Project Title: Promotion of indigenous pig and chicken breeds in Fiji, Niue and the Cook Islands through marketing and consumption

Project Code: INT/14/K09 Perez-Guerrero Trust Fund (PGTF) project

Completion Date: (Extended to January 31 2017) email attached in the annex section

Final Financial Report by: 31 January 2018

Final Substantive Report by: 31 January 2018

Submitted by SPC
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1.0 Project Narrative

The Promotion of indigenous pig and chicken breeds in Fiji, Niue and Cook Islands through the marketing and consumption project was designed to promote marketing and consumption of indigenous livestock breeds which were endemic in most of the PICTs but the products were inaccessible to consumers. The project was funded by the Perez-Guerrero Trust Fund (PGTF).

The Secretariat of the Pacific Community was the implementing agency in collaboration with the Ministries and Departments of Agriculture and Livestock in the participating countries of Fiji, Niue and Cook Islands. SPC as a lead implementing body had started some implementation of the activities according to the work-plan that was developed. Although implementation of activities had started the whole programme was affected by the impacts of the Tropical Cyclone Winston which hit Fiji on the 7th of February 2016, this affected most parts of Fiji including some of our proposed farms and farmers. Since SPC was heavily involved in assisting rehabilitating farmers that were affected by the cyclone, a no-cost extension of the project duration was requested and approved by the UNDP Secretariat, extending the completion date for the project from July 2016 to the 31st January 2017.

2.0 Approval and project preparation:

2.1 After the project was approved, funds were transferred to SPC Fiji from UNDP Regional Office, in March 2015.

2.2 A revised work-plan for activities was developed and implemented in Fiji, Niue and the Cook Islands as the proposed work was delayed by the TC Pam activities.

2.3 Consultation was carried out with the country focal points prior to implementing the activities on ground in the countries.

3.0 Project introductory meetings;

One of the main activities that had to be implemented immediately was the conducting of introductory workshops in the participating countries. These workshops were conducted by SPC in the 3 countries to create awareness and introduce the objectives of the project activities to achieve the proposed outputs. Staff of SPC conducted the workshops with the staff of the Fiji Animal Health & Production Division, Ministry of Agriculture and also made international travels to Niue and the Cook Islands to introduce the project and its aims to the ministries and departments in those two other countries. The workshops assisted SPC better collaborate with the Ministries and department to identify sites, identify host farmers and to confirm activities for implementation in the countries.

In Fiji, the project was introduced to the Ministry of Agriculture, Animal Health and Production Division as well as potential farmers. In Niue, the project was introduced to the Department of Agriculture staff including the Permanent Secretary and to the senior staff of the Department as well as to potential farmers through a workshop. In the Cook Islands,
introductory workshop was also held with the senior livestock staff and the Permanent Secretary for their awareness and action as well as to potential farmers.

![Participants and farmers at the Cook Islands and Niue AnGR Promotion Introductory workshops funded by the PGTF in 2015](image)

4.0 Assisting Pig and chicken Farms, Fiji. Niue and Cook Islands

The project in consultation with the Ministry of Agriculture, Animal Health and Production Division identified sites established under the FAO Animal Genetic Resources Conservation and Multiplication Project was used as the sites for the Promotion of indigenous pig and chicken breeds for marketing and consumption project. This decision was based on utilising the established sites which were currently operational thus further improve production, marketing and have sustainable sales of pigs chickens and edible eggs. The following sites were identified and assisted;

4.1 Fiji:

4.1.1 Koronivia Indigenous Pig Conservation Centre, Koronivia, Fiji

The Indigenous pig conservation, multiplication and distribution centre that was built at the Koronivia Pig Research Station (KRS) under the AnGR Conservation Project was used to promote indigenous pig breeds for marketing and consumption under the Perez-Guerrero Trust Fund (PGTF) Project. Breeding stock of pigs for the centre was collected from five sites from around the islands of Fiji and these were: Cicia, Taveuni, Savusavu, Matuku and Gau. The main purpose of the exercise was to collect a good range of indigenous pigs for breeding, conservation and multiplication of these pig breeds under the PGTF project. The villages on those sites where the pigs were sourced were recorded and their physical traits were used as a basis for their selection. The PGTF promotion project then focussed on a first cycle of breeding of the indigenous pigs to multiply their numbers, where offspring’s were then selected based on the physical traits for further breeding purposes. In other words those offspring’s that had more hybrid physical traits were culled and those that had more indigenous traits were retained for breeding. Awareness was also carried with potential farmers in Fiji on the potential to raise indigenous pigs as a source of livelihood. This was part of the project aim and that was to eventually distribute indigenous breeds of pigs for farmers to raise and supply the offspring’s to the domestic markets around Fiji.
Some blood samples were also collected from the indigenous pigs at the centre in Koronivia and are awaiting funds for DNA analysis.

Indigenous pig breeds, at KRS multiplication, conservation & promotion centre Fiji

4.1.2 Happy Chicken” Farm, Sigatoka, Fiji

The Promotion of indigenous livestock project (PGTF) also assisted an indigenous chicken breeding and distribution farm called the “Happy Chickens” which is located at the Sigatoka valley, on Viti Levu, Fiji. The PGTF project has assisted this farm through the procurement of incubators, i.e. setters and hatchers as well as with building materials to improve the poultry hatchery on the farm. In addition chicken breeding sheds have also been expanded with the PGTF project and to increase the numbers of local chicken breeders on the farm. The farm and the hatchery has the aim to increase the production of fertile eggs and local chickens for breeding and to distribute them to interested farmers who would raise them for meat and eggs improving food security and livelihoods in the Sigatoka valley. The farm has also been doing capacity building training with the local communities in Fiji and other Pacific Island countries to improve chicken husbandry and management and at the same time conserve local chickens through breeding. In Sigatoka (Fiji), the farm assisted women’s groups in 2 villages with the provision of capacity building training as well as through the provision of local chickens and small chicken incubators. The farm has also carried out chicken husbandry training with participants from Vanuatu that were associated with the Bahai Centre with the aim of empowering local communities to improve food security with the use of local chickens and local feed ingredients.

Fertile eggs set in the incubator, indigenous chickens at the farm and day chickens in the brooder
4.1.3  Nacocolevu Research Station chicken farm

The Nacocolevu Research Station is a facility that does research in livestock and crops and under livestock research they have a chicken component. The chicken research component has a breeder farm and a hatchery. The aim is to collect and multiply indigenous chickens that are climate impact tolerant as well create livelihoods and improve food security in the Sigatoka valley area. In Fiji there is a demand from farmers to raise and sell local indigenous chickens, so the research station farm has been working towards that by increasing the size of their breeder farm to increase the number of fertile eggs for hatching. In addition to the production of fertile eggs and dayold indigenous chickens, the farm is also interested in research on the performance of the indigenous chickens collected and bred on their farm. Performance such as egg production, hatchability of fertile eggs, growth rates in relation to local feed consumption and mortality are some of the areas that are currently being looked at. The PGTF project assisted the farm improve their sales and distribution, hatchery as well as their research component by assisting them with planning and with the provision of equipment to increase their production capacity as well as carry out research on performance. The findings from the research are preliminary at this stage.

![Indigenous chicken breeders and cages constructed for performance research trials at the station in Sigatoka, Fiji](image)

4.2  Niue

4.2.1  Breeding, multiplication and conservation chicken centres, Niue

Three chicken conservation, multiplication and distribution farms were assisted in Niue under the AnGR promotional project. The sites have been multiplying indigenous chickens with the use of local feed ingredients supported by some commercial feed and awareness has been created on the sales and consumption of edible eggs and meat from indigenous chickens. The three sites are located in the villages of Hikutavake, Mutalau and Hakupu.
4.3 Cook Islands:

4.3.1 Breeding, multiplication and a conservation centre, Cook Islands
Two farms were established under the AnGR promotion project on Rarotonga in the Cook Islands; these were the Takamoa Theological farm and the Tai Areai-Avatiu farm to breed local chickens for breeding, multiplication and conservation. The promotion project utilised the facility for the purpose of promoting local chickens for breeding, multiplication, marketing and consumption. In addition, some blood samples were collected from the Cook Islands for DNA analysis and the samples are currently stored at SPC awaiting funds for analysis.

5.0 AnGR Video:
An animal genetic resources video was done to promote the work on indigenous chickens and pigs in Fiji and this video was played on the Pacific Way television program in Fiji and the Pacific South West region at the end of 2017. This was funded by the PGTF project.

The video is available on the SPC youtube channel and could be downloaded and viewed via the following link: https://youtu.be/w3MqOQ4yPE0
6.0 **Financial Report:**
The financial report is pending at this stage but will be submitted soon. The starting date for the financial transactions was in June 2015 and the finish date was on the 31st of January 2017.

The report indicates that all the project money has been spent by the 31st January 2017.

7.0 **Conclusion:**
SPC has implemented all the activities in the work-plan developed and endorsed within the duration of the project. The project implementation was delayed as work had to be carried out to rehabilitate farmers in Fiji and other countries that were impacted by tropical cyclone Winston, however the extension from July 2016 to January 2017 enabled the work in the developed work-plan to be implemented.

The delay in the submission of the final substantive report was due to the fact that both the contact focal points (Dr Ken Cokanasiga and Mr Nichol Nonga) for the AnGR project had finished their contracts and left SPC in 2017 and it was not clear who would take over overseeing the AnGR project.

Some good outputs and outcomes were achieved in the AnGR promotion project as it complimented the FAO funded project. In other words the promotion project added value and expanded activities after the FAO funding ceased, i.e. the FAO funded project identified through DNA analysis that the genetic pool of indigenous chickens and pigs in Fiji, Niue, Tonga, Vanuatu, Samoa and the Solomon Islands were unique and the promotion project provided technical expertise and funding to collect and multiply through breeding to conserve those breeds of chickens and pigs in Fiji, Niue and the Cook Islands. Breeding at this stage is still ongoing and more work is still needed in terms of research, i.e. which breeds will do well and which breeds need to be culled in terms of their productive performance and climate impact tolerance.

More awareness and conservation work is needed for indigenous chickens and pigs in the Pacific island community, in light of the impacts of climate change, to protect future pool of genetic resources for breeding as well as food security. The FAO report in 2007 on the global status of AnGR, stated that 20% of indigenous breeds of animals were at risk of becoming extinct and from the period 2001 to 2007, 60 breeds of animals became extinct globally which average 1 breed per month becoming extinct globally.

Thus there is still a need to have funding to record and conserve indigenous animal and livestock breeds in the Pacific Island community. SPC looks forward to future collaboration with the PGTF (UNDP) as well as FAO to further develop projects to support AnGRs in the Pacific Island communities, as the work achieved through the funding provided has indicated some important benchmarks however more work is still needed to improve these.
Finally the Land Resources Division at SPC takes this opportunity to show appreciation for the enormous support and funding provided by the PGTF under UNDP as well as to FAO for the initial AnGR project in the Pacific island communities.

8.0 **Focal contact names and emails:**
Dr. Ken Cokanasiga, Acting Deputy Director Land Resources Division, Trade and Agribusiness Programme, Secretariat of the Pacific Community (SPC), email: kenc@spc.int

Mr. Nichol Nonga, Animal Production Officer, Land Resources Division, Secretariat of the Pacific Community (SPC), email: nicholn@spc.int

Mr. Andrew Tukana, Animal Production and Extension Officer, Land Resources Division, the Pacific Community (SPC), email; andrewt@spc.int

*(Dr Ken Cokanasiga and Mr Nichol Nonga have both left SPC in 2017)*

9.0 **Annexes:**

9.1 **Email communication for the promotion project extension**

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To: Nichol Nonga
Cc: Osnat Lubrani; Elena Wakolo; Ines Tofalo
Subject: RE: Seeking approval for a no cost extension to the "Promotion of indigenous pig and chicken breeds in Fiji, Niue and Cook Islands Project"

Dear Nick

On behalf of Ms. Osnat Lubrani, UN Resident Coordinator, this is to advise you that the non-cost extension of the "Promotion of indigenous pig and chickens breeds in Fiji, Niue and Cook Islands through marketing and consumption project", implemented by SPC, has been approved until 31 January 2017 as requested below. Please note that the extension has been granted exceptionally in due consideration of the devastating effects by the Cyclone Winston as you described below. We look forward to the accelerated implementation and thank you in advance for the continued partnership.

Best regards

Akiko Fujii

UNDP Country Director a.i.
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9.2 **Final financial report (Pending)**
9.3 AnGR brochure developed for the FAO Project

Chicken conservation centres, Cook Islands - Similar to Niue, chicken conservation in the Cook Islands, and in a similar fashion, is being conducted there. The project is establishing two new chicken pens, which will become collection, breeding and conservation centres, one at the Avarua High School and the other at Aitutaki High School. Both on Rarotonga. Local village chickens are faremeke, lending for the project, feed, water, shelter and production. The addition of village chickens will increase population and management will allow public access to local chicken products. A total population of 100-150 breeding chickens is expected to be in place on the two farms in a phased breeding production system.

Conserving Animal Genetic Resources
In Fiji, Niue & Cook Islands

Why protect animal genetic resources?
Animal genetic resources (AnGR) play an essential role in contributing to food security and sustainable livelihoods. They provide meat, milk and dairy products, eggs, fibres, clothes, manure for fertilizer and fuel, and many other products. The present generation of the world community is responsible for identifying, characterizing, conserving, sustainably using, and developing animal genetic resources to supply future generation.

Arising from many animal genetic resources worldwide.

Threats to AnGRs include... (continued)

Pig conservation centre, Fiji - A fourteen-room pig breeding and conservation centre has been built by the Fiji Ministry of Agriculture, supported by the FAO. The centre is located at the Kava Research Station, in Lagi Ridge, Fiji. The pigs are being collected and bred from local communities and distributed to interested farmers.

Chickens conservation centres, Niue - Local chickens are enshrined in Niue's cuisine and heritage. According to the DNA analysis, Niue has a unique breed of indigenous chickens that is not commercially available. The centres are to be used for implementing the AnGR conservation project. In the future, the centres will be used to develop breeds that are resilient and tolerant to diseases, climate change and other threats.

The main expected outcomes include the establishment of six collection, breeding and distribution centres for indigenous pigs in Fiji, three for indigenous chickens in Niue and two for Indigenous chickens in the Cook Islands. The centres will provide a reliable and sustainable source of genetic material for farmers in the region. The centres are to be used for implementing the AnGR conservation project. In the future, the centres will be used to develop breeds that are resilient and tolerant to diseases, climate change and other threats.
9.4 AnGR video (funded by the AnGR Promotion Project)
Video link: https://youtu.be/w3MqQQyPE0