, phytosanitary and biosecurity standards, supporting trade).

Benefits to participating countries by using the GeNS

- ✚ Exchange phytosanitary certificates without making an additional investment to develop a *National System*² via a software provider.
- ✚ Install GeNS free of charge as a web based platform tailor made for participating countries replacing paper certificates.
- ✚ Align GeNS with the national biosecurity concerns of individual countries to mitigate pest risks.

² All the countries that had developed *National Systems* will have to adjust their respective systems in future by spending extra resources, should they wish to get connected to the global hub for phytosanitary exchange. Countries currently participating in GeNS will have to undertake the same procedure if a separate *National System* is developed by them at this stage.



- ✚ Reduce ongoing and costly bilateral arrangements.
- ✚ Pre-arrival planning for phytosanitary certification measures of commodities to better control the biosecurity risks of National Priority Plant Pests. This action will improve the arrival and clearance time of plants and plant products at the border, including transparency; reduce data entry and validation functions by NPPO staff (manual processes = e.g. reproduction, sorting, distribution, filling, retrieving and archiving paper documents) along with administrative costs by automating business processes thereby improving efficiencies.
- ✚ Use of harmonised international e-business standards between governments during the phytosanitary exchange.
- ✚ Capacity building of PPPO members to develop sustainability of GeNS.
- ✚ Improve security in transmission of certificate documentation thereby reducing possibilities of getting fraudulent documentation.
- ✚ Reduce delays in receiving replacement phytosanitary certificates by expediting communication between exporting and importing NPPOs.
- ✚ Enable retrieval of import and export data of various countries for statistical and planning purposes.
- ✚ Decrease costs associated with expensive auditing processes.
- ✚ Enable information to be stored and accessed electronically in real-time.
- ✚ 24/7 (round-the-clock) service desk to provide assistance in technical matters only.

The UNICC built the GeNS and it has been successfully implemented in Fiji, Samoa, Sri Lanka and Ghana. The direct beneficiaries includes the public and private sector (e.g. key industry partners) and non-governmental organizations, public, NPPOs and various sectors of economies engaged in trade.

How ePhyto facilitates phytosanitary trade for countries affected by COVID-19?

The COVID-19 pandemic has impacted the effective operation of National Plant Protection Organisations (NPPO) to deliver phytosanitary activities. NPPOs are encouraged by the IPPC to make alternative arrangements for sending and accepting phytosanitary certificates via different mechanisms to facilitate the export and import of plants and plant products. In this context, the adoption of IPPC ePhyto Solution by countries will act as a mechanism to securely exchange phytosanitary certificates in pandemic situations without disruption in trade.

For instance, Samoa is currently using GeNS in production to trade with New Zealand. Some of Samoa's major export countries include New Zealand and Australia. During this time, countries were focusing discussions and actions around the facilitation of trade with minimal disruptions to the flow of imports and exports.

With the cancellation of international flights and closing of borders, many countries faced challenges in the delivery of original phytosanitary certificates to their exporting countries. However, Samoa and Sri Lanka were able to send ePhyto certificates to New Zealand using their GeNS in production. This was done in parallel with the issuance of hard copies of the phytosanitary certificate to clients in parallel with ePhyto certification.

Also the scanned copies of phytosanitary certificates generated by GeNS were also sent to other countries such as Australia that had granted approval for receiving same. It is envisaged that many countries will eventually go into full paperless mode with countries that are currently using GeNS.



It was noted that utilizing the ePhyto system has significantly helped to allow uninterrupted trade. As observed in the Samoan and Sri Lankan experience, ePhyto has helped to mitigate the effects of the Covid-19 pandemic on trade by maintaining safe and efficient paper-less trade.

The SPC and ePhyto

As the countries in the Pacific do not have a National System for phytosanitary exchange, GeNS will provide a cost-effective solution. To implement GeNS in Pacific countries, SPC plays a major role as the principal scientific and technical organisation supporting development in the region. For this purpose, SPC provides a regional resource of specialist technical expertise to strengthen or, in some cases, supplement regional and national capacity. It has to work with all members, at all levels for delivery and sustainability of ePhyto solution by integrating the process with all member countries.

The ePhyto project will be integrated into the PPPO work programme and consequently, allows the opportunity for it to be included in a business and investment plan that is currently being developed for the PPPO Executive Committee. The completed plans will be socialised and presented to funding agencies in an effort to secure a more sustainable funding support for PPPO in the future. This may include issues on limiting implementation due to lack of funding for infra-structure development. The ePhyto solution will contribute to the following development goals of the Pacific community.

Goal 1: Pacific people benefit from sustainable economic development.

GeNS will help improve pathways to regional and international markets by its efficiency; mobilising private enterprises (direct involvement of traders in completing application); better use of phytosanitary certification and biosecurity standards thereby supporting trade. The use of ePhyto will also directly or indirectly strengthen the sustainable management of global challenges such as poverty, inequality and environmental degradation. Participating Pacific countries will also have access to the use of statistical data of export and import via GeNS.

Goal 2: Pacific communities are empowered and resilient.

GeNS will empower women and young people with opportunities to engage in the Information and Communications Technology (ICT) work associated with storing, retrieving, manipulating, transmitting and receiving information electronically in a digital form.

Goal 3: Pacific people reach their potential and live long and health lives.

GeNS will indirectly contribute to improving the food security by minimising the spread of pests and diseases thereby improving the livelihoods of Pacific communities. GeNS will also provide benefits to import-based industries and consumers by reducing food spoilage during shipping and efficient clearance of consignments.

Role of the IPPC and UNICC in the Pacific

The IPPC will facilitate the development and adoption of international standards via GeNS. It will also provide technical expertise to Pacific NPPOs for using GeNS and organise regional workshops. Building the phytosanitary capacity of members to protect their wild and cultivated plants, their environments and food security by minimising food spoilage, and better management of risk have been addressed by the IPPC via ePhyto solution.

The UNICC was engaged in developing the Hub and GeNS for the IPPC. It will also be engaged in hosting the Hub and management of GeNS after implementation. It will provide the following system design services to the IPPC for Pacific countries after ePhyto implementation.

1. Data centres for hosting services
2. Enterprise backup
3. System performance monitoring
4. Physical platforms (storage option for countries)



5. Support services (helpdesk)
6. Training services.

Role of the SPC / PPPO Secretariat in the Pacific

The role of SPC is mainly in supporting to achieve the development goals of members by closely working with them during implementation of ePhyto by drawing on their necessary scientific and technical expertise, and knowledge and experience in wider social, economic and environmental issues to realise the sustainability of GeNS after implementation. For this purpose, SPC will make necessary arrangements to appoint a Regional ePhyto Coordinator who will be responsible for GeNS implementation by coordinating and managing the implementation plans of Pacific countries. SPC will closely work with the ePhyto Manager to achieve the milestones specified in the project plan and utilisation of project funds.

The implementation of ePhyto will not interfere with the existing bilateral arrangements of Pacific countries. Such bilateral arrangements need to be separately managed between individual countries. The use of the GeNS in the Pacific also does not override the existing and future bilateral discussions relating to market access and import clearance requirements between trading partners.

GeNS in the Pacific

Support letters:

Pacific countries interested in the first round of GeNS implementation have sent LoS to the PPPO Secretariat. The NPPOs have expressed in their LoS that they are keen to commence the on-boarding process to start testing the GeNS with their staff and trading partners as soon as possible.

Benefits to countries:

The Pacific countries had endorsed a regional approach through the PPPO that supports all countries, for the successful implementation of ePhyto across the Pacific since the implementation will be difficult if worked alone. Many Pacific countries share common hurdles such as funding, infra-structure, personnel and training and a shared resource such as Regional ePhyto Coordinator is critical to guide the process. Countries such as Papua New Guinea undertake trade with major trading partners like Australia, New Zealand, China, Vietnam and Thailand.

In this context, many Pacific countries may find that GeNS will provide them benefits in greater assurance of phytosanitary certificates; increase efficiency in border clearances and becoming a very valuable trade facilitation tool for their NPPOs. As the Pacific countries heavily rely on trade as their primary form of income, implementing GeNS will facilitate for faster clearance. For instance, Niue export coconuts, root crops and honey to the Pacific region and issues more than 5000 phytosanitary certificates per year.

Countries such as Niue has informed that the plans are underway to install the Manatua Fiber internet cable to provide faster internet for the island which will further help implementing GeNS. The Government of Vanuatu is the first country in the Pacific to launch the Vanuatu Electronic Single Window Project (VESWP), an online software system for evaluation and management of import and export certificates, licence and permits, expected to be completed in 2021. The single window will substantially reduce barriers to trade, reduce border clearance times and improve security of traded goods. There is a potential for this system to be linked with GeNS in future.

GeNS could be implemented in the shortest period of time with regional collaboration. For this purpose, regional GeNS implementation plan complementing the PPPO implementation plan has to be developed and finalised by Australia and New Zealand to demonstrate to donors about the value of their investment.



Roadmap for GeNS implementation in the Pacific

The Australian Department of Agriculture, Water and the Environment (AWE), the SPC (Fiji) and the New Zealand, Ministry for Primary Industries (MPI), will collaborate to facilitate ePhyto implementation in the Pacific as follows:

1. A “Readiness Survey” questionnaire was used at the Pacific Workshop, August 2019 to capture information to identify countries for future ePhyto implementation.
2. The countries for GeNS implementation will be selected on the following basis:
 - ✦ Countries that have provided Letters of Support (LoS) to implement the GeNS
 - ✦ Evaluation of technical capacity of countries based on the Readiness Assessment (RA) Questionnaire developed by the AWE and assessed by the MPI
3. The countries selected for GeNS implementation will have to complete the “GeNS on boarding document” outlining their technical competency and infrastructure capacity for network and file sharing. This will assess the volume of phytosanitary certificate based trade, ability to resource the sustainability of GeNS, legislative (e.g. governance) and IT infrastructure of the participating countries as sub-criteria.
4. GeNS will be implemented in countries through a prioritisation process (Readiness Assessment) developed by AWE, assessed by MPI in agreement with PPPO. The RA sits outside the Pacific strategic plan to facilitate prioritisation. The RA will consider the expression of interest (LoS) provided by the Pacific countries in combination with supportive legislation; presence of internet and trade volume (export, import, re-export) as key factors to select the first set of countries for implementation.
5. Australia and New Zealand will provide funding to the SPC to appoint a Regional ePhyto Coordinator for GeNS implementation with the SPC/PPPO providing support in-kind.
6. The SPC/PPPO Secretariat will house the Regional ePhyto Coordinator in Suva, Fiji.
7. Participating countries will be visited by the Regional ePhyto Coordinator for discussions with their NPOs, IPPC country Representatives, key industry bodies, ePhyto Project Managers and IT Managers of participating countries.
8. Regional ePhyto Coordinator will establish a project/work plan for the participating country with advice from Australia and New Zealand.
9. Regional ePhyto Coordinator will conduct country workshops, industry awareness and training sessions in participating countries. The objective of meetings and workshops would be to discuss the specifications of the ePhyto solution; the steps required for countries to implement the GeNS; sustainability; capacity building; potential upgrades and integration with other systems.
10. After implementation, test plans will be developed to pilot GeNS with other countries (e.g. New Zealand, Samoa, Fiji etc.) to identify and resolve technical issues before the system moves into production. Testing will be undertaken by exchanging ePhytos with countries in the Pacific and in other Regional Plant Protection Organisations (RPPPO) in Asia; Europe, America etc. After testing, GeNS will move into production and active trade through the system will commence with participating countries. Both paper certificates and ePhyto will be exchanged between countries during the transitional stage of production.
11. Regional ePhyto Coordinator will report the progress of GeNS implementation in Pacific countries to the SPC EXCO, Australia and New Zealand at regular intervals.
12. Regional ePhyto Coordinator to request various internal and external stakeholders such as industry groups, participating countries to test GeNS to get their feedback for further improvements.
13. Regional ePhyto Coordinator to provide annual reports to the ePhyto Steering Group (ESG), PPPO, Commission on Phytosanitary Measures (CPM) Bureau and Asia and Pacific Plant Protection Commission (APPPC).



14. ePhyto regional workshop will be organised by the secretariat of the SPC/PPPO with support provided by the MPI, AWE and SPC to share technical information and experience with participating countries in the Pacific region.

Regional Collaboration

PPPO will develop individual country work plans targeting regional collaboration in partnership with AWE and MPI, to implement GeNS. One of the key elements of country work plan will be on establishing a country based full time Regional ePhyto Coordinator in the Pacific (Fiji). The Regional ePhyto Coordinator will manage and co-ordinate GeNS implementation in the participating Pacific countries by undertaking the following activities.

1. Develop and manage a detailed work plan on the implementation of GeNS in the Pacific.
2. The work plans will further strengthen countries to become active members in the region by participating in ePhyto conversations, meetings and interactions passively with constructive contribution.
3. Prioritise countries according to the PPPO prioritisation guidelines for endorsement.
4. Provide support to countries (e.g. train government and industry users) where required to assist in the implementation, management and troubleshooting of the GeNS.
5. Closely liaise with the ESG, United Nations International Computing Centre (UNICC) and IPPC in the installation and training of GeNS in various locations of participating countries.
6. Provide first point of contact for GeNS user issues in the Pacific.
7. Conduct an assessment of the workflows associated with the issuance and receipt of phytosanitary certificates; discuss potential pathways where changes to work flows would be required and continue processes for consultation with country stakeholders. This work will assist participating countries to identify the benefits, dis-benefits and potential impacts of ePhyto implementation.
8. Report on progress, issues, feedback etc. to AWE, Ministry of Primary Industries (MPI) New Zealand, PPPO, IPPC and UNICC.

Train the Trainers Proposal for the Regional ePhyto Implementation

The ePhyto project in the Pacific may well be the gateway in providing a sound platform for the South West Pacific Countries for implementing GeNS collectively in the region. This opportunity will foster regional partnerships and collaboration in advancing towards electronic phytosanitary certificate exchange.

Biosecurity Authority of Fiji (BAF) is keen to provide additional support to the Regional ePhyto Coordinator who will, at the country level, assist all Pacific countries with technical know-how and capacity building for the implementation of GeNS. The Regional ePhyto Coordinator shall further work with PICTs to identify country representatives who have been or will be directly involved in the implementation of GeNS and certify them as “Master Trainers” or “Train the Trainers” after completion of agreed requirements or trainings. Once certified by IPPC/UNICC, these personnel will support ePhyto work in their respective countries. They will also provide on-ground real time assistance to PPPO staff when required.

Furthermore, BAF can identify and recommend to SPC potential master trainers from the BAF ePhyto Project Implementation Team who can be further trained; assessed for proficiency and certified to assist with regional ePhyto project activities when needed. This will not only strengthen the local ePhyto expertise but also would potentially contribute to the reduction in costs that may arise from engaging trainers from outside the region.



Time frame³

Two year financial program (2020/21 to 2021/22) with application for funding in 2019/20. The funding program may be structured as follows:

- 2020/2021: 10 countries** – Papua New Guinea; Solomon Islands; Cook Islands; Palau; Tonga; Kiribati; Nauru; Tuvalu; Vanuatu; Niue
- 2021/2022: 7 countries** - Tokelau; Timor Leste; Marshall Islands; Federated SM; French Polynesia; Wallis & Futuna; New Caledonia
- Optional third year (2022/2023)** - Countries from the above list may be identified, if further assistance required in future.

Budget and resources

Draft Operational Multi-year costs estimated for GeNS implementation in the Pacific including the operational and travel costs of AWE

Total cost (AUD) ⁴	2020-21	2021-22	2022-23 (Optional)
Program Management and Operational			
Remuneration for AWE ePhyto team (1.0 FTE, APS 6 per annum and 0.25 FTE, EL2)	\$140,000	\$145,000	\$150,000
Management (Accommodation, travel costs etc.)	\$50,000	\$50,000	\$50,000
Total program management⁵ for AWE	\$190,000	\$195,000	\$200,000
Regional ePhyto Coordinator (Band 11) base salary ⁶	\$68,800	\$72,200	\$75,600
Benefits and Entitlements for an International banded position (Education, Housing, Medical, relocation costs)	\$41,300	\$43,300	\$45,300
Financial and Corporate Relations (FCR) Facilities	\$4,000	\$4,000	\$4,000
FCR ICT	\$6,400	\$6,400	\$6,400
Benefit analysis undertaken by a suitable provider such as the University of the South Pacific	\$50,400	\$50,700	\$51,000
Regional ePhyto Coordinator's travel, accommodation etc. for visiting Pacific countries ⁷	\$101,400	\$102,000	\$102,600
Training, catering, stakeholder and industry forums	\$81,600	\$79,300	\$80,000

³ This proposal has considered the delivery of GeNS in the Solomon Islands, Vanuatu, Timor Leste and Papua New Guinea are not separately undertaken by the DFAT from their respective Biosecurity Development Programs.

⁴ This will only cover the cost associated with implementing ePhyto in the South West Pacific.

⁵ This will be directly paid to AWE in three instalments to manage its work program.

⁶ The adjusted cost of living and performance reviews will be undertaken for salary increments.

⁷ Minimum of four trips per annum.



Total cost (AUD)⁸ Program Management and Operational	2020-21	2021-22	2022-23 (Optional)
Stationery and translation costs (French and local languages in the Pacific countries) of GeNS user manuals for participating countries.	\$30,000	\$32,900	\$35,800
Subtotal	\$383,900	\$390,800	\$400,700
Management fees of SPC (15% of Subtotal)	\$57,585	\$58,620	\$60,105
Total operational⁹ for SPC	\$441,485	\$449,420	\$460,805
Total annual budget¹⁰ (Program + Operational)	\$631,485	\$644,420	\$660,805

AWE is seeking the afore-stated multi-year funding for a period of three years (optional third year) to implement GeNS in the Pacific countries. The SPC Land Resources Division (LRD) has estimated the operational costs associated with this proposal.

Funding Support

Almost all the Pacific countries have requested funding to implement the GeNS. AWE and MPI, will make arrangements to seek joint funding for implementation of GeNS in the Pacific.

Draft Pacific Project cost contributed by AWE (Australia) and MPI (NZ) to SPC

Total cost (AUD) Program Management and Operational	2020-21	2021-22	2022-23 (Optional)
Co-funding from Australia	220,743	224,710	\$230,403
Co-funding from New Zealand	220,743	224,710	\$230,403
Total Contribution	441,486	449,420	460,806

⁸ This will only cover the cost associated with implementing ePhyto in the South West Pacific.

⁹ This will be directly paid to SPC in three instalments.

¹⁰ The annual budget will be further revised after consultation with Fiji.



Other organisation(s) supporting the proposal

Draft in-kind support provided by the SPC LRD to the ePhyto Project Manager stationed in Fiji

Details of in-kind support (AUD)	2020-21	2021-22	2022-23 (Optional)
ICT -Use of SPC networks, service desk, shared drives and equipment etc. The equipment are desktop, laptop, printer services, skype for business etc.	9,700	9,700	\$9,700
Facilities (provision of office space, basic office furniture, cleaning services and regular maintenance services)	6,300	6,300	\$6,300
Total Support	16,000	16,000	16,000

For the purpose of implementing GeNS in the Pacific, AWE organised funding from the DFAT and the MPI, New Zealand to host the first ePhyto workshop in Fiji in August 2019. The World Bank, UNICC, IPPC and the PPPO administered by the SPC, participated in the workshop along with representatives from many Pacific countries. The workshop paved the way to work on the “Pacific solution” in future through joint collaboration between Australia and New Zealand for the implementation of ePhyto in the Pacific.



Appendix 1: Status of Pacific Countries for using the GeNS

	COUNTRY	PLAN	STATUS
1	Samoa ¹	Piloted GeNS and currently undertaking commercial phytosanitary certificate exchange (from March 2020)	<p>Provided the LoS to implement GeNS</p> <p>Provided the GeNS on-boarding document</p> <p>Completed the Pacific survey</p>
2	Fiji	Commenced commercial phytosanitary certificate exchange with New Zealand in July 2020	<p>Provided the LoS to implement GeNS</p> <p>Provided the GeNS on-boarding document</p> <p>Provided the Readiness Assessment</p> <p>Completed the Pacific survey</p>
3	Papua New Guinea	2020/2021	<p>Provided the LoS to implement GeNS</p> <p>Provided the GeNS on-boarding document</p>
4	Solomon Islands ²	2020/2021	<p>Provided the LoS to implement GeNS</p>
5	Cook Islands ²	2020/2021	<p>Provided the LoS to implement GeNS</p> <p>Provided the GeNS on-boarding document</p> <p>Completed the Pacific survey</p>
6	Palau	2021/2022	<p>Provided the LoS to implement GeNS</p> <p>Completed the Pacific survey</p>
7	Tonga ¹	2020/2021	<p>Provided the LoS to implement GeNS</p> <p>Completed the Pacific survey</p>
8	Kiribati ¹	2020/2021	<p>Provided the LoS to implement GeNS</p> <p>Completed the Pacific survey</p>
9	Tuvalu ³	2020/2021	<p>Provided the LoS to implement GeNS</p> <p>Completed the Pacific survey</p>
10	Vanuatu ³	2020/2021	<p>Provided the LoS to implement GeNS</p>



11	Niue ³	2020/2021	Provided the LoS to implement GeNS
12	Nauru ²	2020/2021	
13	Tokelau	2021/2022	Provided the LoS to implement GeNS
14	Timor Leste	2021/2022	
15	Marshall Islands	2021/2022	Provided the GeNS on-boarding document Completed the Pacific survey
16	Federated States of Micronesia	2021/2022	
17	French Polynesia	2021/2022	Provided the LoS to implement GeNS
18	Wallis and Futuna	2021/2022	
19	New Caledonia	2021/2022	Completed the Pacific Survey AWE sent the on-boarding document for completion Provided the LoS to implement GeNS
20	Guam	Guam may use the USDA APHIS system.	Provided the LoS to implement GeNS Completed the Pacific Survey
21	American Samoa	American Samoa may use the USDA APHIS system.	

Key

BLUE: GeNS is in production

GREEN: GeNS implementation in the first year

LIGHT BROWN: GeNS implementation in the second year

PINK: These countries will use the USDA APHIS National system (can't use GeNS = part of USA)

¹ Pacific Agreement on Closer Economic Relations (PACER) ratified country with Australia and New Zealand

² PACER may be ratified in June 2020

³ PACER may be ratified in near future.