

TRAVEL REPORT FORM

출장보고서

결 재	사원	부서장	원장	
	12/21 Christianne Aikins	12/21 문상원	12/21 정홍상	
협 조	팀장			
	12/21 김광형			

I. Reporter 보고자

Department 소속	Position 직위(직급)	Name 성명	Travel Date 날짜	Note 비고
External Affairs Department	Staff	Christianne Aikins	2016.12.04.~ 2016.12.10	ToCSA Training Workshop

II. Major Activities 주요업무 수행내용

1. Main Contents and Activities 주요내용 및 활동

- The Tonga Climate Services for Agriculture (ToCSA) Training Workshop was held on Tuesday 6 December and Thursday 8 December, 2016 to teach participants about APCC and climate science, and train them on how to use ToCSA
- Various venues were evaluated for the 2017 APCC Joint Final Workshop for this project (*Improving Agricultural Productivity in Tonga through Ensuring Data Availability and Enhancing Agro-Meteorological Services*) and the groundwater project (*Development of Smart Groundwater Management System in the Kingdom of Tonga: Utilizing Climate Information in Response to Shortage of Water*)
- Meetings were held with the Ministry of Agriculture and Food, Forests and Fisheries (MAFFF) CEO and Head of Corporate Service Division to discuss the expansion of ToCSA to include extension workers and the upcoming 2017 APCC Joint Final Workshop for this project, as well as the official handover of ToCSA
- Meeting held with the Tonga Meteorological Service (TMS) to discuss the 2017 APCC Joint Final Workshop and the official handover of ToCSA
- Meeting with NGO Mainstreaming of Rural Development Innovation Tonga Trust (MORDI) to discuss data acquisition and the potential of future collaboration

2. Relevance to APEC Climate Center's Activities 결론 및 소감

- These activities improved awareness about APCC, enhanced visibility for

this project, and disseminated information about the usefulness of ToCSA among commercial farmers and various stakeholders

- The training improved the understanding and uptake of APCC's product, ToCSA, and gathered feedback for its improvement
- Meetings and feedback gathered will contribute to the development of future APCC projects, including the potential of expanding ToCSA to include an aspect focused on extension workers, as well as new potential collaborations
- Venue options were evaluated for the 2017 APCC Joint Final Workshop

III. References 참고사항

(with attachment of any information or report in case of attendance of conferences, workshops and meetings) 학술대회, 워크숍, 회의 등 참석 시 관련 정보 및 문서 첨부

1. Presented and Collected Materials 주요 수집자료

- Attachment 1: Travel Report

2. Suggestions and Remarks 건의사항

- Presentations and other supporting documents will be included with the forthcoming ToCSA Training Workshop Report

Travel Report: Tonga

[2016.12.19. Prepared by Christianne M Aikins @ External Affairs Department and Kwang-Hyung Kim @ Research Department]

☐ Travel summary

1. Name and position of traveler(s):

Christianne Aikins (International Project Officer, External Affairs Department)

2. Destination and travelling period:

Tonga, Tongatapu Island; 4(Sun)-10(Sat) Dec, 2016

3. Purpose of Travel:

- Tonga Climate Services for Agriculture (ToCSA) training workshops to be held for: key commercial farmers, extension workers and target Ministry of Agriculture and Food, Forests and Fisheries (MAFFF) staff, and Farmer Field School participants
- Meetings with MAFFF CEO and staff to understand the needs of extension workers, future directions under the new leadership, and explore options for an extension-focused aspect of ToCSA
- Meetings about ToCSA and seasonal temperature forecasts with Tonga Meteorological Service (TMS), to discuss the use of the upcoming tercile probabilistic ENSO forecast, and to discuss the National Climate Outlook Forum (NCOF)
- Meetings with NGO Mainstreaming of Rural Development Innovation Tonga Trust (MORDI) to discuss data acquisition (traditional agricultural knowledge) from FAO project to integrate into Climate Smart Farming aspect of ToCSA
- Evaluate venue options for the upcoming APCC Joint Final Workshop in early 2017 for the *Improving Agricultural Productivity in Tonga through Ensuring Data Availability and Enhancing Agro-Meteorological Services* (referred to as the Tonga AgroMet Project which developed ToCSA) project and the *Development of Smart Groundwater Management System in the Kingdom of Tonga: Utilizing Climate Information in Response to Shortage of Water* project.

4. Outcomes:

- Increased awareness about APCC, the project, and ToCSA among commercial farmers and various stakeholders, focusing on young individuals for maximized project uptake and sustainability
- Enhanced understanding and usage of ToCSA among target beneficiaries
- Input for potential expansion of ToCSA to include elements to support extension workers
- Data access to traditional agricultural knowledge
- Additional feedback on user-friendliness of ToCSA
- Enhanced knowledge of stakeholder interests and increase project visibility
- Venue options have been found, with key contacts identified, and began plans with government partners for the APCC Joint Final Workshop in February or March

5. Meeting Notes:

Tuesday December 6, 2016

Nishi Trading

Location: Nishi Office, 'Utulau

Participants: Christianne Miko Aikins (APCC), Mr. Minoru Nishi (Managing Director, Nishi Trading), Ms. Ella Gabriel Kafalava (Research & Development Officer, Nishi Trading)

Major points

- Mr. Minoru Nishi shared ideas of how Tonga Climate Services for Agriculture (ToCSA) and the AgroMet project could be expanded – including integrating ToCSA into the district offices by training officers. Possibilities of expanding the project for the management of disasters (e.g. to enable a comparison of before/after crop records) and additional features were discussed.
- Mr. Nishi suggested talking to Mr. Soane Patolo, National Programme Coordinator for MORDI, who could be willing to help disseminate the information and services provided through ToCSA.
- Ms. Ella G. Kafalava shared some minor errors encountered on the online “Field Diary” within ToCSA, to be fixed by APCC, and also noted that the Ministry of Agriculture and Food, Forests and Fisheries (MAFFF) website does not have a direct link to ToCSA.
- Mr. Nishi and Ms. Kafalava also noted that the MAFFF survey form for the annual agricultural census has a start and end date. They suggested this could be an option for ToCSA rather than including a duration of action (eg harvesting over three days).
- They also pointed out a need a legend for the symbols on the weather forecast
- Additionally they thought that ToCSA should have “English/Tongan” for the initial inputs in ToCSA (the automatic entries with a new account is created), so that workers can at least select what they’re doing. This is also important because farmers need to have English on their export certificates, so if it’s English/Tongan, then it does both.

Actions

- Discuss with the Tongan Meteorological Service (TMS) about translating these terms and discuss with the IT company about possibility of integrating these translations

ToCSA Training

Location: Nishi Farm, 'Utulau

Participants: Christianne Miko Aikins (APCC) and 22 participants

Major points

- The participants for this session consisted of mostly smallholder farmers and workers. As they are not the direct target beneficiaries of ToCSA, this training focused more on APCC's work, climate change impacts in Tonga, Climate Smart Agriculture, and the more simple tools of ToCSA (such as finding the optimal planting date or checking the weather forecast or seasonal outlook). A more detailed training was performed on Thursday December 8.
- The training was held in English and Tongan, as most participants could not speak English, but lively discussion about climactic change in Tonga as well as farming practices were held.
- Overall the feedback was positive, as the participants were very interested to learn about global warming and the impacts of climate change on Tonga, but many also said they would not use ToCSA (in particular the women, potentially due to the fact that they only grow a small amount of vegetables to augment their household's food). This is partially due to the language (as it is in English) but also an unfamiliarity with working with data and graphs. As ToCSA was designed as a comprehensive but somewhat complicated suite of tools for commercial farmers, rather than smallholder farmers, this was not unexpected. However plans are currently underway to help make ToCSA accessible to a broader audience, making the feedback from this session important.
- Computer literacy was extremely low but participants expressed interest in using ToCSA to access the weather forecast through friends and family with smartphones. The weather forecast is generally only available twice a day on the radio and television, making ToCSA a valuable source.
- Participants voiced the need to have ToCSA in Tongan as well.
- Full details will be provided in the workshop report

Mainstreaming of Rural Development Innovation Tonga Trust (MORDI)

Location: The Waterfront Cafe, Nuku'alofa

Participants: Christianne Miko Aikins (APCC), Mr. Minoru Nishi (Managing Director, Mr. Nishi Trading), Soane Patolo (National Programme Coordinator, MORDI)

Major points

- Mr. Patolo expressed excitement and great interest in ToCSA and hoped that we could collaborate in the future. He and Mr. Nishi discussed how ToCSA or similar climate information services could be used when they reach out to communities.
- Mr. Patolo shared some relevant work, which may be able to link to APCC's efforts in Tonga. There is an upcoming MORDI project beginning in 2018, which they say is one of the biggest

agriculture projects in Tonga. It focuses on smallholder farmers, climate change and disaster risk management to increase the resilience of farmers.

- The project will also focus on Agromet, and they expressed interest in building on our work. He also noted they are hiring 60 new extension officers, due to their experiences with the government extension officers, who they say are uncooperative.
- Mr. Patolo noted that they are looking to build a Ministry of Internal Affairs database for agriculture. Because of the overlap with the database developed by APCC for MAFFF (Tonga Agriculture Information System) I suggested looking into how these could be linked, rather than building a new database.
- Next year MORDI will have a conference focusing extension (end of February or early March) to do a gap analysis and build knowledge. MORDI would welcome APCC as a guest, as our work is closely related to extension services. This seems to be an excellent opportunity for APCC to learn more about the current status as well as needs for extension work in Tonga
 - Due to long-term disinterest or active obstruction to MORDI's work (which performs many extension or extension-like services in villages across Tonga), they voiced a very negative view of government extension workers, and have taken steps to provide these services despite lack of support.
 - They also would like to include private sector
- MORDI would like to meet and discuss collaboration for similar things to these projects with APCC in February or early March.

Actions

- Update MORDI on the APCC Joint Final Workshop dates and arrange meetings.

Wednesday December 7, 2016

Venue Assessment for the Joint Final Workshop

Location: Fa'one Lua Conference Centre, Nuku'alofa and Tanoa Dateline Hotel, Nuku'alofa

Participants: Christianne Miko Aikins (APCC), Ms. Falefehi Taufu (Administrative Assistant, MORDI), Mere Vuda (Conference and Events Manager, Tanoa Dateline Hotel), Tiola Fotukava (Reservations Team Leader, Tanoa Dateline Hotel)

Major points

- The Fa'one Lua Conference Centre and the Tanoa Dateline Hotel were evaluated as potential venues for the upcoming Joint Final Workshop in early 2017 (for the project *Improving Agricultural Productivity in Tonga through Ensuring Data Availability and Enhancing Agro-Meteorological Services*, which developed ToCSA, as well as the *Development of Smart Groundwater Management System in the Kingdom of Tonga: Utilizing Climate Information in Response to Shortage of Water* project).
- While the newly renovated Tanoa Dateline Hotel is beautiful and well designed, it seems that this will be well above the APCC Joint Final Workshop budget.
- The Fa'one Lua Conference Centre, which is managed by the Prime Minister's office, seems better suited to our needs and budget and was recommended by our government partners.
- See section 6 for more details on pricing and amenities

Ministry of Agriculture and Food, Forests and Fisheries (MAFFF)

Location: MAFFF New Building, Nuku'alofa

Participants: Christianne Miko Aikins (APCC), Dr. Viliami Manu (CEO, MAFFF), and Mr. Manaia Halafihi (Head of Corporate Division, MAFFF)

Major points

- Dr. Manu updated us on recent efforts, where MAFFF is trying to initiate a new project with the World Bank (13.8 million USD), *Tonga Agriculture and Fisheries Improvement Project*, which will be based in extension office and focusing on food security. While the project is not directly related to the AgroMet project, they wanted to keep APCC aware of future initiatives.
- This new project might involve making a new database, so I suggested working with the Tonga Agricultural Information System (TAIS), a database which APCC has already developed for MAFFF as part of the Tonga AgroMet Project. TAIS is currently being used for market and crop data collected by MAFFF and would potentially be a good system for other crop information from the potential World Bank project. APCC is interested in promoting the long-term sustainable use of TAIS, which includes linking to new projects.
- APCC Joint Final Workshop
 - MAFFF is okay with a joint handover with TMS of ToCSA and agreed to signing a commitment on updating data.
 - The minister would be able to join (possibly) if we give enough advanced notice. Currently Feb 22 is okay with them.
- A number of extension officers were identified to join the next day's ToCSA Training.
- MAFFF agreed to make sure a link to ToCSA was put on the MAFFF website (<http://mafff.we.bs/>), which they are currently updating.

Actions

- Follow up to ensure that a link has been placed on the MAFFF website

Thursday December 8, 2016

ToCSA Training

Location: Nishi Farm, 'Utulau

Participants: Christianne Miko Aikins (APCC), and 19 participants

Major points

- The participants of this training consisted of our target beneficiaries: commercial farmers, extension workers, and other partners in government, making this a more focused training than the first session on Tuesday 6 December.
- The participants were extremely receptive towards the section on global warming and the impacts of climate change. Many of them expressed that they did not know the full extent to the changes, though they were familiar to the concept.

- As many of them recognized the importance of climate and weather for agriculture, the participants were excited to hear about ToCSA as a portal to access key information. Although there were varying levels of interest in the full suite of services, planting dates and market data were highlighted as interesting.
- The participants were appreciative of APCC's work in the region, saying how important it is to bring in international knowledge and tools to support Tongans.
- Extension workers provided feedback and discussed needs
 - They noted that the basic needs of transport and equipment for normal tasks need to be met before trying to introduce complex tools like ToCSA.
 - However, they were generally positive about using new technology in their work and were appreciative of APCC's work in Tonga.
- Full details will be provided in the workshop report

Small Farmer Consultation

Location: PekiPaki Farm

Participants: Christianne Miko Aikins (APCC), Mr. Saia PekiPaki (Farmer Field School), Mr. Paula Halapiapi (Farmer Field School)

Major points

- These smallholder farmers were excited to use more climate information in the future, as they stressed the importance of knowing the weather in advance or the best day for harvest, but feel that further training is necessary.
- They noted that they do not have easy access to a smart phone or computer, but expressed a desire to gain access (Mr. PekiPaki shared a story of contacting his family in the US to request a smartphone after attending the training on Tuesday December 6).

Actions

- Mr. PekiPaki was willing to speak at the APCC Joint Final Workshop in February if we wished.

Friday December 9, 2016

Tongan Meteorological Service (TMS)

Location: Tongan Meteorological Service (TMS)

Participants: Christianne Miko Aikins (APCC), 'Ofa Fa'anunu (Head, TMS), Seluvaia 'Llolahia (Senior Climate Officer, TMS)

Major points

- ToCSA and Final Workshop: Mr. Fa'anunu will go to Fiji for a World Bank meeting/workshop on Feb 13. They may also have a week-long training. Mr. Fa'anunu will find out about that in mid-December and let us know. He also pointed out that February is when there are the most cyclones in Tonga.
 - ToCSA handover: Mr. Fa'anunu is amenable to doing a joint handover with MAFFF – we can do a little handover signing ceremony as well. He is also concerned that MAFFF will lose interest.

- Mr. Fa'anunu wants to know ensure that TMS can independently update and change ToCSA – and would like training for IT staff. He also noted that funds from TMS's World Bank project (see below) could be used to fund travel and training.
- Ms. 'Llolahia had forgotten how to update ToCSA and upload the climate advisory, so I shared the admin details.
- Flyer: Mr. Fa'anunu was happy with the flyer but also asked about the possibility of creating one focused only on ToCSA. He recognized that this needs to be in Tongan and English (willing to translate).
- AgroMet Working Group: Mr. Fa'anunu says they have all been too busy to meet. It seems that there have also been some issues with harmony. There was an FAO consultant who came to Tonga for a couple months and also held “agro” meetings of the AgroMet working group. This consultant caused issues by claiming the group as an FAO project (took implementation plan and put FAO logo on it)
- National Climate Outlook Forum (NCOF): TMS only received 10,000 USD from WMO but they expect a need of 70,000 (to bring in everyone from outer islands etc). They asked us to help think about other avenues (Tonga has other priorities for GEF funds) or sources to fund this. This means that the NCOF will no longer be taking place in February/March, as the plans will be suspended until further funding is obtained.
- They also gave an update on their EU project, where they will be installing new Automatic Weather Stations (AWS) around the country. This should begin in mid-2017. As these AWSs will now contribute to ToCSA, they will need IT support integrating the new data .
- Mr. Fa'anunu also shared some information about a separate World Bank project, which he said is now fully active (it runs from 2016-2020 and is supported by 16.8 million USD).
 - 500,000 USD is allocated for training, and there is also other money for training arrangements. Mr. Fa'anunu expressed interest in sending someone to APCC or bringing APCC staff here to do training using these funds. The details have not yet been discussed.
 - The main focus of this project is on infrastructure: they are using 11 million USD for the multi-hazard early warning system and building three new buildings on Tongatapu, Vava'u, and Ha'apai. TMS will also be housed there. The goal is to have impact forecasting.
- They also asked about the possibility of bringing in an agromet expert to be embedded in TMS from APCC or elsewhere. Mr. Fa'anunu felt that this is a good time to bring in an expert to bridge this gap, and may also make MAFFF aware of their need for such a position. Since this type of support is not commonly provided by APCC, I suggested also looking into the Climate Technology Centre & Network (CTCN) and other organizations that do technical assistance.

Actions

- Discuss internally to explore possibilities of sending APCC staff or APCC-partner organization experts
- Follow up regarding a confirmation of dates for the APCC Joint Final Workshop

Scenic Hotel

Location: Scenic Hotel, Fua'amotu (Near to the Fua'amotu International Airport)

Participants: Christianne Miko Aikins (APCC), Mr. Zeyn Buksh (Assistant Manager, Scenic Hotel), Ms. Katie Silcock (General Manager, Scenic Hotel)

Major points

- The Scenic Hotel was evaluated as a potential venue for the APCC Joint Final Workshop in early 2017 (for the project *Improving Agricultural Productivity in Tonga through Ensuring Data Availability and Enhancing Agro-Meteorological Services*, which developed ToCSA, as well as the *Development of Smart Groundwater Management System in the Kingdom of Tonga: Utilizing Climate Information in Response to Shortage of Water* project).
- The hotel has a range of flexible options for dining and event arrangement, however the location is inconvenient for the many participants who will be coming from Nuku'alofa, roughly 35 km away. TMS noted their belief that participants would in fact not come, due to this distance.
- See section 6 for venue details

6. Venue Options for the 2017 APCC Joint Final Workshop:

The APCC Joint Final Workshop will be held in early 2017 for the projects *Improving Agricultural Productivity in Tonga through Ensuring Data Availability and Enhancing Agro-Meteorological Services*, which developed ToCSA and *Development of Smart Groundwater Management System in the Kingdom of Tonga: Utilizing Climate Information in Response to Shortage of Water*.

At the time of travel, this workshop was going to include a short training for the water-related project. However, this training has now been moved to a separate occasion, obviating the need for such a room. The evaluation of side rooms has been included for general information.

These venues will be discussed amongst the PI and PMs of these projects (Dr. Kwanghyung Kim, Ms. Christianne Aikins, Dr. Sunkwon Yoon, and Ms. Inja Jeon). New developments in APCC staff schedules have pushed the Joint Final Workshop to early March, to be confirmed by partners. The workshop plan will be drafted in early January.

Fa'one Lua

Location: Waterfront Nuku'alofa

Contact: Prime Minister's Office directly (would need assistance through MORDI or TMS)

Conference room:

- Main conference room is \$575^{*}/day (tax included)
- Seats 400 people, large conference style
- Whole building: \$1,450

Side rooms:

- Small rooms for training and meetings are all \$287.80 per day
- Have meeting rooms (board room) and also empty rooms that can be arranged in any manner
- They were not sure about having a projector but we can also bring any equipment we might need

Lunch:

- Refreshment costs differ depending on room type; and they have four tables – enough for refreshments
- we would have to bring in catering and tables/chairs for a lunch from an outside company

Accommodation:

- None but since downtown, any can be used

Notes

- This is the venue that was recommended by TMS and MORDI, both of whom are happy to assist in arranging it. Another upside is its run by the ministry so more “official”

^{*} All prices in TOP, unless specified