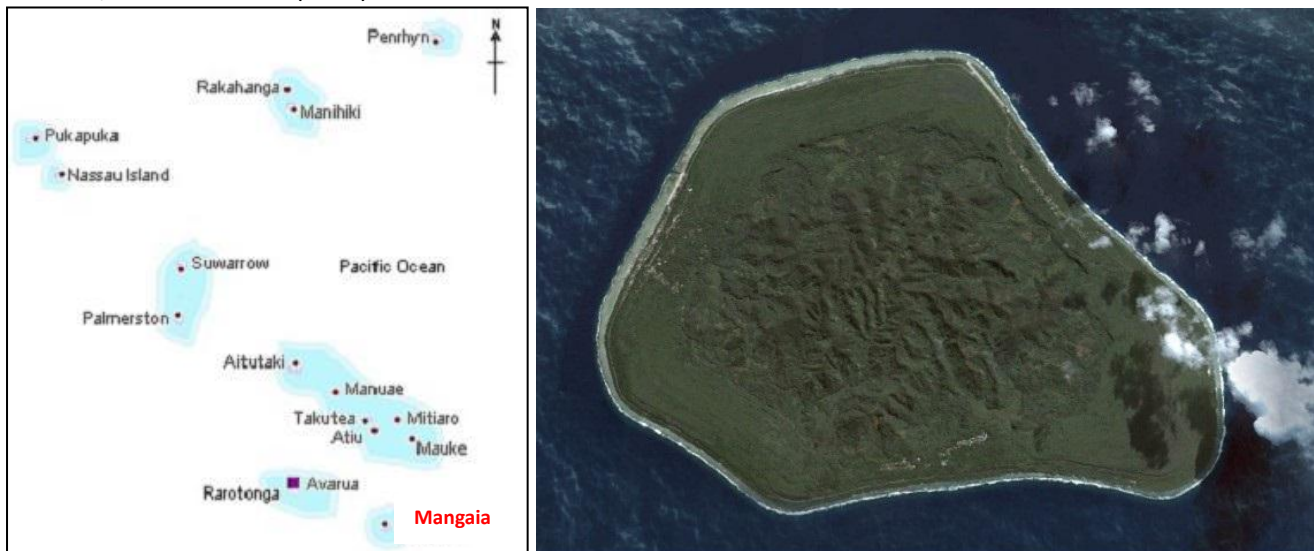


**Mangaia Rauti Para Tablet Training Project**  
**27 – 31 January 2014**

## Introduction

The Rauti Para Project team from the Office of the Prime Minister embarked for the ancient island of Mangaia on Monday, 27 January 2014, to commence the tablet training project for seniors in the southern Cook Islands. Mangaia was the first island to receive the tablet training funded by SPC EU GCCA: PSIS in partnership with the SRIC CC Adaptation Fund, Telecom Cook Islands, Cook Islands Marine Park, ICT Division of the Office of the Prime Minister, and Rauti Para (NGO).



Left: Map of the southern Cook Islands from [www.cookislands.org.uk](http://www.cookislands.org.uk). Right: an aerial view of Mangaia, the furthest island south in the Cook Islands; taken from Google Earth.

The island of Mangaia is unique in its formation and acclaimed as one of the oldest volcanic atolls in the Pacific, dated around 19 million years. In some areas terraces are clearly evident, indicating the periodic uplift of the island as a result of tectonic activities within the region during the Pleistocene period. While the coast is surrounded by razor sharp coral fossils (*makatea*), the middle of the island is a valley of rich agricultural land referred to as '*te kainga*' where residents plant taro and other crops.

In the 1950's and 1960's, Mangaia was the citrus and pineapple hub of the Cook Islands that supplied the Raro Juice canning factory in Rarotonga. However, this has since ceased when the factory closed down in the 1970's. Because the abandoned land became exposed and subject to erosion, several species of plants with commercial uses (mainly *Pinus* spp.) was introduced and are now the most dominant canopy within the interior of the island.

Mangaia's total resident population from the last census in 2011 was 562, yet more have migrated overseas since then. Like all the other islands of the Cook Islands, Mangaia suffers from depopulation especially of the younger age group who are drawn away by higher wages and better opportunities overseas. Sadly, this leaves mostly the mature-aged population who are employed by government and a few young, a situation that is most prevalent in the Pa Enua of the Cook Islands.



**Left:** Razor sharp *makatea* terraces in Mangaia (photos by Celine Dyer – Jan. 2014). **Right:** Lake Tiriara in the middle of the island is the only remaining wetland area with standing water on Mangaia.

The population demography for Mangaia (see below) clearly indicates a wide gap from the 20 – 34 yr age group (highlighted in the Table below) and the rest of the total resident population as of 2011. It is apparent that fewer people in the mature and older age groups would have much exposure to computer technology unless they have lived overseas. Considering also that many mature-aged people in Rarotonga are still unfamiliar with technology though it is much easier accessed there, how much more are the people of Mangaia disadvantaged.

*Population demography of Mangaia (2011 Census)*

Age group	10	20	30	40	50	60
<5					50	
5-9						69
10-14						67
15-19				46		
20-24	13					
25-29	15					
30-34	18					
35-39		29				
40-44				46		
45-49			38			
50-54		26				
55-59		24				
60-64			36			
65-69			32			
70-74		24				
75-79	14					
>79	15					
<b>Total 562</b>						

*Data from Cook Islands Census 2011*

## Objectives

There are three components to this project:

- 1) Tablet training
- 2) Video documentary on climate change indicators
- 3) Quantifying climate change indicators through a questionnaire survey



## Tablet Training

The Cook Islands national vision of *'Te Kaveinga Nui'* elaborates the desire of the government of the Cook Islands... *'to enjoy the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment'*. This dream is further echoed in the Cook Islands National Sustainable Development Plan 2011 – 2015 under *Goal 5: Resilient and Sustainable Communities*, and *Goal 6: Environment for Living*. The Climate & Disaster Compatible Development policy 2013 – 2016 also mirrors these views through building *'...climate and disaster resilient development...'* as its number one strategic objective, as well as its third objective which is *'building capacity of people through education and training'*. Thus, the tablet training for the mature-aged population in the *Pa Enua* aims to address some of these ambitions.

Since the mature-aged remain in the *Pa Enua* with some caring for their grandchildren, it becomes a priority to up-skill these seniors as in this instant they are the lifeline for the survival and sustainability of their particular island, their culture, and their future generations. Although they possess local and traditional knowledge and practices that have worked in the past, their knowledge and skills may not be sufficient to meet or overcome the impacts of climate change. Thus, introducing them to accessible information via the tablet will allow seniors to build upon their existing knowledge and practices. The training will certainly open new horizons for them to communicate with their families and friends living abroad while encouraging the sharing of information.

The Rauti Para project is a valuable and an historical moment for seniors in the *Pa Enua* as previous computer training have focused largely on Rarotonga, and the *Pa Enua* are often overlooked due to funding restrictions. It is arguable that the existence and future survival of these islands may not depend on government or foreign aid, but rather on the ability of the *Pa Enua* seniors to interweave their traditional knowledge and practices with new knowledge that will ensure a more resilient population to both economic hardship and particularly the impacts of climate change.



Rauti Para tablet training on the island of Mangaia, 27 – 31 Jan 2014 (photo by Celine Dyer).

## Documentary

Documenting the experiences of seniors are useful to capture their thoughts and lifetime skills and local knowledge that otherwise will be lost. The value of this concept will be measured against the questionnaire survey that is running in parallel to this exercise. With this information, it is possible to elucidate the causes of changes observed especially whether they are climate- or human-induced.

## Survey on climate change indicators

For this component of the project, questionnaires were designed to encourage people to talk freely about their personal observances of their environment in their normal everyday activities whether they are fishermen, farmers or housewives. The target number for the survey was based on population size of the island, with at least 10% of the population surveyed to be statistically valid for any analysis. For the island of Mangaia, we ensured that we gathered enough information from all three villages by door-knocking in each village.

## Delegation

The team was led by Climate Change Advisor from Climate Change Cook Islands Dr Teina Rongo, and included ICT Director of the Office of the Prime Minister Ms Pua Hunter, Ms Celine Dyer and Ms Alanna Smith from Climate Change Cook Islands, filmmaker Mr Ted Nia, and Mr Rob Matapo who joined the team two days later from SRIC CC Adaptation Fund.



The team on arrival in Rarotonga from Mangaia. *Front row (left to right):* Alanna Smith, Pua Hunter and Celine Dyer. *Back row (left to right):* Ted Nia, Teina Rongo, and Rob Matapo.



## Logistics

All logistics arrangements were organised by Rob Matapo in collaboration with the SRIC Focal Point Mr Pa Epi Mana.

## Equipment procurement

Thirty Samsung tablets including covers were purchased, a projector, a laminator (an unbudgeted item which was needed to laminate participants' certificates on each island). Other unbudgeted items included a hard drive to store our film footage, and flash drives to store data including TV news releases (*details in Finance Statement*).

## Methodology

A tablet training workshop for seniors was conducted over four days. Running parallel to this were video interviews and questionnaire surveys around the whole island. The target age group for the questionnaire was from 20 years and older, while those interviewed on video were 60 years and older (see Appendix 1 for questionnaire survey). People were only interviewed once, meaning that those who were interviewed on video were not interviewed via the questionnaire survey and vice versa.

### Day 1

The team left Raro at 9:30 am on Monday, 27 January 2014, and arrived on Mangaia just after 10 am. After checking into their accommodation, the team visited the training venue to set up. However upon arrival, set up was already completed with participants present and ready to start the training. There was a short formal welcome ceremony, and in attendance were the Mayor, the island Executive Officer and other government workers. The SRIC Focal Point Mr Pa Epi Mana conducted the proceedings and invited the team leader Dr Teina Rongo to respond. Dr Rongo thanked everyone for the warm welcome and introduced the team members. He then explained about the project and highlighted the funding sources for the project. He emphasised the importance of the video interviews and survey to which he asked for co-operation from the people.

After the formalities, a scrumptious lunch was served with all the delicacies of the island especially the dragon fruit. For the rest of the afternoon, Mrs. Hunter took over the tablet training assisted by Ms Smith, while the rest of the team firmed up key people for the video interviews with the help of Mr Epi Mana. In the late afternoon, the team went to tour the island with Mr Epi Mana as tour guide, who alluded to the many fascinating features of Mangaia island. We noted significant landscapes to film that would be useful in telling Mangaia's story.



Ms Alanna Smith assisting mamas O'iaua Pukeiti and Arumetua Toko of Mangaia, 27-31 January 2014 (photo by Celine Dyer).

## Day 2

Tablet training class started at 9 am, but participants had already arrived at 8:30 am and asking to start working on their tablets, in which the trainer was happy to comply. While the training was taking place, the rest of the team commenced the video interviews and took some scenic shots of interesting areas mentioned in the interview. After lunch, the team continued with more video interviews.

## Day 3

The tablet training gained momentum with much excitement as the participants were getting to know us and openly discussed their joy and enthusiasm with the training. The research team split in two: Dr Rongo and Mr Nia continued with the video interviews while Ms Smith and Ms Dyer were dropped off in the village of Tamarua to begin the questionnaire survey through door knocking. Late afternoon when it was cooler, the team went to take more pictures of the unique Mangaia landscape.

## Day 4

The day began with interviewing the participants in the workshop and the main village of Oneroa. In the afternoon, the team went to the village of Ivirua and knocked on as many doors as they could before dark. The aim was to get as many questionnaire interviews as possible.

## Day 5

Since the plane was scheduled to leave at 9:30 am, the day's program started at 7:30 am with a climate change presentation by Dr Rongo. This was followed by question time to which a lot of interesting issues were raised. After the awarding of certificates to the participants, four tablets were presented to the Telecom officer by Dr Rongo to be used by participants at the Telecom office. A TV news release was filmed while in Mangaia for the Rarotonga night news the same evening (note: footage available).



Rima Hermmann, Telecom officer on Mangaia, thanking the Rauti Para project for the tablets received from Cook Islands SPC EU GCCA: PSIS co-ordinator Dr Teina Rongo (photo by Celine Dyer).

## Outcome

- ❖ There were 15 participants (see Appendix 2) in the workshop with ages ranging from 20 to 75.
- ❖ Seven people were interviewed on video while 56 were surveyed using the questionnaire.



### Feedback from the tablet training

- ❖ People from the other villages complained they were unable to attend due to lack of transport.
- ❖ The training venue was too small that more people couldn't be accommodated.
- ❖ Telecom internet was slow when accessed simultaneously.
- ❖ People were confused between the medicinal tablet (pills) and technology tablet.
- ❖ Those who attended were overjoyed and grateful for the opportunity.
- ❖ Additional training for the other two villages was requested as well as a follow-up workshop.
- ❖ Those who attended the training have placed orders for their own personal tablets.
- ❖ Participants were able to go on Facebook, access websites, and confidently navigate around the tablet.
- ❖ Many positive comments were received from the participants, including the Mayor and Environment Officer.

### Feedback from the interviews and questionnaires

- ❖ The *a priori* assumption of rising sea level was confirmed both from the video and questionnaire interviews.
- ❖ As suspected, the younger age group under 30 years did not notice or recognise any major changes.
- ❖ Significant marine species are no longer seen and some are less abundant.
- ❖ Significant changes to the terrestrial fauna and flora were noted when compared to the past.
- ❖ Drought appears to have a significant influence on changes noted in Managia.
- ❖ People have changed planting methods and crop varieties to adapt to climatic changes.
- ❖ Fishing methods have also changed; women harvested a lot of seafood and nowadays, it is more difficult for them to go reef fishing.
- ❖ There were no clear-cut roles for men and women as most tasks were family-oriented, with both men and women working together with their children and extended families.



A small creek near lake Tiriara in 1957 (left Photo by Don Marshall) and 2014 the same creek (right Photo by Teina Rongo) illustrating drought being an important factor on Mangaia

### Team feedback

- ❖ People wanted to be interviewed and liked talking.
- ❖ In one village, the research team was chased around by a woman on her motorbike to make sure that the team went to her home to interview her and her husband.
- ❖ The people are very open and happy to share information without reservation.
- ❖ People were very keen to learn.
- ❖ People were very comfortable sharing their thoughts to a Maori speaker.
- ❖ Others were disappointed they weren't part of the workshop.
- ❖ People were very happy and thankful for the opportunity that otherwise they wouldn't have had.

### Recommendations

- ❖ Improve the radio advertisement to ensure it clarifies between the medicinal and technology tablet.
- ❖ Ensure that there is ample space to accommodate at least twenty participants.
- ❖ Ensure that the venue has strong internet reception.
- ❖ Ensure there is transport available for those from other villages, or run a second training in the other village.
- ❖ Depending on population and size of the island, start the questionnaire surveys on the first day considering the limited number of days available to run this project.

- ❖ Ensure that interviewers are culturally sensitive.

### Considerations

- ❖ Ensure that the SRIC Focal Point is appropriately remunerated for his time and use of transport as this was not included in the budget.
- ❖ Failed to include donations in the budget as is customary in our culture.
- ❖ Failed to allocate funding for a closing party as was the expectation of participants.
- ❖ The questionnaire survey was time-consuming as people liked to talk. The interviewer must be mindful of the time allotted for each interview.

### Conclusion

The overall program was a huge success from both the tablet training component and the research. The people were so grateful of the program that they showered the team with gifts of Mangaia and eis on their departure. Success was evident from the research as reliable evidence was collected, documented and filmed. The research results will be analysed and published at the completion of the project. The island Executive Officer emailed and reiterated the success of the workshop, and that they will convey their joy when meeting the Prime Minister at the Round Table meetings the following week.



Graduates of the Mangaia tablet training workshop, 27 - 31 January 2014 (photo by Celine Dyer).



**Acknowledgement**

We thank the wonderful people of Mangaia for assisting the team in our research. We also thank all of the workshop participants for being awesome students. To the Mayor Mr Teremoana Atariki, island Executive Officer Nena College, the SRIC Focal Point Mr Pa Epi Mana, the Mangaia Heritage and Culture Centre, and all those who assisted and helped us in anyway, Meitaki ngao.

To the funders and partners SPC EU GCCA: PSIS and SRIC CC Adaptation Fund, Climate Change Cook Islands and ICT both from the Office of the Prime Minister, Telecom Cook Islands, Cook Islands Marine Park and the House of Ariki and Koutu Nui, Rauti Para, thank you all for the great partnership.

Thank you also to Corporate Services of the Office of the Prime Minister for the efficient handling of funds.

**Tangike, Tangike, Tangike, Meitaki Ngao**

## Appendix 1. Quantitative questions

1. Have you heard of climate change?
2. Rank your understanding of climate change on a scale of 1-10 (10 being good)
3. Do you think that we are vulnerable to climate change impacts (e.g., cyclones, drought)?
4. Do you feel that outside assistance, such as financial support, is critical for us to cope with the impacts of climate change?
5. Is there a need to increase the awareness of climate change?
6. What seasonal resources on your island have you noticed have changed (e.g., fruiting season, spatial distribution) and how?
7. Do you know of any plant or animal on both land and sea that have declined or increased in abundance? (indicate a time period when this happened)
  - marine
  - land
8. Have you noticed any climatic changes e.g., rainfall, temperature etc.) on your island
  - Pre 1980s?
  - Post 1980s?
9. Have you noticed any hydrodynamic (e.g., currents) or tidal changes in the marine environment?
  - Pre 1980s
  - Post 1980s

## Appendix 2. List of participants

<b>PARTICIPANT</b>	<b>GENDER</b>
Tepaeru Paio	F
Ngariki Adams	F
Arumetua Toko	F
Tuara Tuara	M
Peiaa Teinangaro	M
Tearapiri Teaurima	M
Poroa Arokapiti	M
Tuaine Tuara	F
Tangimokopuna T George	M
Ngametua Toko	M
Teremoana Atariki	M
Inangaro Papatua	F
Stephanie Piiti	F
Tei Tangatakino	M
Maara Tuamingi	F
Oiaua Pukeiti	F