

STDF PROJECT PREPARATION GRANT (PPG)

APPLICATION FORM

The Standards and Trade Development Facility (STDF) provides Project Preparation Grants (PPGs), up to a maximum of US\$50,000, for the following purposes (or a combination thereof):

- application of SPS-related capacity evaluation and prioritization tools;
- preparation of feasibility studies that may precede project development to assess the potential impact and economic viability of proposals in terms of their expected costs and benefits; and/or
- preparation of projects proposals that promote compliance with international SPS requirements, for funding by the STDF or other donors.

Applications that meet the STDF's eligibility criteria are considered by the STDF Working Group, which makes the final decision on funding requests. Complete details on eligibility criteria and other requirements are available in the *Guidance Note for Applicants*. The completed application should be submitted through the [STDF online application system](#).

PPG Title	Supporting the Pacific Islands' apiculture industry for economic development
Budget requested from STDF	\$49,536.00 USD
Full name and contact details of the requesting organization(s)	Pacific Islands Forum Secretariat, Ratu Sukuna Road, Suva, Fiji
Full name and contact details of contact person for follow-up	Andrea Giacomelli, andrea.giacomelli@pifs-geneva.ch Jemima Holborow, jemimah@forumsec.org Manisha Mudliar, manisham@forumsec.org

I. BACKGROUND AND RATIONALE

1. What is the purpose of this PPG? Explain whether it is requested to: (i) apply an SPS-related capacity evaluation or prioritization tool; (ii) prepare a feasibility study (prior to project development) to assess the potential impact and economic viability of proposals in terms of their expected costs and benefits; and/or (iii) prepare a project proposal for consideration by the STDF or other donors?

Trade has long been recognized as an essential tool for promoting economic growth and development, particularly for developing countries. The Pacific region face several economic challenges, including limited market access, inadequate infrastructure, and a lack of diversification as shown through the impacts of COVID 19 on the tourism sector. However, trade has the potential to overcome these barriers and enhance the region's economic prospects.

Beekeeping has been identified as a potential income-generating activity in the Pacific region, particularly in rural areas where farming is the primary livelihood. Beekeeping is

environmentally friendly, has positive externalities for agriculture, requires low capital investment, and can provide a stable income source for smallholder farmers.

The Pacific region has a unique biodiversity that supports a range of plant species suitable for beekeeping, making it an ideal location for the development of apiculture. Additionally, beekeeping has the potential to promote environmental conservation by encouraging the growth of flowering plants that support bee populations and supporting the production of agricultural commodities that require pollination. Honey and other bee-related products, such as beeswax and propolis, have significant economic value and are in high demand in international markets.

The development of apiculture in the Pacific region has the potential to create employment opportunities, enhance food security, and increase the region's export earnings. Moreover, beekeeping can provide an alternative income source for smallholder farmers, which can help reduce poverty and increase economic resilience. As such, beekeeping can play a crucial role in supporting the development of trade in the Pacific region.

The PPG will use funds to develop a regional project that covers the countries listed below. The final project proposal will require a two-pronged approach to assess the disease status of the different islands. Within these sub-regions our initial focus will be on 8 countries: Niue, Cook Islands, Samoa, Fiji, Solomon Islands, Vanuatu, Papua New Guinea and Tonga. These can be further classified in two categories which require separate activities to progress. These are:

Countries where, to the best of our current knowledge, the apiculture industry has a honey bee disease status that would allow for the establishment or further development of a cost-effective beekeeping industry that could achieve the goals of the project.

- Niue
- Cook Islands
- Samoa

Countries where the apiculture industry has a bee disease status that may have an impact on the establishment or further development of a cost-effective beekeeping industry that could achieve the goals of the project. Typical issues are the presence of varroa mites, very aggressive strains of the European honey bee or undesirable bee genetics (specifically the Asian Bee, *Apis cerana*).

- Fiji
- Solomon Islands
- Vanuatu
- Tonga
- Papua New Guinea (PNG)

The PPG will fund the development of a proposal, which will seek to address the varying issues facing the Pacific Islands listed above. As part of the development of the PPG, private and public stakeholders such as PACER+, NZAID, AUSAID, SPC, PIFS, WTO, FAO and others will be engaged to ensure the proposal addresses their specific needs. Ideally, the final project proposal developed using PPG funds will include activities such as a baseline assessment of the viability of each island's apiary sector, a review of current legislation, planning of a disease survey and border evaluation, capability review and an analysis market opportunities and restrictions for each country, but final activities will be decided on during the project proposal development process.

2. Explain the key SPS problems and/or opportunities to be addressed. Clarify why these issues are important, with attention to market access and poverty reduction. Describe, if relevant, how these issues relate to SPS priorities in the Enhanced Integrated Framework's Diagnostic Trade Integration Studies (DTIS), the findings of SPS-related capacity evaluations, national poverty reduction strategies, sector development strategies or policies, etc. See Qn. 7. (b) – (d) of the Guidance Note.

While beekeeping has significant potential to create employment opportunities, enhance food security, and provide an alternative income source for smallholder farmers; there are challenges to this. This PPG would focus on ensuring that there are regionally specific activities to address many of the apiculture specific challenges in the Pacific region. The specific activities would be distinct for individual countries and regionally, however these could be classified as below:

- 1) The countries identified are free from pests and bee diseases which can make apiculture a more intensive industry.
- 2) Regulations and legislation are present which can underpin the apiculture industry, including biosecurity legislation, quarantine and border control, and legislation enabling safe food handling, processing and export certification.
- 3) Extension, training and capability development. Ensuring local people have the skills to start and maintain hives and process the honey to local and export standards
- 4) Identifying and promoting market avenues for the honey and pollination activities of the beekeeping industry.

Among the issues to navigate, in order to establish conditions for the sector to thrive, are the lack of capacity development opportunities, vulnerabilities to extreme weather events such as cyclones and floods, humidity and temperature levels. One of the important outcomes of the PPG will be planned activities that focus on pests and diseases that might affect bees in the Pacific.

3. Which government agencies, private sector, academic or other organizations support this PPG request? Letters of support from each of these organizations would be advantageous (Appendix 1). See Qn. 7. e of the Guidance Note.

Supporting letters to be provided before 31st May 2023.

4. How does this PPG complement and/or build on past, ongoing and/or planned national programmes and/or donor-supported projects? See Qn. 7. (f) of the Guidance Note.

Beekeeping has already proven to be a possible avenue for promoting trade and economic development in several Pacific Islands Countries, for example, in Niue and Samoa. In Niue, a previous STDF funded project included scoping work which was undertaken to establish a bee sanctuary¹, as a springboard to promote tourism and the potential export of queen bees. The country's honey has gained international recognition for its unique flavour and quality, which has helped to create new market opportunities and increased exports. Similarly, in Samoa, beekeeping has been identified as a potential source of income for local communities, particularly in rural areas.

¹ASUREQuality Ltd and the Standards and Trade Development Facility (STDF). (2020). Establishing a Honey Bee Sanctuary in Niue - Feasibility Study. Retrieved from https://standardsfacility.org/sites/default/files/STDF_PPG_616_Feasibility_Study.pdf

A 2012 disease survey identified that Samoa has an estimated 21 beekeepers operating 403 hives on 47 apiaries².

A disease survey was undertaken in Fiji in 2013³ which outlined that Fiji at that time had an estimated 32 beekeepers with 671 hives. Since this work was undertaken, the Varroa mite has been detected which will require a higher level of expertise and knowledge to maintain hives.

Other work and studies has taken place across the Pacific Islands periodically, however it has been sporadic over the last 20 to 30 years.

This PPG would build off the knowledge in the previous studies and build a coordinated plan across the Pacific for the apiculture industry to grow further to support local communities. This includes consulting other agencies and stakeholders which have aligned projects in development or underway.

5. Have you discussed this PPG request – or funding for the project proposal which would result from it – with any potential donors (bilateral, multilateral, Enhanced Integrated Framework, etc.)? If so, provide details below and indicate potential sources of funding for the resulting project. See Qn. 7. (g) of the Guidance Note.

Through the development of the PPG, donors in countries/regions such as Australia, New Zealand, the EU, and the UK, as well as organisations such as PACER+ Implementation Unit and Pacific Islands Forum Secretariat, would be engaged to ensure collaboration and strategic linkages into other relevant projects and work. However, this PPG request specifically has not been discussed with other donors.

6. Briefly explain how gender and environmental issues are relevant for this PPG and, if appropriate, how they will be addressed.

- **Agriculture Productivity:** Apiculture is of considerable benefit to the wider agricultural sector as a result of complementary ecosystem services: the pollination services of the honey bees support overall agricultural productivity. Most Pacific Island countries have comparatively limited endowments of land available for agriculture. In order to maximize production from limited land resources, planned pollination can be undertaken when sufficient honey bee colonies are available.
- **Natural Environment:** As a result of ecosystem services provided via the pollination activities of the honey bee this project would also lead to increased native vegetation productivity and regeneration. As pollination leads to exponentially increased yields in agriculture plants, a honey bee operating in a Pacific Island context also obtains its pollen from native forest plants (including coconut trees and mangroves). This promotes greater native plant reproduction and faster regeneration of native forests, which in turn assist with both topsoil development and soil retention. In the context of increasing sea levels, native forest and soil retention becomes critical for low lying Pacific Islands. Increased native forest regeneration contributes positively towards an island nations and the region's carbon footprint. Additionally, the disease-focused activities that will be assessed in the PPG and likely integrated into the PG will aid those countries without disease issues to protect their natural bee stocks (which has positive externalities for the natural environment). For those countries that have pest and disease issues, activities to control and improve the brood stock will have both positive effects on agriculture and the natural environment.

²ASUREQuality and PHAMA. (2012). Disease Survey of Honey Bees in Samoa. Retrieved from <https://phamaplus.com.au/wp-content/uploads/2016/07/TR-35-SAMOA11-Bee-Health-Survey-FINAL-051112.pdf>

³ PhamaPlus. (2016). Disease survey of honey bees in Fiji [PDF]. Retrieved March 5, 2023, from <https://phamaplus.com.au/wp-content/uploads/2016/06/TR-49-FIJI15-Disease-Survey-of-Honey-Bees-in-Fiji-v1.0-FINAL.pdf>

- **Age and Gender Equality:** Beekeeping can be practised by men and women, although the heavy lifting of hives and honey boxes suggests field operations, at least, are carried out by men. Women are very adept at processing and marketing of bee products, including in the local tourism industry. Expansion of honey production will result in more processing activities.



II. IMPLEMENTATION & BUDGET

7. Who will take the lead in implementing this PPG? If particular national experts and/or international consultants are proposed, attach a copy of their Curriculum Vitae and record of achievements (Appendix 2). If no names are provided, the STDF will provide a shortlist of consultants if the PPG request is approved.

AsureQuality Limited

8. In the table below, briefly describe the main activities to be carried out under this PPG and specify who would be responsible. Provide an estimate of the budget required (e.g. for national/international expertise, travel and DSA of consultants, stakeholder meetings or workshops, general operating expenses, etc.).

Online Consultation

Under this proposal all consultation would take place online with the AsureQuality (AQ) team coordinating and facilitating the coordination for each country.

Activity	Activity Description	Responsible	Estimated Time Required	Hours	Cost per activity USD
Activity - Discovery	Background discovery before initial meeting for each country. Review 5 year plan, other projects currently underway.	AsureQuality	23 hours (2.5 hours/country)	23	\$2,201.60
Meeting One (Online) with each individual country	Purpose: Information gathering for each country to enable plan to be developed	AsureQuality	92 hours (11.5 hours/country)	92	\$8,806.40
	Stakeholders: Minister of Biosecurity, Minister of Agriculture, Minister of Trade, any beekeeping associations, other associated industries				
	Proposed Meeting Agenda: <ul style="list-style-type: none"> • Introduction and background. Overview of previous work • Current state – Apiary industry • Future State • Next Steps/what we require from stakeholders 				

Activity – Drafting of plan	Clarify information and draft of project grant proposal (regional plan + country specific annexes) including the following tentative elements: <ul style="list-style-type: none"> • Stock health assessment • Legal and regulatory aspects • Quality aspects (standards certification, etc.) • Extension, training and capability development • Identifying and promoting market avenues 	AsureQuality	172 hours (18 hours/country + 28 hours for regional plan)	172	\$16,512.00
Activity – Coordination and preparation for workshops	Coordination and preparation of workshop content, including coordinating with officials and key stakeholders	AsureQuality	57 hours (6 hours/country + 9 hours for regional plan)	57	\$5,504.00
Meeting Two (online)	<p>Purpose: Presentation and validation of proposed PG Plan</p> <p>Stakeholders: Minister of Biosecurity, Minister of Agriculture, Minister of Trade, any beekeeping associations, other associated industries</p> <p>Proposed Meeting Agenda:</p> <ul style="list-style-type: none"> • Introduction • Presentation of Plan to Stakeholders • Workshop/Elicit feedback regarding plan • Finalise plan and present back • Next Steps 	AsureQuality	57 hours (6 hours/country + 9 hours for regional plan)	57	\$5,504.00
Meeting Three (online)	<p>Purpose: Presentation and validation of proposed plan to agency and private sector funders and partners</p> <p>Stakeholders: Aid Agencies (NZ, EU, Australia), other partner agencies</p> <p>Proposed Meeting Agenda:</p> <ul style="list-style-type: none"> • Introduction 	AsureQuality	57 hours (6 hours/country + 9 hours for regional plan)	57	\$5,504.00

	<ul style="list-style-type: none"> • Presentation of Plan to Stakeholders • Workshop/Elicit feedback regarding plan • Finalise plan and present back • Next Steps 				
Activity – Incorporation of feedback	Collating feedback from previous meetings and updating plans to reflect	AsureQuality	57 hours (6 hours/country + 9 hours for regional plan)	57	\$5,504.00
			Total USD		\$49,536

Appendices

Appendix 1: Curriculum Vitae of Byron Taylor

CURRICULUM VITAE

Name: Byron Peter Taylor
Profession: Apiculture Technical Manager
Years with Firm: 21 yearsASUREQuality Limited, a State (government) Owned Enterprise (SOE)
Nationality: New Zealand
Vehicle Licences: Car
Languages: English
Country Experiences Australia, USA, Niue, New Caledonia, Tonga, Vanuatu, Chile

Address: ASUREQuality Limited, Private Bag 3080, Hamilton, New Zealand.
Phone 64 7 850 2867, mobile 64 21 918 400
After hours 64 7 849 5166, E-mail byron.taylor@asurequality.com

KEY QUALIFICATIONS:

- Disease control- surveillance
- Export verification and certification
- Lead auditor
- Exotic disease response systems training
- Apiculture extension training for beekeepers
- Project management
- Qualified teacher
- Report writing and extension articles

EDUCATION:

DipTchg Massey University, New Zealand 1997

BSc Massey University, New Zealand 1993-1996

- Courses on practical beekeeping, exotic disease and pest response, financial management, first aid (anaphylactic shock)
- Lead auditing
- Food safety qualifications NZ Qualifications Authority unit standards 167, 168 and 15276

CAREER HISTORY:

2001-present Apicultural Officer, ASUREQuality Limited, Hamilton, New Zealand

2000-2001 Mathematics and Science Teacher (Secondary School), Te Kauwhata College, New Zealand

1999: Honey Bee Research Site Manager, University of Montana, USA

1998: Mathematics Teacher (Secondary School), Dannevirke High School, New Zealand

TECHNICAL MANAGER ASUREQUALITY LIMITED

Local Responsibilities:

Local duties include:

- Providing Risk Management Program and Official Assurance Program (exports) verification for bee products.
- Providing Official Assurance Program (exports) verification for live bees.
- Administering the Biosecurity Act in the North Island
- Surveying for and responding to suspect exotic bee disease incursions

- Writing popular articles in the national beekeeping magazine on various topics
- General advisory.

National Responsibilities:

National responsibilities include:

- Technical Manager for Apiculture programs withinASUREQuality Ltd.
- Technical advisor to the Ministry of Agriculture and Forestry for exotic bee disease surveillance and response.
- Technical Manager for Industry Quality and Grade Programs (Horticulture) withinASUREQuality Ltd

VERIFICATION EXPERIENCE

- **RMP Verification**, Recognised under the Animal Products Act 1999 for the verification of Bee Product Risk Management Programs.
- **OAS Verification – Bee Products**, Recognised under the Animal Products Act 1999 for the verification of Bee Product eligibility documents.
- **OAS Verification – Live Bees**, Recognised under the Animal Products Act 1999 for the verification of Live Bee eligibility documents.

EXOTIC DISEASE RESPONSE EXPERIENCE

- **Psa Response**, Involvement in the capacity of an Incursion Response System (IRS) specialist role.
- **South Island Varroa Response**, Various roles including Surveillance Group Manager, FORT Apiary Officer, and Planning and Intelligence functions.
- **Tracing Group**, Current Tracing Group Manager responsible for training of tracers including IRS familiarity.
- **IRS Specialist**, IRS specialist with involvement in training and testing of the IRS system.

TEACHING EXPERIENCE

- **1998 Secondary School Teaching**, Teaching of mathematics up to Year 13 Statistics including some unit standards based assessment
- **2000-2001 Secondary School Teaching**, Teaching of Mathematics and Science with some unit standards based assessment including professional development in the writing of unit standards based assessments and the measurement of students against the standards.
- **2001-2002 AgriQuality New Zealand Limited**, Delivery of 31 workshops for commercial and hobbyist beekeepers titled "Living with Varroa".
- **2006 Tonga**, Beekeeper training in the basics of beekeeping.
- **2007 AgriQuality Limited**, Delivery of 13 workshops for commercial and hobbyist beekeepers titled "Living with Varroa".
- **2007 to 2015**, Delivery of tracing group training to new and existing tracing officers
- **2009 to 2015**, Delivery of Accredited Person training for staff at Biosecurity Transitional Facilities

OVERSEAS EXPERIENCE:

- **2019 Niue**, Assessment of the viability of establishing and maintaining a Pacific Bee Sanctuary in Niue.
- **2018 Niue**, Honey bee disease survey and assessment of the food safety systems applicable to the honey factory in Niue.
- **2016 Vanuatu**, Visit to continue work on market access preparations, training the competent authority, assessing legislation, and training border officers.
- **2014 Vanuatu**, Bee disease survey and beekeeper training for the purposes of assisting Vanuatu with gaining access to overseas markets for their bee products
- **2012 Chile**, Pollination hive auditing and standard formulation seminars focusing on beekeepers and growers

- **2011 Australia**, Assisting a local council (Orange City Council) with managing the disease risk to bees associated with the establishment and operation of a waste processing and landfilling operation.
- **2008 USA**; Completed a two-week study tour of the USA focusing on exotic bee diseases and particularly Colony Collapse Disorder. This work was carried out for the Ministry of Agriculture and Forestry (Biosecurity Authority) as part of training required to hold the position of Apicultural Technical Advisor for exotic bee disease responses.
- **2006 Tonga**, bee disease survey, beekeeper training and analysis of the beekeeping industry in Tonga in relation to the pollination requirements of the squash industry (FAO).
- **2005 New Caledonia**, bee population density survey, impact assessment and implementation of control measures for feral bee colonies competing with a native endangered parakeet for nesting sites (ASPO).
- **2003 Australia** Completed a two-week study tour of Australia focusing on two exotic bee diseases (European foulbrood and small hive beetle). Experience was gained in identification, eradication, control, and movement control issues associated with these diseases. This work was carried out for the Ministry of Agriculture and Forestry (Biosecurity Authority) as part of training required to hold the position of Apicultural Technical Advisor for exotic bee disease responses.
- **2003 Niue**, bee disease survey and evaluation of legislation, border quarantine and response systems to protect the beekeeping industry (FAO).
- **2002 USA**; Completed a three-week study tour of the USA focusing on exotic bee diseases. Experience was gained in identification of exotic diseases, eradication, control, and movement control issues associated with each disease. This work was carried out for the Ministry of Agriculture and Forestry (Biosecurity Authority) as part of training required to hold the position of Apicultural Technical Advisor for exotic bee disease responses.
- **1999 USA; Feb – Dec University of Montana**
 - Manager of honey bee field project, Maryland
 - Used honey bees to bio-monitor the effectiveness of remediation projects on an active military base, Aberdeen Proving Ground, MD, USA.
 - Managed 95 honey bee colonies
 - Used biological, chemical and electronic sampling techniques to assess the environment
 - Maintained Windows 95 and Linux based data and acquisition software
 - Maintained hardware associated with the electronic and chemical sampling