Concept Note

An integrated response for climate change mitigation and adaptation for agriculture in Samoa, Vanuatu and Tonga

Samoa, Tonga, Vanuatu | SPC

2 October 2019

GREEN CLIMATE FUND

Simplified Approval Process
Concept Note

Project/Programme title:	An integrated response for climate change mitigation and adaptation for agriculture in Samoa, Vanuatu and Tonga
Country(ies):	Samoa, Tonga, Vanuatu
National Designated Authority(ies) (NDA):	Ministry of Finance, Ministry for Metereology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC), Ministry of Climate Change, Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management
Executing Entities:	Pacific Community (Land Resources Division)
Accredited Entity(ies) (AE):	Secretariat of the Pacific Community
Date of first submission/ version number:	*10/1/2019 V.1*
Date of current submission/ version number	*10/1/2019 V.1*

GREEN CLIMATE FUND

Eligibility for SAP is determined by the review of the concept note and the ESS screening.

A. Project / Programme Information (max. 1 page)					
A.1. Project or programme	☒ Project ☐ Programme	**A.2. Public or private sector**	☒ Public sector ☐ Private sector	**A.3 RFP**	Not applicable
A.4. Indicate the result areas for the project/programme	Mitigation: Reduced emissions from: ☐ Energy access and power generation: 0% ☐ Low emission transport: 0% ☐ Buildings, cities and industries and appliances: 0% ☒ Forestry and land use: 30% Adaptation: Increased resilience of: ☐ Most vulnerable people and communities: 0% ☒ Health and well-being, and food and water security: 50% ☐ Infrastructure and built environment: 0% ☒ Ecosystem and ecosystem services: 20%				
A.5. Impact potential	A.5.1. Estimated mitigation impact (tCO2eq over project lifespan)	33,400 tCO2eq			
	A.5.2. Estimated adaptation impact (number of direct beneficiaries)	2,937 direct beneficiaries			
	A.5.3. Estimated adaptation impact (number of indirect beneficiaries)	94,001 indirect beneficiaries			
	A.5.4. Estimated adaptation impact (% of total population)	16% of the country's total population			
A.6. Financing information					
A.6.1. Indicative GCF funding requested (max 10M)	Amount: 10,000,000 Currency: USD Financial Instrument: Grants				
A.6.2. Indicative co-financing	Amount: 0 Currency: USD Financial Instrument: Grants Institution: TO BE CONFIRMED WHEN DEVELOPING THE FULL PROPOSAL				
A.6.3. Indicative total project cost (GCF + co-finance)	Amount: 10,000,000 Currency: USD				
A.6. Estimated duration of project/ programme:	disbursement period: 60 repayment period, if applicable:	**A.7.2. Estimated project/ Programme lifespan**	60		
A.8. Is funding from the Project Preparation Facility needed?	☐ Yes ☒ No	**A.9. Is the Environmental and Social Safeguards Category C or I-3?**	☒ Yes ☐ No		
A.10. Provide rationale for the ESS categorization (100 words)	The project activities will have minimal or no adverse environmental, social risks and impacts.				
A.11. Has the CN been shared with the NDA?	☒ Yes ☐ No	**A.12. Confidentiality**	☐ Confidential ☒ Not confidential		

A.13. Project/Programme rationale, objectives and approach of programme/project (max 100 words)	Climate Change is the most important issue facing the 3 countries this project will operate in - Tonga, Vanuatu and Samoa. This project has been designed to support farmers to adapt to the its impacts as well as to mitigate the production of GHG from agriculture in these countries. The project has the following goal - *Establishing resilient, low carbon agricultural systems in Tonga, Vanuatu and Samoa.* Activities with leading commercial producers and stakeholders will initially pilot regenerative organic farming and associated technologies and practices and following validation, these will be shared more widely. The Pacific Community (SPC) is the accredited entity for this project with a mix of private sector and government agencies engaged in local implementation.

B. Project / Programme details

B.1. Context and Baseline (500 words)

Climate variability and change in the three countries has exisiting and anticipated impacts on agriculture production[1],[2],[3], [4] so the project has been designed to enable adaptation to these impacts and for agriculture to become more resilient to these impacts. The project will support the adoption of regenerative organic management methods such as those that increase soil organic matter. These are scientifically proven to be efficient and effective[5],[6], [7],[8].

Agriculture in the 3 countries has also an impact on Climate change[9]. The adoption of regenerative organic management practices as proposed in the project will decrease GHG emissions. There is robust research establishing the mitigation potential from the adoption of regenerative organic agricultural practices[10].

The primary commercial crops of the Pacific (horticulture, taro and coconuts) are currently managed in ways that damage soil and lead to, amongst other things, loss of Soil Organic Carbon (SOC), significant land degradation, loss of biodiversity, and deforestation, thereby increasing GHG emissions and the vulnerability of these commercial crop systems to climate variability and change. SOC is critical for not only building resilience to climate change and building soil fertility but also in sequestering carbon from the atmosphere[11].

Agricultural systems that recycle organic matter and use crop rotations can increase the levels of SOC. This is achieved through techniques such as the adoption of longer rotations: use of ground covers, cover crops, green manures and livestock on pasture using sustainable grazing systems. These systems are starting to come under the heading of “regenerative organic agriculture[12] because they regenerate SOC and degraded soil biology, resulting in carbon drawdown and improving the water cycle. In addition to potential for SOC sequestration, regenerative organic practices support adaptation of agricultural food production systems as they are proven to be more resilient to climate variability and change impacts[13], in particular to droughts and heavy rains. In addition, such practices provide benefits to the environment as well as ecosystem services largely through enhancing biodiversity and protecting water sources as the amount of land farmed under these practices is increased. The importance of improving soil carbon, soil health and soil fertility to enable adaptation to the impacts of climate change are supported by the COP Koronivia Joint Work on Agriculture (KJWA)[14] to develop and implement new strategies for adaptation and mitigation within the agriculture sector. Other international agencies such as FAO[15], for instance through its *Climate Smart Agriculture*[16],supports this pathway.

Tonga, Vanuatu and Samoa have identified climate change as a critical risk, especially for agriculture, which is the three countries most important sector, and all have developed comprehensive plans to manage its impacts. Descriptions on the climate vulnerabilities and impacts as well as GHG emissions and mitigation and adaptation needs are provided in the country UNFCCC Intended Nationally Determined Contribution (INDC). Key climate projections[17] for the three countries include: increasing air temperatures ; more very hot days; altered rainfall patterns (more extreme rainfall events; possible decreased frequency of droughts); and less frequent but possibly more severe typhoons.

Tonga (2015)[18]

From the 2015 Tonga INDC Report `*Tonga makes a negligible contribution to global greenhouse gas emissions, with low per capita emissions of 2.95 tCO2e Tonga is a net carbon sink in the order of 1691.97 Gg CO2e. Agriculture produces 21% of GHG emissions.* The project aligns with the countries Sector Emission Reduction Targets; the *Tongan Strategic Development Framework 2015-2025*, (one of its seven Goals is *'a more inclusive, sustainable and effective land administration, environment management, and resilience to climate and risk'*); *The Joint National Action Plan for Climate Change Adaptation and Disaster Risk Management*; *The Tonga Agriculture Sector Plan* - its goal is to *"increase and sustain resilient agriculture* livelihoods" and it recognises the importance of, and includes strategies to support, climate-resilient agricultural production systems which are driven by healthy soils, secure and sustainable water supplies, diverse farming systems, and adaptive rural communities.

Samoa[19]

From the 2015 Samoa INDC Report - *Samoa is committed to addressing issues associated with climate change including adaptation and mitigation measures.* The *Strategy for the Development of Samoa 2016/17-2019/20[20]* is the primary planning document with the theme of "*Accelerating Sustainable Development and Broadening Opportunities for All*". A number of its Key Outcome areas strongly align with the proposed project. The *Samoa Agriculture Sector Plan (2016-2020*)[21] has the theme of *enhancing partnerships to develop and sustain agriculture and fisheries* - and recognises the role of private sector, NGO`s and development partners to achieve a goal of *Increasing Food, Nutrition and Income Security.* The plans strategic policy outcome 4 aligns with the project objectives *To strengthen capacities in rural communities, landowners, farmers and fishers to use natural resources in a sustainable way and increase sector resilience to natural disasters and climate change*.

Vanuatu[22]

The National Sustainable Development Plan outlines the country's vision and overarching policy framework for "*achieving a stable, sustainable and prosperous Vanuatu*" by 2030. *The Vanuatu Agricultural Policy* envisions that "*food and cash crops are sustainably and profitably managed and contribute to sustainable development and the wellbeing of all Vanuatu's people by 2030*." The *Vanuatu Climate Change and Disaster Risk Reduction Policy 2016 - 2030[23]* has a vision for Vanuatu to be a nation whose communities, environment and economy are resilient to the impacts of climate change and disaster risks. In relation to agriculture it identifies the need to reduce its vulnerability to the impacts of climate change

The project is well aligned with the participating countries plans for mitigation and adaptation to

climate change. It has been developed in full collaboration with both the NDAs and Ministries of Agriculture (section C4).

The three countries face several barriers that prevent the establishement of resilient, low carbon agricultural systems:

- There is a poor enabling environment with a lack of practical and viable strategies to test and promote more resilient agricultural systems;
- The benefits from adopting the improved management strategies/systems are not currently visible, accessible, attractive and attainable for farmers.
- There is a lack of incentives, such as through the establishment of markets for carbon trading, to enhance the relative attraction and adoption of regenerative agricultural practices.
- Enabling technologies and inputs to support regenerative organic farming are lacking.

[1] https://www.ipcc.ch/site/assets/uploads/2019/08/2i.-Chapter-7_FINAL.pdf
[2] https://www.ipcc.ch/site/assets/uploads/2019/08/2j.-Chapter-7_Supplementary-Material_FINAL.pdf
[3] https://unfccc.int/sites/default/files/leg_2012_pacific_workshop_fao_presentation.pdf
[4] https://www.pacificclimatechangescience.org/publications/country-brochures/
[5] https://www.ipcc.ch/site/assets/uploads/2019/08/Edited-SPM_Approved_Microsite_FINAL.pdf section B1.1, B5,
[6] https://wedocs.unep.org/bitstream/handle/20.500.11822/28453/Foresight013.pdf
[7] Wiese LD, Alcántara-Shivapatham V, Wollenberg E. 2019. Enhancing Nationally Determined Contribution (NDC) ambition for soil organic carbon protection and sequestration. CCAFS Info Note. Wageningen, Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). https://ccafs.cgiar.org/publications/enhancing-nationally-determined-contribution-ndc-ambition-soil-organic-carbon#.XYQeLC17HBK
[8] Jean-François Soussana, Suzanne Lutfalla, Fiona Ehrhardt, Todd Rosenstock, Christine Lamanna, Petr Havlík, Meryl Richards, Eva (Lini) Wollenberg, Jean-Luc Chotte, Emmanuel Torquebiau, Philippe Ciais, Pete Smith, Rattan Lal, Matching policy and science: Rationale for the ‘4 per 1000 - soils for food security and climate' initiative, Soil and Tillage Research, Volume 188, 2019, Pages 3-15, ISSN 0167-1987, https://doi.org/10.1016/j.still.2017.12.002
[9] https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg3-chapter8-1.pdf
[10] https://www.4p1000.org
[11] https://www.4p1000.org
[12] https://rodaleinstitute.org/wp-content/uploads/rodale-white-paper.pdf
[13] https://rodaleinstitute.org/wp-content/uploads/rodale-white-paper.pdf
[14] https://unfccc.int/topics/land-use/workstreams/agriculture
[15] http://www.fao.org/sustainability/en/
[16] http://www.fao.org/climate-smart-agriculture/en/
[17] https://www.pacificclimatechangescience.org/publications/country-brochures/
[18] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Tonga%20First/Tonga%20INDC.pdf
[19] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Samoa%20First/Samoa%20INDC_Sub

mission%20to%20UNFCCC.pdf
[20] https://www.mof.gov.ws/Portals/195/EPPD/SDS%201617-1920_Eng.pdf
[21] https://www.mof.gov.ws/Portals/195/EPPD/2018_Update/Cross%20Cutting/Agriculture%20Sector%20Plan%20%202016-2020%20Vol%201.pdf
[22]https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Vanuatu%20First/VANUATU%20%20INDC%20UNFCCC%20Submission.pdf
[23] https://www.nab.vu/vanuatu-climate-change-and-disaster-risk-reduction-policy-2016-2030-0

B.2. Project / Programme description (1000 words)

This project has been designed to support the adoption of regenerative organic agricultural practices in three Pacific countries - Tonga, Samoa and Vanuatu. The project is initially structured around the main crops/landuses in the 3 countries: Samoa - taro; Vanuatu - beef under Coconuts; Tonga - horticultural crops. The project will also extend out to work with other crops grown by the farmers the project will be working with.

The theory of change for the project is provided in Appendix 1. This sets **the goal** of *Establishing resilient and low carbon agricultural systems in Tonga, Vanuatu and Samoa.*

The project will be achieved through the following components:

Component 1:Regenerative organic farming practices and systems

- Outputs

Locally adapted and validated best practices and enabling technologies for regenerative organic agriculture are developed, evaluated and shared.

- Activities

Strategies & best practices for regenerative organic agriculture techniques are defined and reported on.
Following consultation strategies to support the adoption of project outputs are developed and a extension/adoption plan adapted for local conditions is prepared.
Regenerative organic agriculture country and crop plans are developed that detail potential best practices and trial designs.
Following 2 years of pilot trials with leading commercial growers in each country (Project Primary Partners) a report on the results of the trials and evaluations with associated country level recommendations is completed.
Extension/adoption plans are implemented in years 1-2 at the Primary Project Partners pilots and evaluated. This will inform the refinement of the plans that will guide the project broader extension/support activities with other communities in years 3-5.
Years 3-5 regenerative organic farming best practices informed from the pilot trials are shared with other farmers.

- Outcomes

Regenerative organic agricultural practices have been established on: Vanuatu 5%, Samoa 25%, Tonga 37% - agricultural land area and effectively enhance the resilience of agricultural production.

Component 2: Technologies and incentives to support the adoption of regenerative organic

farming practices

There are a range of enabling technologies and inputs that could be made accessible to support regenerative agriculture and potentially establish new climate friendly commercial initiatives. These include the management of green waste which if properly managed could provide an input resource to lift SOC and fertility. In addition there are potential market incentives such as voluntary carbon emmissions trading schemes that include soil carbon. These could create long-term incentives to encourage the adoption of climate friendly agricultural practices.

- Outputs

The commercial feasibility and viability of regenerative organic agriculture enabling technologies and inputs are piloted, evaluated and documented. Robust methodologies for measuring and trading in soil carbon are developed, demonstrated, evaluated and documented.

- Activities

Enabling technologies:

In year 1 a preliminary scoping review of enabling technologies and inputs to define opportunities, constraints and development pathways. This analysis will identify projects such as the use of green waste, compost, grazing management techniques, green manure crops that have significant potential to support regenerative agriculture, and these will be subsequently piloted.

Year 2-5 pilot programmes. As an example:

Green waste -In year 1 the project will investigate options and the feasibility of establishing commercial scale management systems for green waste. In years 2-3, if the results are positive - a commercial pilot facility will be established for further evaluation. In year 4 the results of this evaluation will be shared with the other countries (government and commercial parties) to inform the development of national green waste strategies and/or commercial initiatives

Incentives:

Year 1 - preliminary review of methodologies for measuring and trading soil and associated carbon trading markets (including private schemes

[1]

). This will inform the design of a plan for the pilot implementation in the 3 countries.

The carbon accounting and trading plan is implemented with the Primary Project Partners pilots in years 1-2 and evaluated with the results documented. These results are shared with government and other stakeholders with the aim of informing the development of national strategies to support the wider scale adoption of carbon accounting and trading systems.

Years 3-5 - carbon accounting and trading systems are promoted to support the wider adoption of regenerative organic farming systems.

Based on the results, the project will work with participating governments to support the development of their adaptation and mitigation policies and to incorporate the adoption regenerative organic agriculture and associated practices.

- Outcomes

Commercial scale production of enabling technologies and inputs have been evaluated and commercialization pathways have been piloted in the 3 countries. They demonstrate successful systems for carbon sequestration and the production of inputs for regenerative organic agriculture.

Agricultural carbon accounting and trading systems have been piloted in the 3 countries and reviewed for national adoption.

Capabilities

There have been previous research and a large number of projects in the Pacific that this project will build on. SPC as the lead provider of research has an excellent understanding of previous and current initiatives and their potential to support the project objectives. This will be complemented with the experience of the Primary Project Partners and other stakeholders that will be aligned with the project. It is recognised that additional capabilities and experiences beyond these Pacific resources especially in relation to some new technologies and systems will be required. Key project partners include:

- Primary Project Partners - leading commercial operators with a proven track record in development projects in the 3 countries have been identified and have been involved in the design of this project. They are:

Samoa - Savaia Village Council - this Village Council activities has resulted in the village becoming the leading producer and exporter of Taro in samoa.

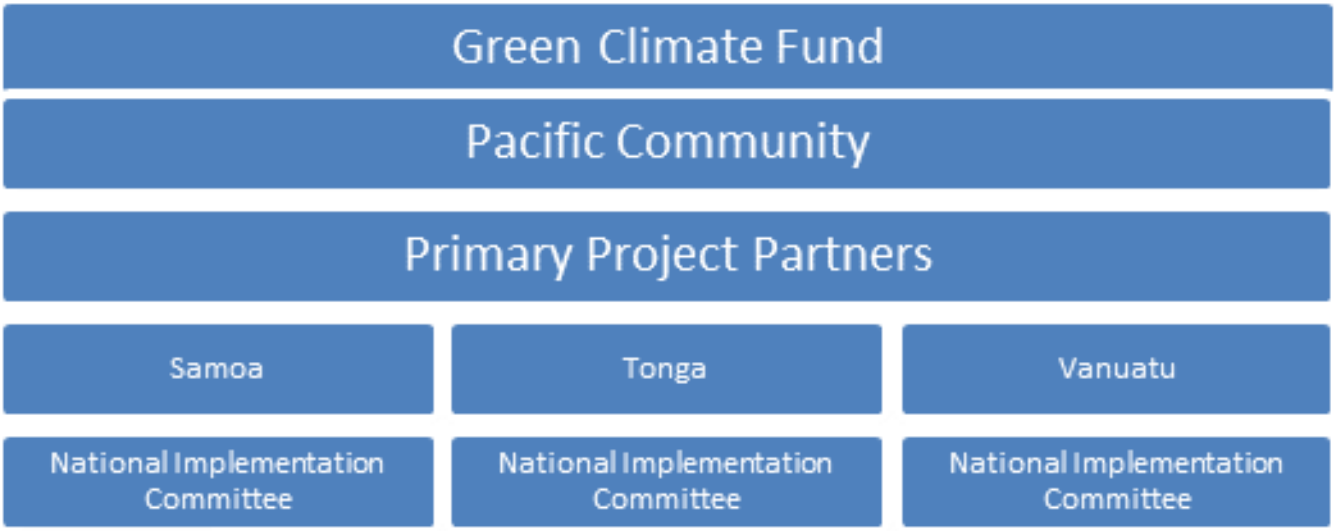
Tonga - Nishi Trading Co Ltd - this company is the largest horticultural producer and exporter in Tonga. It operates the Nishi Trading Foundation which is the community support arm of the Organization. This has track record of driving or backing projects that have an impact on improving standard of life in the local community.

Vanuatu - Tebakor Island Products Ltd. This diversified company operates a large organic farming operation as well as the production and the largest exporter of many high value organic products.

- Regenerative/organic agricultural practices - Regeneration International[2] and Lincoln University, New Zealand have been both involved in the development of this Concept Note and have an in-depth of knowledge in regenerative agriculture and organic systems.
- Carbon accounting and trading systems - The AgriBusiness Group Ltd has extensive experience in carbon accounting and trading mechanisms and have also been involved in the development of this Concept Note.

SPC Capability

The Pacific Community is the Accredited Entity for this project. Implementation arrangements will be tailored to the conditions of each country however a summary of approach is provided below.



Risk Analysis

The key operational risks identified to the project's success and the mitigation measures are:

o Some regenerative organic techniques might not fit with specific crops or types of soil. The project will provide as many alternatives as possible at the early stages to be be able to tailor to specific situations. There may also be some delays or before benefits from the adoption of regenerative techniques become apparent - this will be addressed through the initial screening and evaluation of appropriate technology and best practices by international experts in partnership with local stakeholders. The piloting of these with the associated monitoring of the economic, environmental, social impacts will also validate the use of the management practices and inputs. If the management practice does not achieve the anticipated impacts then it will not be subject to further promotion.

o Lack of interest and commitment by farmers - this will be addressed through the selection of motivated and respected farmers for the initial pilots and the use of training and extension methods to build trust and interest from other farmers resulting in their participation. The project will have links with partners with strong networks and reputations to assist with the wider sharing of project outputs.

o Poor project implementation and support - the project will work directly with leading, successful and motivated private sector companies and community agencies, identified in the project design process, to manage and implement the project activities with a commitment to financial and activity transparency. These project lead agencies will foster links with government and other stakeholders under the oversight of SPC and country implementation committees.

o Environmental and natural adverse events - all 3 countries have climatic risks such as cyclones that can disrupt project implementation. In addition, there are pest and disease risks that can emerge through climate change and natural adverse events. As mentioned in section B1, there is evidence that regenerative farming helps enhance resilience against some of these types of events and this will help mitigate the impacts and even possibly provide opportunities to demonstrate comparative benefits. The project will actively monitor these potential risks and introduce appropriate mitigations.

Monitoring and Evaluation

SPC have experience and policies to guide the development of Monitoring, Evaluation and Learning

processes. Indicators will be established to monitor progress against the objectives and activities. Key components of the M&E process will include:

- o Baseline and annual GHG audits of the overall project and objective impacts;
- o Social, economic and environmental annual monitoring and reporting - the project will report against the IFC performance standards PS 1-8 that are applied for SPC projects. These will be monitored through indicators developed to monitor SER components;
- o Mid-term and final evaluations;
- o Alignment with and reporting against international (SDG), regional level (SPC) and country level indicators.

[1] https://www.co2offsetresearch.org/policy/VoluntaryStd.html
[2] https://regenerationinternational.org

B.3. Expected project results aligned with the GCF investment criteria (500 words)

Impact potential

Mitigation core indicator - 16,700 tCo2eq per year x 2 years =33,400 tCo2eq (only 2 years impact is calculated as this reflects the wider extension of project results[1]).

Adaptation core indicator - 16% of the country's total population; 2,937 direct beneficiaries; 94,001 indirect beneficiaries

For the purpose of a high-level quantification of the potential mitigation impacts of regenerative organic agriculture could have on Samoa, Tonga, and Vanuatu, we exclude all other beneficial carbon mitigation aspects of regenerative farming and focus on only the sequestration potential of soils and the reduction in direct energy inputs from diesel for farm machinery. For the calculation of impact we made the following assumptions:
Vanuatu 5%, Samoa 25%, Tonga 37%, (Average of 16)% of agricultural land will adopt regenerative agricultural practices
Soil organic carbon will increase by between 0.2 to 0.5 tonne of carbon per hectare per year.
Diesel use will reduce by 50% per hectare per year
All data on agricultural land area, emissions, and diesel are sourced from the latest FAOSTAT[2] or national datasets. See appendix 2 for the methodology for calculating the above and the assumptions used.

Paradigm Shift Potential

This project has a number of components that will contribute to a paradigm shift in climate change mitigation and adaptation in the 3 countries.

- o Innovation - regenerative organic agriculture provides a pathway for improving both the resilience and sustainability of agricultural systems as well as provide an important contribution for its mitigation. The project will also act to adapt and commercialise novel technologies such as green waste management to support the projects mitigation/adaptation goals. The project will also be principally led by successful private sector and community-based agencies with proven track records. They will be supported by government and NGO groups however their leadership is a comparatively novel approach to project delivery in the Pacific. It provides a good base for initially

adapting and evaluating technologies and practices as well as a pathway for subsequent widescale promotion.

o Contribution to government adaptation and mitigation policies. The project will support the development of policies to further promote the adoption of regenerative organic agriculture and associated practices based on the impact of the pilot projects. The results from the carbon accounting and trading pilots may also inform the establishment of national schemes.

o Scaling up and wide potential impact - the specific technical knowledge and experience developed through this project has the potential to be shared throughout the Pacific region through the activities of SPC and its projects (though it may need to be adapted to meet local conditions). In addition insights from this projects design and implementation may provide insights to the design of future collaborative projects.

Sustainable Development

Organic and regenerative agriculture are recognized as promoting long-term agricultural sustainability, reduction in pollution, promotion of soil conservation and improving the climate change resilience of agriculture and livestock systems through effective eco-system management. Details on these impacts as anticipated through this project will be provided at the proposal stage. The project design team are also sensitive to and excited about the potential of the project to support GCF and national aspirations in relation to gender impacts. The role of women in farming and cultural dynamics varies between the participating countries however the project recognises the high level of interest and engagement they have in developing strategies to address climate change and ensure the longterm sustainability of their families and communities. The project anticipates new opportunities for women emerging through this project for example through providing leadership, knowledge and potentially through the commercialisation of enabling technologies.

Needs of Recipients

The 3 countries have high levels of vulnerability to the impacts of climate change and have a recognised need for support to address these risks. They are classified as Small Island Developing States[3] reflecting similar constraints in their sustainable development efforts, such as a narrow resource base, little resilience to natural disasters such as cyclones, limited opportunities for the private sector and a proportionately large reliance of their economies on their public sector; and fragile natural environments. Vanuatu is also classified as a Least Developed Country[4] while Samoa graduated from this criterion in 2014. The 3 countries have relatively high ND-Gain Country Index[5] (a measure of vulnerability and readiness to Climate Change) with rankings of - Vanuatu 135, Tonga 123, Samoa 98, out of 181 countries. The three countries identify climate change as their most significant challenge with national priorities on climate change adaptation. All countries have limited financial resources to address the significant challengers they are facing in this area and though alternative funding may be available the GCF appears to have the best fit. Agriculture is the dominant land use in all 3 countries and agricultural production critical for food security and development. Climate change creates significant risks to sustaining agriculture production that this project will help address. SPC is aware of the development of other Climate Change mitigation and adaptation projects (FAO) in Samoa and Tonga - however the focus of this project and the stakeholders who are involved are significantly different as reflected in the private sector/community leadership.

Country ownership

The project focus is on the adaptation, piloting, validating and promotion of regenerative organic farming systems and associated systems to achieve more resilient farming systems. There is a good alignment with the country National Adaptation and National Mitigation Actions (see section B1) as well as their development strategies, climate change response plans and agricultural sector development plans (as detailed in section B1). The accredited agency (SPC) has well established relationships throughout the Pacific and key research capabilities. The local Primary Project Partners are all recognised successful leaders and innovators in their countries agricultural sectors.

Efficiency and effectiveness

The projects Primary Project Partners all have existing commercial scale agricultural operations that the project will link with. This provides an excellent basis for the commercial scale evaluation of the technologies/practices to be piloted - as well as efficiencies in relation to the establishment and the operation of the pilots. (Note the Primary Project Partners will be subject to tight subcontacts with SPC for the provision of services and inputs - these will be managed to provide recovery of costs rather than to attain any profit from participation with the project). The project also provides a cost-effective strategy for CO2 reduction of 27.2 Gg CO_2-e per annum - based on a partial and conservative modelling as detailed in Appendix 2.

[1] Appendix 2 provides a description of the detailed calculations and assumptions.
[2] http://www.fao.org/faostat/en/#home
[3] http://unohrlls.org/about-sids/
[4] https://www.un.org/development/desa/dpad/least-developed-country-category/ldcs-at-a-glance.html
[5] https://gain.nd.edu/our-work/country-index/rankings/

C. Indicative financing / Cost information (max. 2 pages)

C.1. Financing by components

Please provide an estimate of the total cost per component and disaggregate by source of financing.

Component	Output	Indicative cost (USD)	GCF financing		Co-financing			
			Amount (USD)	Financial Instrument	Type	Amount (USD)	Financial Instrument	Name of Institutions
1	See B2	6,800,000	6,800,000	Grant		0	Grant	To be confirmed at a la later stage
2	See B2	2,500,000	2,500,000	Grant		0	Grant	To be confirmed at a later stage
Project Management Costs	Project management unit at SPC , incl.	700,000	700,000	Grant		0	Grant	

	monitoring and evaluation							
Indicative total cost (USD)		10,000,000	10,000,000		0			

For private sector proposal, provide an overview (diagram) of the proposed financing structure.

C.2. Justification of GCF Funding Request (300 words)

As outlined in B3 the three countries have limited financial resources to address the significant challenges that they face from the impacts of climate change. The private sector in these countries is also relatively small with limited resources to fund the investment required as detailed in this Concept Note. The beneficiaries from the project are wider than just the Primary Project Partners - with broader social, environmental and economic impacts resulting from this investment.

Based on this, a GCF Grant has been identified as the most appropriate funding mechanism for the project. The project will operate in 3 Pacific countries - it is anticipated that the results however will be shared more widely through the SPC who operate in the 22 countries and territories in the Pacific. Additional points in relation to the projects funding:

o In relation to the project goals and objective - though there are other activities addressing adaptation to climate change in the Pacific the focus of this project on promoting the adoption of regenerative organic management systems is unique and does not duplicate any other initiatives.

o SPC has a strict policy for ensuring that Grant funding is managed with high levels of integrity and this is reflected in its experience of successfully managing many projects with funding from many different agencies. This project will also be subject to these controls with all funding channelled through SPC and managed through contracts with Primary Project Partners and others involved in the delivery of the project.

o The project is ambitious, and a 5-year timeframe has been defined to provide enough time to undertake the pilots and subsequent wider scale promotion and adoption of project insights. The project will operate with agricultural systems and involves the adaptation, validation and evaluation of technologies/practices to meet the specific needs of each country - this cannot be achieved more rapidly than what is proposed.

C.3. Exit Strategy and Sustainability (300 words)

The project is designed to ensure that the outputs from the project are made available to all farmers in each of the 3 countries and that the farmers are actively engaged with the project (especially in years 3-5). This will be facilitated through:

o Project Governance Committee - this will be led by SPC and will have appropriate government and sector representatives from each of the 3 participating countries. This will ensure high level awareness and support for the project.

o National Implemantation Committees - these will be made up of Government, NGO and private sector participants and operate through the life of the project in each of the countries. They will provide a forum for input into the project activities as well as the socialisation of the project activities and outputs.

o There are differences in the extension strategy for each country reflecting the local conditions for example in Samoa Village Councils are the key drivers for adoption of new practices, however this provides a weaker pathway in the other two countries.

At the completion of the project the knowledge developed will be retained and continue to be promoted through:

- Government, NGO, growers, community groups and the private sector
- Regional agencies such as SPC, USP, POETCom.
- Potential linkage with carbon trading schemes evaluated in the project.

Knowledge developed in the project incorporated into educational course curricula

Project partners and stakeholders

	Primary Project Partners	Key Government Partner	Other Key Stakeholders
Samoa	Savaia Village Council[1]	Ministry of Agriculture and Fisheries (MAF)[2] 2ndry Ministry of Natural Resources and the Environment[3]	Samoa Farmers Association (S.F.A.)[4] Other Village Councils
Tonga	Nishi Trading Co Ltd[5]	Ministry of Agriculture & Food, Forests and Fisheries[6] 2ndry - Ministry of Environment and Climate Change[7]	Mainstreaming of Rural Development Innovation (MORDI) Tonga Trust[8] Tonga Youth Council TNYC [9] Growers Federation of Tonga[10]
Vanuatu	Tebakor Island Products Ltd (Alain Jacobe)	Department of Agriculture and Rural Development (DARD)	Farm Support Association (FSA)[11] Vanuatu Agriculture Support Centre
Regional	SPC Pacific Community (SPC)[12]		Pacific Organic and Ethical Trade Community- (POETCom) [13] The University of the South Pacific (USP)[14] Regeneration International Lincoln University – BHU[15], [16] The AgriBusiness Group NZ Ltd[17]

[1] https://www.facebook.com/pg/savaiavillage
[2] https://www.maf.gov.ws
[3] https://www.mnre.gov.ws
[4] https://www.samoafarmers.ws
[5] http://pacificfarmers.com/listing/nishi-trading/
[6] http://mafff.we.bs.
[7] http://ecc.gov.to
[8] https://www.morditonga.to
[9] http://www.tonganationalyouth.org
[10] http://pacificfarmers.com/listing/grofed/
[11] https://www.oxfam.org.nz/what-we-do/where-we-work/vanuatu/our-partners/fsa
[12] https://www.spc.int
[13] www.organicpasifica.com.

[14] https://www.usp.ac.fj
[15] http://www.lincoln.ac.nz
[16] https://www.bhu.org.nz
[17] https://www.agribusinessgroup.com

C.4 Stakeholders engagement in the project or programme (300 words)

SPC has a good understanding of policy settings, projects and plans for the three countries in relation to their strategies to address the impacts of climate change. In June/July the SPC Land Resources Division, Operations Manager (Karen Mapusua) visited the 3 countries and held meetings to clarify the current activities, priority and needs of each of the countries. This included meetings with the country NDA as well as Ministries of Agriculture (or equivalent organisations). Meetings were also held with leading private sector companies and organisations to define their concerns in relation to the potential impacts of climate change on their operations and their suggested strategies in relation to being able to manage these. A workshop was held from August 6-8 in Fiji with participants from both key government agencies and the private sector from the 3 countries attending. In addition, SPC representatives and international experts attended the meeting to assist with the design of this project. This Concept Note has been shared with all these participants for their review and input. SPC and the project team have a commitment of active engagement and transparency in relation to the development and subsequent management of this project.

A. **Annexes**

D. Annexes

☒ ESS screening check list (Annex 1)
☒ Map indicating the location of the project/programme (as applicable)
☐ Evaluation Report of previous project (as applicable)

Annex 1: Environmental and Social Screening Checklist

Part A: Risk Factors

Please indicate your answers to the questions below and provide an explanation on the response selected. In cases when the TBD response has been selected please explain briefly why you are not able to determine now and when in the project cycle the question will be addressed.

If the criteria is not applicable to the project you may write N/A in the justification box.

Exclusion criteria	YES	NO
Will the activities involve associated facilities and require further due diligence of such associated facilities?	☐	☒
This project will be only resourced through the requested GCF Grant.		
Will the activities involve trans-boundary impacts including those that would require further due diligence and notification to affected states?	☐	☒
The project will be located in the land and coastal areas of 3 isolated islands in the Pacific with no trans-boundary impacts (apart from GHG reduction) identified.		
Will the activities adversely affect working conditions and health and safety of workers or potentially employ vulnerable categories of workers including women and children?	☐	☒
The project will have a positive impact on the health and safety of workers by addressing pesticide use, food quality and safety issues. No negative changes to existing employment conditions are anticipated.		
Will the activities potentially generate hazardous waste and pollutants including pesticides and contaminate lands that would require further studies on management, minimization and control and compliance to the country and applicable international environmental quality standards?	☐	☒
This project aims to manage many of these risks - ie reduce the use of agricultural pesticide use in the project countries as well as manage green waste - which is currently being dumped to land fill. The project will comply with relevant national and international laws.		
Will the activities involve the construction, maintenance, and rehabilitation of critical infrastructure (like dams, water impoundments, coastal and river bank infrastructure) that would require further technical assessment and safety studies?	☐	☒
No large construction are planned in this project.		
Will the activities potentially involve resettlement and dispossession, land acquisition, and economic displacement of persons and communities?	☐	☒
The project will not involve any of these activities. It will operate closely with local communities and operators with the oversight of relevant national agencies.		
Will the activities be located in or in the vicinity of protected areas and areas of ecological significance including critical habitats, key biodiversity areas and internationally recognized conservation sites?	☐	☒
The exact locations of activities are yet to be identified but the project will comply with all rules around permitted activities associated with such areas.		
Will the activities affect indigenous peoples that would require	☐	☒

further due diligence, free, prior and informed consent (FPIC) and documentation of development plans?		
The governments and stakeholders of the 3 countries participating in this project are composed of the countries indigenous people and so reflect intent and consent of these people.		
Will the activities be located in areas that are considered to have archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values or contains features considered as critical cultural heritage?	☐	☒
This is not anticipated as most of the project activities will be undertaken on established agricultural land with only changes in farm management practices anticipated. The linkage with community and landowners will also provide a pathway to ensure that any such risks will be quickly identified and managed if they emerge.		

Part B: Specific environmental and social risks and impacts

Assessment and Management of Environmental and Social Risks and Impacts	**YES**	**NO**	**TBD**
Has the E&S risk category of the project been provided in the concept note?	☒	☐	
Has the rationale for the categorization of the project been provided in the relevant sections of the concept note?	☒	☐	
Are there any additional environmental, health and safety requirements under the national laws and regulations and relevant international treaties and agreements?	☐	☐	☒
These are not anticipated however will be mapped in more detail in the project proposal.			
Are the identification of risks and impacts based on recent or up-to-date information?	☒	☐	☐
Yes - based on links with the Primary Project Partners, SPC as well as National Government Agencies. The risks and impacts will be mapped in more detail in the project proposal.			
Labour and Working Conditions	YES	NO	TBD
Will the activities potentially have impacts on the working conditions, particularly the terms of employment, worker's organization, non-discrimination, equal opportunity, child labour, and forced labour of direct, contracted and third-party workers?	☐	☒	☐
No negative impacts from the project are anticipated.			
Will the activities pose occupational health and safety risks to workers including supply chain workers?	☐	☒	☐
No negative health and safety risks are anticipated from this project.			
Resource Efficiency and Pollution Prevention	**YES**	**NO**	**TBD**
Will the activities generate (1) emissions to air; (2) discharges to water; (3) activity-related greenhouse gas (GHG) emissions, (4) noise and vibration; and (5) wastes?	☐	☒	☐
The project is based in agriculture which involves the use of soil, water and other inputs and the above impacts are normal and anticipated. The project goals however are to enhance the sustainability in the use of natural resources and the mitigation of negative impacts.			

Will the activities utilize significant amount of natural resources including water and energy?	☐	☒	☐
The project is based in agriculture which involves the use of soil, water and other inputs however the project goals is to enhance the sustainability in the use of these natural resources.			
Will there be a need to develop detailed measures to reduce pollution and promote sustainable use of resources?	☐	☒	☐
The project M&E system will be closely monitoring the impact of the adoption of regenerative agricultural techniques on environmental, social and economic indicators. It is anticipated that the project impacts will be positive in relation to all these impacts.			
Community Health, Safety, and Security	**YES**	**NO**	**TBD**
Will the activities potentially generate risks and impacts to the health and safety of the affected communities?	☐	☒	☐
The project is designed to remove a number of risks to the community such as exposure to pesticides and pollution.			
Will there be a need for an emergency preparedness and response plan that also outlines how the affected communities will be assisted in times of emergency?	☐	☒	☐
No major impacts are anticipated apart from natural events such as cyclones.			
Will there be risks posed by the security arrangements and potential conflicts at the project site to the workers and affected community?	☐	☒	☐
No such risks are anticipated - this project does not involve a change in land use or ownership.			
Land Acquisition and Involuntary Resettlement	**YES**	**NO**	**TBD**
Will the activities likely involve land acquisition and/or physical or economic displacement?	☐	☒	☐
No such activities are planned.			
Biodiversity Conservation and Sustainable Management of Living Natural Resources	**YES**	**NO**	**TBD**
Will the activities potentially introduce invasive alien species of flora and fauna affecting the biodiversity of the area?	☐	☐	☒
There are a number of interventions that are possible to achieve regenerative organic farming systems such as the use of crops to build soil organic matter, provide eco-system services as well as nutrients. Some of these may be new to the project countries and if so a full risk assessment as required by national regulations and SPC policies will be undertaken.			
Will the activities have potential impacts on or be dependent on ecosystem services including production of living natural resources (eg.agriculture, animal husbandry, fisheries, forestry)?	☒	☐	☐
Regenerative agriculture aims to augment natural ecosystem services to enhance farm system sustainability.			
Indigenous Peoples	**YES**	**NO**	**TBD**
Will the activities potentially have any indirect impacts on indigenous peoples, ethnic minorities, or vulnerable and marginalized groups?	☐	☒	☐
The governments and stakeholders of the 3 countries participating in this project are composed of the countries indigenous people and so reflect intent and consent of these people. No negative			

impacts to ethnic minorities, vulnerable or marginalized groups have been identified or anticipated.			
Cultural Heritage	**YES**	**NO**	**TBD**
Will the activities restrict access to the cultural heritage sites and properties?	☐	☒	☐
There are no planned restrictions to cultural heritage sites or properties through this project. This project is led by local communities and stakeholders which will ensure that any such risks are identified and managed if they are identified.			
Will there be a need to prepare a chance-find procedure in case of the discovery of cultural heritage assets?	☐	☒	☐
The project does not involve any significant site disruptions (such as earthworks) so it is not anticipated that any such chance-find occurrences will eventuate.			
Stakeholder engagement and grievance redress	**Yes**	**NO**	**TBD**
Will the activities include a continuing stakeholder engagement procress and a grievance redress mechanism and integrated into the management/implementation plans?	☒	☐	☐
The project has been designed in close partnership with key stakeholders who will be involved in its implementation. Local governance and project management systems in line with SPC and local policies will be established to ensure ongoing stakeholder consultation and will also actively manage any issues resulting from the projects implementation.			

Part C: Sign Off

Sign-off: *Specify the name and designation of the person responsible for the environmental and social screening and any other approvals as may be required in the accredited entity's own management system.*

Aude Chenet, Environmental Sustainability Coordinator, Pacific Community (SPC)