LRD NEWS
Pacific Community
Communauté du Pacifique
QUARTERLY NEWSLETTER OF SPC LAND RESOURCES DIVISION
DECEMBER, 2015

# AGRICULTURE POLICY BANKS LAUNCHED IN VANUATU AND SOLOMON ISLANDS

On 10 September 2015 Vanuatu launched its agriculture policy bank, the first of its kind in the Pacific region. The bank, developed in partnership with the European Union's Pacific Agricultural Policy Project (PAPP) which is implemented by the Pacific Community, and the Ministry of Agriculture, Livestock, Fisheries, Forestry and Biosecurity (MALFFB), is an electronic repository containing information on Vanuatu's key agriculture sector policies, including its recently released Agriculture Sector Policy 2015–2030.

The agriculture policy bank enables farmers, entrepreneurs, government officers, researchers and the public to access the country's agricultural policies and related documents and papers easily. General consensus of guests attending the launch was that there is an abundance of information relating to the agriculture sector, but up to now this has not been easily accessible to the stakeholders who need it.

Speaking at the policy bank launch, Director General Howard Aru, the Minister for Agriculture, said that the policy bank will help the agriculture sector maximise its limited budget. "Agriculture is the lifeblood of the economy so it has to keep moving to create change, employment," he said. It was confirmed at the launch that the bank will be supported by cross-media platforms such as rural radio, television and print programmes, to reach rural stakeholders who do not have reliable internet access.

Soon afterwards, in November, Solomon Islands followed Vanuatu's example and launched its inaugural agriculture policy bank, once again supported by the EU PAPP project. This houses key policy documents for Solomon Islands' agriculture sector including the new Solomon Islands Agriculture and Livestock Policy 2015–2019.

SPC Adviser and Team Leader for PAPP, Vili Caniogo, said the policy bank initiative is in line with the vision to make agricultural information more accessible and to foster knowledge sharing. Other countries in the region have welcomed this initiative and Mr Caniogo confirmed that similar policy banks are planned for 14 other Pacific countries, including Timor-Leste, in the next 6 to 12 months. Other partners in the initiative include the Intra-ACP Agricultural Policy Programme which coordinates inter-regional exchanges between the Caribbean and the Pacific ACP countries, and the ACP-EU Technical Centre for Agricultural and Rural Cooperation (CTA).

The agriculture policy banks are hosted on SPC's Pacific Agriculture and Forestry Policy Network portal, the PAFPNet portal *(www.spc.int/pafpnet)*. ■ *source PAPP team*

## AGRICULTURE SECTOR POLICY OUTLINES HELP SHARE KNOWLEDGE

Easy-to read summaries of the Vanuatu Agriculture Sector Policy 2015–2030 are now available in English, Bislama and French. These policy outlines answer key questions, such as why a national agriculture policy is important and how it will be implemented.

Following the success of the Vanuatu outlines, a summary of the **Solomon Islands Agriculture and Livestock Policy 2015-2019** was also produced in English to answer similar questions on the purpose of the policy, its use and implementation.

Both the Vanuatu and Solomon Islands policy outlines can be accessed on the PAFPNet portal *(http://www.spc.int/pafpnet/policy-bank)*. Printed copies are available from the national ministries (Department of Agriculture and Rural Development, Tagabe, Vanuatu; and Ministry of Agriculture and Livestock, Honiara, Solomon Islands).

# DEVELOPING TONGA'S NATIONAL EXTENSION STRATEGY

A four-day workshop held in Tonga in November brought together stakeholders from public and private sectors to develop a draft national extension strategy for Tonga. This is the first national extension strategy to be developed across the Pacific.

The need for an extension strategy was identified during development of the Ministry of Agriculture, Forestry, Fisheries and Food (MAFFF)'s draft sector plan. The extension component was identified as requiring additional support for effective implementation of projects and programmes. The process highlighted developments in the sector including a move by the private sector to form product-specific extension services, and a need to reorientate the role of public extension services to facilitate smallholder access to information and technology.

The workshop was facilitated by the European Union (EU)-supported Pacific Agriculture Policy Project (PAPP) at the Pacific Community (SPC), with technical support from the SPC Land Resources Division's Crop Production and Extension team. The workshop brought together stakeholders from including MAFFF extension staff, representatives from other MAFFF divisions, non-governmental organisations (NGOs), farming communities (subsistence and commercial) and exporters.

Delivering the keynote address at the opening of the workshop, Tonga's Minister for Agriculture, Forestry, Fisheries and Food, Hon. Semisi Fakahau, highlighted the significance of the agriculture sector saying, "a large percentage of Pacific Islands rely on agricultural production for food security and there is increasing demand on agricultural production to generate incomes for households from primary produce and value added products." The Minister emphasised the need for research, extension and farmers to work together, as the three key players in advisory services. "Extension has traditionally been viewed as an add-on to research. A lack of understanding exists about the variety of roles that extension and advisory agents can play in identifying needs, building and facilitating networks and supporting research," Fakahau said.

The workshop was coordinated by SPC's Deputy Director – Crop Production and Extension, Dr Siua Halavatau. Training was delivered on project cycle management, including participatory rural appraisal (PRA) and logical framework (logframe) tools. In the second session, participants determined key indicators and means of verification, and on the third day of the workshop, participants contributed towards a risk assessment, ending the day with the development of a monitoring and evaluation (M&E) plan to support the implementation of the strategy. The outcomes of these activities came together on the final day in the first draft of the national extension strategy, which was presented by the participants to the MAFFF Minister and Chief Executive Officer Losaline Maasi.

According to the Growers Federation of Tonga Inc. (GroFed) Production Manager Nomipa Napa'a, the workshop was extremely valuable in fostering an understanding of the linkages that exist and those that need to be reinforced among stakeholders. "Although we work together sometimes, this needs to be strengthened," said Napa'a.

The draft strategy aims to improve partnerships between the public and private sectors, and between key players in the research–extension paradigm. To date, Tonga is the only Pacific country to have established a public–private partnership agreement which has since been endorsed by its cabinet.

The national extension strategy aligns with the Pacific Island Rural Advisory Services (PIRAS) strategy which is currently being developed with support from PAPP. ■ *source Crop Production team*

CONTENTS PAGE

# NEW TOMATO VARIETY RELEASED FOR FIJI FARMERS

Melrose is the name given to a new tomato variety recently released by Sigatoka Research Station. One hundred farmers attended the launch event on 30 September 2015 to learn more about this new variety. They were also given some Melrose seeds for planting.

The event was part of the regional Integrated Crop Management (ICM) programme, an initiative funded by the Australian Centre for International Agricultural Research (ACIAR) and implemented through a collaboration between the Pacific Community, the World Vegetable Center (AVRDC) and the Fiji Ministry of Agriculture. Samoa, Solomon Islands and Tonga are also partners in this research.

The Chief Guest, the Hon. Assistant Minister for Agriculture Joeli Cawaki, said the launch of the Melrose tomato variety was part of the Fiji Government's efforts to improve nutrition and wealth of people in the country.

Melrose is an open-pollinated, semi-determinate variety; this means farmers can keep the seeds to replant. Melrose has resistance to some virus diseases, and is tolerant to stem rot, which is important in the wetter parts of the country. The Sigatoka Research Station's Principle Research Officer, Shalendra Prasad, noted that Melrose is now the best tomato variety in the country. Seeds for Melrose can be obtained from the research station, which also plans to soon release a cherry tomato variety. Prior to Melrose, the only other two varieties of tomatoes to be released in Fiji were Alton and Alafua Large, over a decade ago ■

*source Plan Health team*

# ANIMAL GENETIC RESOURCES PROJECT ON SHOW IN NIUE

The South West Pacific Animal Genetic Resources (AnGR) project, which aims to conserve indigenous animal genetic resources, was highlighted during the recent 45th annual meeting of the Committee of Representatives of Governments and Administrations (CRGA) and the 9th biennial Pacific Community Conference in Niue. Meeting participants, including the Deputy Prime Minister of Tonga the Hon. Siaosi Sovaleni, Fiji's Minister for Foreign Affairs Ratu Inoke Kubuabola, European Ambassador Mr Andrew Jacobs and the Secretary General of the Pacific Islands Forum Secretariat Dame Meg Taylor, had the opportunity to visit the project site and learn about the project. During the visit the project was also officially handed over to the Niue Director General of Natural Resources Dr Josie Tamate by SPC Director General Dr Colin Tukuitonga.

The AnGR project is funded by the Food and Agriculture Organization of the UN (FAO) and implemented in collaboration with the Pacific Community (SPC). The project is conserving identified indigenous breeds through the establishment of on-farm (in situ) conservation and multiplication centres. The project aims to strengthen food security and livelihoods, support adaptation to climate change, and ensure the islands' unique genetic resources are available for use by future generations.

This project follows on from the South West Pacific Animal Genetic Resources pilot project, which focused on developing an inventory and DNA characterisation of indigenous pigs and chickens in Fiji, Niue, Samoa, Solomon Islands, Tonga and Vanuatu, and

*.....continues on page 8*

# SAMOA LAUNCHES NEW TARO EXPORT VARIETIES

Samoa has come a long way since the taro leaf blight disaster in 1993, achieving another milestone by launching three new taro varieties during the Samoa Agriculture Show held in October. The new varieties support the taro export industry in meeting market demand for pink taro in New Zealand and further afield.

The varieties, named Talo Tanu, Talo Fusi and Talo Lani, were selected from Tanumalala, Fusi and Salani villages after consultation between farmers, Samoa's Ministry of Agriculture and Fisheries (MAF) and the Pacific Community (SPC). The varieties were selected based on taste and yield.

"Over 20,000 taro planting materials have been produced for the taro launching so that farmers, the private sector, cabinet and senior officials can receive enough taro planting material for further planting in their taro patches," said MAF's Assistant Chief Executive Officer in the Nuu Crops Division, Misa Konelio.

Increasing demand for taro is shown by exports of Samoa 1 and 2 taro varieties, which rose dramatically between January 2014 and June 2015, with approximately 1.5 million taro roots exported according to figures from the MAF taro packhouse. The number of containers of taro exported by Samoa to New Zealand and the United States of America has increased from four to 16 containers per month, and this figure is expected to further rise.

The selection and release of the three new taro lines was part of the Australian Centre for International Agricultural Research (ACIAR)'s Pacific Agricultural Research for Development Initiative (PARDI). The project, which is developing a clean seed system for market-ready taro cultivars in Samoa, is led by SPC's Land Resources Division in collaboration with MAF, the Scientific Research Organisation of Samoa (SROS), farmers and exporters, SPC's Genetic Resources Coordinator Valerie Saena-Tuia explained.

More potential export varieties have been evaluated by SROS, and one cycle 8 line has been identified that has produced four types which outperformed existing export varieties and Fiji Tausala ni Samoa, in terms of taste and consumer acceptance. These four types have been released to MAF for multiplication and trials to further assess their performance under Samoa's different agro-climatic conditions. These new taro lines, including top varieties acquired from cycles 3 to 8, were bred by SPC's taro breeder in Samoa, Moafanua Tolo Iosefa, in collaboration with MAF, SROS, the University of the South Pacific, farmers, the private sector and development partners under different projects.

Sixteen taro varieties from Samoa's breeding programme have been ranked among the best from eight countries (Burkina Faso, Costa Rica, Cuba, India, Madagascar, Philippines, Saint Vincent and Grenadines and Papua New Guinea) by the European Union International Network for Edible Aroids (EU INEA). INEA is also evaluating new taro lines for drought tolerance in Samoa, along with the UN Food and Agriculture Organization (FAO) Treaty Benefit Sharing climate change project, both of which are implemented by SPC.

The SPC-managed and EU-supported Pacific Agriculture Policy Project will also contribute to the taro breeding programme to produce lines with improved nutrition and to assist with farmer training on multiplication of these new varieties.

The new lines are hybrids from Pacific and Asian taro diversity provided by the SPC Centre for Pacific Crops and Trees (CePaCT), based in Suva Fiji. The Pacific and Asian taro varieties were acquired through SPC–AusAID Taro Genetic Resources (Conservation and Utilisation) and Samoa Farming System projects, the EU-funded Taro Network of the South-east Asia and Oceania, the Global Crop Diversity Trust and FAO Treaty Secretariat facilitating access and sharing of taro diversity through the International Treaty on Plant Genetic Resources for Food and Agriculture. ■ *source CePaCT team*

# LOW TECHNOLOGY, ELEVATED CULTIVATION MODEL FOR VEGETABLE FARMING SHOWCASED IN SAMOA

A simple but effective technology for growing and irrigating vegetables was showcased and promoted at the Samoa Agriculture Show held 13–16 October, and is receiving interest from local farmers. The system uses a bamboo structure to raise the crops, and irrigation using readily available containers such as household buckets. It draws on one of the models demonstrated at the SPC Pacific Agricultural Plant Genetic Resources (PAPGREN) meeting held in Fiji in 2014, which showcased low-tech appropriate technologies.

Malouafuli Pueata Tanielu, Principal Crops Development Officer of the Ministry of Agriculture and Fisheries in Samoa, attended the PAPGREN meeting and was pleased to see the technology being demonstrated in Samoa. "I see this of great benefit for our small vegetable growers in Samoa," he said.

"The high cost of vegetables and low supply during the off season period are the main constraints in the availability of vegetable varieties for household consumption."

"The model is perfectly suited to alleviate supply constraints using bucket irrigation system and shade house combinations. Promotion and adoption of this model is also in line with the new settlements of quarter acre land allocated at Vaitele, Vailele and Nuu-fou areas. The technology can be used for a backyard garden to provide vegetables for their own household use."

Showcasing the model during the Agriculture Show generated a lot of interest from the public, farmers and schools. Two farmers have already used the bamboo technology for planting leafy vegetables such as lettuce and Chinese cabbages.

"This model has been promoted in atoll countries such as Kiribati and Tuvalu and proved useful due to the limited land space available and increased urbanisation. In big countries, families living in urban or town areas can use this technology to grow their own vegetables in the backyard for improved health," said Valerie Saena-Tuia, Genetic Resources Coordinator managing the PAPGREN network. ■ *source CePaCT team*

# FOREST INVENTORY
# REGIONAL SUPPORT FACILITY ESTABLISHED IN THE PACIFIC

Pacific Island countries (PICs) need to ensure that their forest and tree resources are sustainably managed and developed to help their communities adapt to the effects of climate change. To achieve this goal, PICs need access to accurate and up-to-date data and information about their forest and tree resources – and a critical starting point is national forest inventories. This was the driving force behind the establishment of the forest inventory regional support facility in 2014, which has recently been approved for a second phase.

The forest inventory support facility was set up under a project titled 'Strengthening regional support to national forest monitoring systems (NFMS) for REDD+ in the Pacific', which is implemented by the Pacific Community (SPC) in partnership with FAO and with funding from the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD). The project established two regional support facilities – one for remote sensing, based at SPC's GeoScience Division (GSD), and one for national forest inventories, based at the Land Resources Division (LRD).

The forest inventory support facility has assisted selected PICs in training their forestry staff in all aspects of compiling national forest inventories. It has also provided technical backstopping support to some countries, and contributed to the formulation of national forest inventory guidelines. By the end of the first phase of the project in July 2015, the forest inventory regional support facility had organised three regional workshops and two backstopping missions, involving 85 participants from seven PICs. In addition, the facility has produced four booklets with guidelines for carrying out national forest inventories, targeting policy makers, managers, foresters and field technicians, and data analysts.

Due to the very successful delivery of the phase one project outputs, FAO, again with funding from UN-REDD, approved a second phase of the forest inventory regional support facility to run from August 2015 to July 2016. This phase of the project aims to continue capacity building activities for developing national forest inventories. With staffing support from the FAO/UN-REDD programme and LRD, the facility will be responding to inventory support requests from PICs, facilitating and hosting regional workshops, and delivering a range of backstopping activities.

One of the first activities organised by the facility in its current phase was a two day REDD+ national forest monitoring system capacity building workshop held in Nadi, Fiji, on 18–19 November 2015. Dr Julian Fox and Dr Abe Hitofumi from FAO were the main resource personnel at the workshop, which was attended by government forestry officers from the Cook Islands, Fiji, Papua New Guinea, Samoa, Solomon Islands and Tonga.

The forest inventory regional support facility is also working towards launching its website, to showcase these events and future activities for REDD+ in the Pacific. ■

*source Forest & Trees team*


# BUILDING PACIFIC CAPACITY IN ORGANIC INSPECTION

Organic markets pay high prices and hold great potential for Pacific Island farmers, but the cost of obtaining the necessary third-party certification can be prohibitive, as it usually requires bringing in qualified inspectors from outside the region. As a solution, the Pacific Organic and Ethical Trade Community (POETCom) is carrying out training for Pacific Islanders in organic inspection, to build capacity within the region.

Amruqa is a small company in Papua New Guinea that produces and supplies spices and virgin coconut oil. Around a year ago Amruqa stopped organic certification of its products, as the cost of flying an inspector into East New Britain, and then travelling to inspect 400 farms growing spices and essential oil plants over an area of 6,107 square miles, became too much.

"We just couldn't do it anymore, it was just too expensive," said Sharmayne Ryan who was managing the certification system for the company. The farmers continued farming without chemical inputs, but without organic verification their products could not be sold as 'organic' and fetch the premium prices.

In Samoa, third-party certification costs are subsidised by the government, and organic production is flourishing with 11.8% of agricultural land under organic production, the highest in the Pacific islands region. However, in other Pacific Island countries where there is no government support, the costs are limiting the development of organic farming and leading to frustration among farmers.

### *A SOLUTION*

The first Pacific organic inspection training for the Pacific Islands region was held in Fiji in November. The participants, from Australia, Fiji, New Zealand, Palau, Papua New Guinea, Solomon Islands and Vanuatu, were already practising organic production or involved in the organic agriculture sector. The course paved the way for further training that will ultimately allow them to undertake organic auditing, based on the International Foundation for Organic Agriculture (IFOAM) Organic standard.

The training was delivered by the International Organic Inspectors Association, with the support of the National Association of Sustainable Agriculture Australia (NASAA) and Biogro. Financial support was provided by Agrana Fiji Limited and two European Union-funded programmes – the Pacific Agriculture Policy Project (PAPP) and Increasing Agricultural Commodities Trade (IACT), both implemented by SPC.

"The aim of the training is to build Pacific-based capacity in organic inspection, ultimately contributing to lower costs for third party organic certification in the Pacific Island region," said Karen Mapusua, POETCom coordinator. "Participants who successfully completed the assessment tasks are eligible to participate in an ongoing training process to qualify to undertake inspections on behalf of accredited organic certifying bodies."

Freelance organic inspectors Costa Rican Luis Brenes and Australian Kathe Purvis facilitated the training. Brenes has worked in the business for 23 years. He believes the benefits of training for the Pacific extend beyond new organic inspectors. "The Pacific needs to build a strong organic farming foundation, and to do that it will need many extension officers to help farmers get certification by guiding them on the principles and rules of organic farming," he said.

It can take up to a year for trainee organic inspectors to fully qualify to carry out independent third party certification inspections. However, some participants left the training with new skills that will allow them to advise and guide organic farmers for certification.

One of the participants was Belten Taki from Solomon Islands. He works with about 900 farmers through the Coconut Technology Centre in Honiara, Solomon Islands, making virgin coconut oil. "What I share will really help them," he said. "More interest is growing in organics in the Solomon Islands because farmers like the lower costs associated with organic farming because they don't have to buy chemical fertilisers. There is also a lot of interest in accessing organic markets overseas so the training will help us prepare them for certification." ■ *source POETCom team*

...from page 3

was operational from 2008 to 2010. DNA analysis under the project showed high genetic diversity within the indigenous populations of pigs and chickens in the six countries. The analysis further showed the local pig populations had strong genetic linkages with the South Asian pig. For chickens, the results showed high variability in genetic diversity within the populations studied, however the indigenous chicken populations were found to be very closely linked to the red jungle fowl. Of the countries studied, the Niue chicken population showed the most uniqueness in genetic makeup. The study also showed there was no evidence of genetic contamination from commercial chicken breeds in all six indigenous populations. Thus the indigenous breeds of chickens and pigs in these countries are considered unique and are regarded as important genetic diversity hotspots. These findings led to FAO reaffirming its commitment to genetic conservation and multiplication through the current project, which is conserving indigenous pig and chicken breeds in the Cook Islands, Fiji and Niue.

In Niue, three existing open-fence chicken farms have been selected, renovated and improved to be centres for breeding, conservation and distribution to other farmers. The centres are located in Hikutavake, Mutulau and Hakupu villages. To improve sustainability, the chicken farms are being run on a semi-commercial basis, generating income from the sale of eggs and meat. Chickens have been sourced from distant villages and brought to the farms for breeding. A total population of 100–150 local breeder chickens are expected to be kept in a free-range system within the fenced-in area at any one time.

Other conservation and multiplication sites under the project include indigenous chicken farms in the Cook Islands and an indigenous pig conservation and multiplication site in Fiji. The AnGR project is also be looking at the next phase, which will focus on conserving and multiplying indigenous breeds for marketing purposes.

■ *source Animal Health team*

# PROVIDING BETTER FUTURES FOR FAMILIES IN SIGATOKA VALLEY

*Ravindra Singh, 42, of Bilalevu, Sigatoka Valley is one of the many farmers who have been assisted by the Improving Key Services to Agriculture (IKSA) project. IKSA, supported by the European Union, is implemented by SPC's Land Resources Division under the EU's Accompanying Measures for Sugar Protocol (AMSP) programme.*

*Ravindra owns 8 acres of freehold land adjacent to the Valley Road some 15 km from Sigatoka town. His family has been farming on this land for the last 8 years. Ravindra left school in Class 6 and as a youth was not interested in farming, pursuing a career in boxing and as a disc jockey. It was only later that he came to see the benefits of a career in farming. He is now married with four children and lives with his parents in a three bedroom house on their land.*

*Ravindra's passion for farming was boosted with the assistance of the IKSA project. The project helped with the drilling of a borehole and equipment such as water tanks and nursery and greenhouse materials. With this assistance, he was able to plant cabbage, tomato, long bean, four varieties of lettuce, cucumber, melon, gourd, English cabbage and capsicum, and is able to grow them year-round to tap into high-value markets.*

*Ravindra markets his crop to middlemen around Sigatoka town, who supply to hotels in the greater Sigatoka and Coral Coast area. According to Ravindra, his income after the IKSA assistance has multiplied more than ten times, and his family is benefitting. He is paying off his bank loan, and will invest in providing his children with better education opportunities.*

*Appreciative of the support of IKSA, Bhinu thanks both SPC and the European Union and acknowledges that without this assistance, he would have been struggling to provide his family with a better future.* ■ *source IKSA team*

## About SPC Land Resources Division (LRD)

LRD's core business is to improve the food and nutritional security of the Pacific Community through the sustainable management and development of land, agriculture and forestry resources. This is accomplished through the delivery of technical support, training and advice to our member country governments in the areas of plant protection, conservation and use of plant genetic resources, animal health and production, agroforestry, sustainable systems for agriculture, forestry and land management, and biosecurity and trade facilitation.

**LAND RESOURCES NEWS IS THE QUARTERLY NEWSLETTER OF SPC LAND RESOURCES DIVISION.**

Contributors: Salome Tukuafu,Fereti Atumurirava, Valrie S. Tuia, Ulamila Lutu, Elenoa Salele, Theresa Fox, Cenon Padolina & Vinesh Kumar

Pacific Community
Communauté du Pacifique

For feedback, comments and contributions, please contact:
SalomeT@spc.int, or the LRD helpdesk, lrdhelpdesk@spc.int.

SPC Land Resources Division
Private Mail Bag, Suva, Fiji Islands
Telephone: (679) 337 0733
Fax: (679) 337 0021
Visit our website: www.spc.int/lrd