

TRAVEL REPORT FORM

출장보고서

결 재	팀장	부서장	원장	
	03/30 김광형	04/04 김형진	04/04 정홍상	
협 조				

I. Reporter 보고자

Department 소속	Position 직위(직급)	Name 성명	Travel Date 날짜	Note 비고
응용사업본부 대외협력실	팀장 PM	김광형 Christianne Aikins	2017/3/1-11	

II. Major Activities 주요업무 수행내용

1. Main Contents and Activities 주요내용 및 활동

- 통가 농업기후정보서비스 사업 최종 워크숍
 - APCC 통가 프로젝트 Joint 최종 워크숍 (프로젝트 결과 공유, ToCSA 이양식 및 2017년 통가 농수자원 사업을 위한 MOU 체결식 등)
- 통가 농업기후정보서비스 시스템(ToCSA) 운영 교육
 - 통가 기상청 및 농림수산부 직원 대상 운영 교육
- 2017년도 사업 Kick-off 협의 및 프로젝트 진행
 - 농업 프로젝트 내용 세부협의(통가 농림수산부 관계자 미팅, 토양수분 센서 설치, 영농일지 활용 농업데이터 수집 체계 구축 등)

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

- 통가 농업기후정보서비스 사업 (Tonga AgroMet Project) 최종 워크숍을 완료함
- 통가 농업기후정보서비스 시스템 (ToCSA)에 대한 운영자 교육을 실시함
- 통가 NGO인 MORDI와 통가 농림수산부와 Extension Diary에 대한 지속적 협력을 논의함

*자세한 내용은 첨부된 출장보고서 참조

(Tonga AgroMet_Travel_Report_201703_Final.docx)

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

2. Suggestions and Remarks 건의사항

Travel Report

[2017.03.15. Prepared by Kwanghyung Kim @ Climate Application Department and Christianne Miko Aikins
@ External Affairs Department]

□ Travel summary

1. Name and position of traveler(s): Kwanghyung Kim (Research Fellow, Climate Application Department), Christianne Aikins (International Project Officer, External Affairs Department)

2. Destination and travelling period: Tonga, Tongatapu Island; 1-11 March, 2017

3. Purpose of Travel:

- This business trip to Tonga was essential for the closing of the project *Improving Agricultural Productivity through Ensuring Data Availability and Enhancing Agro-meteorological Services* (AgroMet Project), which ran from August 2014 to December 2016
- Final meetings were held with key project stakeholders and beneficiaries of the project, which focused on commercial farmers in Tonga
- A final workshop* held on Wednesday March 8th 2017, featured an overview of project successes and outputs, addresses by project partners from the Tonga Meteorological Service (TMS) and the Ministry of Agriculture and Food, Forests and Fisheries (MAFFF), as well as addresses from other project beneficiaries
 - o *The final workshop was held in partnership with another project, the *Development of Smart Groundwater Management System in the Kingdom of Tonga: Utilizing Climate Information in Response to Shortage of Water* (Water Project), which also ended in December 2016.
- An official Handover Ceremony was held during the final workshop to hand over a key project output, the Tonga Climate Service for Agriculture (ToCSA), an online agro-climate service developed by APCC to help support Tongan farmers adapt and minimize climate risks
 - o A Joint Ownership and Usage Agreement was signed by APCC, TMS, and MAFFF to officially cede ownership and responsibility of ToCSA and the relevant supporting equipment

- An informal meeting and training was held on Monday March 6th 2017, for key TMS and MAFFF staff to ensure a successful and sustainable handover of ToCSA on the running and maintenance of the system for future use
- Final visits were made to important project sites, such as the field trial sites at the Nishi Trading Farm and the MAFFF Vaini Research Station

4. Outcomes:

- Provided an practical and administrative close to the AgroMet project
- Disseminated information on the successes of the AgroMet project, increased recognition of APCC's work in Tonga, and raised overall visibility of APCC in the region
- Ensured a successful and sustainable handover of key project outputs such as ToCSA
- Continue to build good relations with key Tongan partners

5. Meetings:

Friday, 3 March 2017

Ministry of Agriculture and Food, Forests and Fisheries

Location: MAFFF Head Office

Participants:

- Hon. Semisi Fakahau (Minister, MAFFF)
- Dr. Viliami Manu (CEO, MAFFF)
- Mr. Manaia Halafihi (Head of Corporate Service, MAFFF)
- Dr. Kwanghyung Kim, Dr. Yonghee Shin, Dr. Sunkwon Yoon, Ms. Inja Jeon (APCC)

Highlights:

Hon. Semisi Fakahau expressed his appreciation of APCC and the work done through the AgroMet project. Dr. Kim responded back with an appreciation of MAFFF sincerely helping APCC for the AgroMet project in various ways, mentioning about trials at Vaini Research Station, remodeling a room for agro-data digitization, and the Minister's support for the project. Dr. Kim also introduced the upcoming Agri-Water project as a continuous collaboration effort between APCC and MAFFF, and asked about continuous help for the project to be successful. Dr. Shin was introduced to the Minister as a PI of the upcoming Agri-Water project.

Hon. Minister talked about an Extension Diary, which can be developed based on the Farm Diary of the ToCSA. Possible collaboration on the development of the Extension Diary was discussed, with MAFFF providing some funding amount. This possible development should first be discussed within APCC, thus Dr. Kim responded that APCC will make a decision on the collaborative development of the Extension Diary for MAFFF and let Dr. Manu (CEO, MAFFF) know about the result.

Mr. Manaia Halafihi and Dr. Shin had a side meeting to discuss about installing soil moisture sensors in three sites of Tongatapu Island. Taro, Yam, and Vanilla were selected as target crops for smart irrigation application. Three sites were selected in the east, central, and west sites of Tongatapu Island. They scheduled the date and time for the installation of soil moisture sensors.

Nishi Trading Co.

Location: Tanoa International Hotel

Participants:

- Mr. Minoru Nishi Jr. (Head Manager of Nishi Trading Co.)
- Dr. Kwanghyung Kim (APCC)

Highlights:

Dr. Kim had a meeting with Mr. Nishi Jr. to discuss about using the Farm Diary of ToCSA at the Nishi Trading farms. An offline App of the Farm Diary was introduced and explored together with Mr. Nishi Jr.. Overall Mr. Nishi Jr. expressed a gratitude of using the App in their farm management. Minor modification of the App based on request was promised. For the upcoming Agri-Water project, installing a soil moisture sensor in one of Nishi farms was asked, and Mr. Nishi Jr. accepted our request by providing assistance of finding a trial farm and installing and maintaining the sensor by Ms. Ella Gabriel (Research Officer, Nishi Trading).

Monday, 6 March 2017

ToCSA Administration Training

Location: Tonga Meteorological Service, Fua'amotu Domestic Airport

Participants:

- Mr. Ofa Fa'anunu (Head, TMS)
- Dr. Viliami Manu (CEO, MAFFF)
- Dr. Kwanghyung Kim, Ms. Christianne Aikins (APCC)

Highlights:

A detailed walkthrough was given for the use and administration of the Tonga Climate Services for Agriculture to key staff of TMS and MAFFF. The training was designed to be an informal discussion style, allowing for the sharing of meteorological knowledge from TMS staff to MAFFF, and the sharing of agricultural knowledge from MAFFF to TMS. Participants were paired and asked to create a theoretical farm, to allow for practical exercises. Workbooks and a user manual for ToCSA were given. A dinner was held after the event to facilitate inter-ministerial cooperation.

Tuesday, 7 March 2017

MORDI Trust TRIP II

Location: MORDI Office

Participants:

- Dr. Kwanghyung Kim, Ms. Christianne Aikins (APCC)
- Mr. Soane Patolo (Head, MORDI)
- Mr. Taniela Hoponoa (Programme Officer, MORDI)

Highlights:

Mainstreaming of Rural Development Innovation (MORDI) Tonga Trust is initiating the upcoming 11 million USD IFAD funded Tonga Rural Innovation Project II (TRIP II) project in 2018, after the successful implementation of TRIP I. As agricultural extension will play a large role in TRIP II, they are extremely interested in the "Extension Diary," a potential next step in the development of ToCSA. They are hiring a number of Extension Facilitators to survey farms and train/communicate with farmers throughout the project, servicing 122 of 170 villages in Tonga, as well as purchasing tablets for this process. MORDI will be hosting a workshop in June 2017 to survey the current state of extension work in Tonga, and explore avenues for improvement.

They are currently planning to modify a suite of open source apps to perform the national baseline survey (to be conducted in late January or February 2018), but hope to join with APCC to develop and use our project. MORDI is an ideal candidate for a partner with APCC, as the strengths and weakness of each organization complement each other. While APCC is able to provide the climate science and ICT to large-scale commercial farmers, the vast majority of farmers are small holder farmers for whom ToCSA is inaccessible (either due to technical constraints or training). MORDI would use this system in communicating with 122 villages spanning across the entire Kingdom, giving unprecedented exposure to APCC initiatives and increasing the impact exponentially. By distributing tablets to all District Officers, TRIP II will make ToCSA accessible to most of Tonga.

MORDI will investigate the possibility of finding funding in 2017, as well as allocating funds from TRIP II , which can only be mobilized in 2018. However, as the product must be used at the beginning of 2018, the development of the app must begin in mid 2017. Mr. Patolo also noted that the IFAD Regional Coordinator, a Korean, is interested in increasing Korean engagement in the region. As TRIP I is currently ending, the initiation for TRIP II will begin in May/June 2017, and as such the conceptual development of the Extension Diary would begin then. They are happy to sign an implementation partner MOU for the IFAD project, or any other organizational agreement APCC would be interested in.

Wednesday, 8 March 2017

APCC AgroMet and Water Projects Joint Final Workshop

Please refer to the Workshop Report for more information

Ministry of Agriculture and Food, Forests and Fisheries

Location: MAFFF Head Office

Participants:

- Dr. Hong-Sang Jung (President, APCC)
- Dr. Viliami Manu (CEO, MAFFF)
- Dr. Kwanghyung Kim, Dr. Yonghee Shin, Dr. Sunkwon Yoon, Ms. Inja Jeon, Ms. Christianne Aikins (APCC)

Highlights:

Dr. Manu shared the story of MAFFF's involvement with APCC and the AgroMet project, noting the many benefits and appreciated outputs. He also explained that gaps remain in the agricultural sector and expressed his interest in expanding ToCSA to include agricultural extension with the Extension Diary. Dr. Jung expressed his appreciation for MAFFF's support and cooperation over the years and his hope for further successful collaborations.

Thursday, 9 March 2017

Ministry of Lands, Survey, and Natural Resources

Location: MLSNR Office

Participants:

- Dr. Hong-Sang Jung (President, APCC)

- Lord Ma'afu (Minister for Lands, Survey and Natural Resources)
- Mr. Fetu'u Vea (Acting Chief Executive Officer, MLSNR)
- Mr. Taaniela Kula (Deputy Secretary, MLSNR)
- Dr. Kwanghyung Kim, Dr. Yonghee Shin, Dr. Sunkwon Yoon, Ms. Inja Jeon, Ms. Christianne Aikins (APCC)

Highlights:

The motivation and outputs of the Water project were shared with his Lordship, with a video showing the process and successes. MLSNR expressed their interest in the project and their hope to expand and work together again. Dr. Hong-Sang Jung expressed his appreciation for the support of MLSNR and his hope to have future successful collaboration.

Deputy Prime Minister

Location: MEIDECC Office

Participants:

- Dr. Hong-Sang Jung (President, APCC)
- Hon. Siaosi 'Ofakivahafolau Sovaleni (Deputy Prime Minister and Minister for Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications)
- Mr. Ofa Fa'anunu (Head, TMS)
- Dr. Kwanghyung Kim, Dr. Sunkwon Yoon, Ms. Christianne Aikins (APCC)

Highlights:

His Hon. Sovaleni expressed his appreciation of APCC and the work done through the AgroMet and Water projects, as well as his high hopes for upcoming projects with the Agri-Water project, as well as other new initiatives. The possibility of mimicking the upcoming GCF project implemented by SPREP in Vanuatu for Tonga was discussed, possibly beginning development in late 2018. Dr. Jung explained the importance of Tonga communicating with the Korean Foreign Service to help promote further Korean engagement in Tonga. He also expressed his interest in continuing developing successful projects, such as the GCF project, or other expansions of the agrometeorological work done in Tonga.

Friday, 10 March 2017

Vaini Research Station

Location: MAFFF Vaini Research Station

Participants:

- Dr. Hong-Sang Jung (President, APCC)
- Ms. Ella Gabriel (Research Officer, Nishi Farms)
- Dr. Kwanghyung Kim, Dr. Yonghee Shin, Dr. Sunkwon Yoon, Ms. Inja Jeon, Ms. Christianne Aikins (APCC)

Highlights:

A brief visit to the Vaini Research station was held to see the automatic weather station (AWS) installed during the AgroMet project and the soil moisture sensor installed for the new Agri-Water project. Ms. Gabriel will monitor the sensors at Nishi farms and Vaini.