

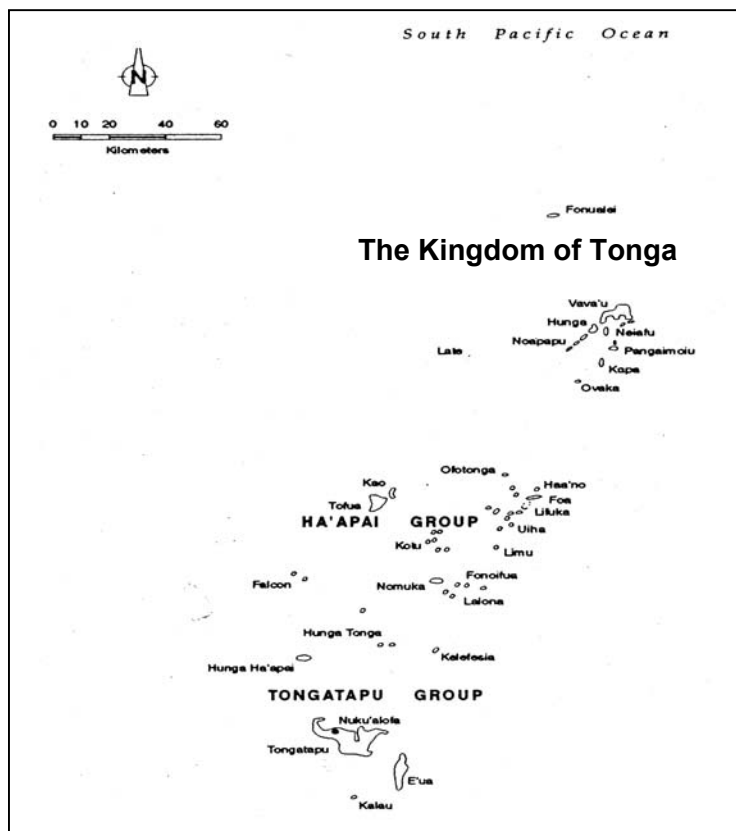
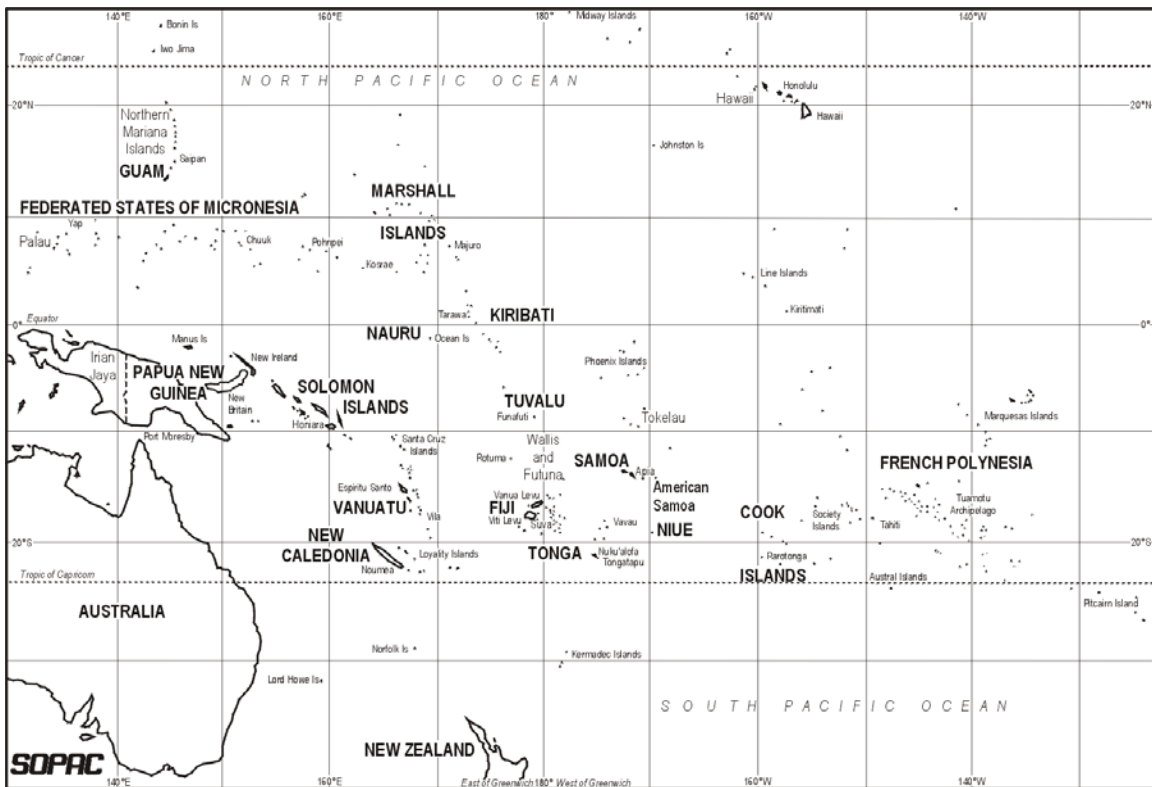
**TONGA ENERGY PLANNING UNIT**  
**TRAINING ATTACHMENT AT THE SOUTH PACIFIC APPLIED GEOSCIENCE**  
**COMMISSION (SOPAC) SECRETARIAT**  
**April 2002**

**Rupeni Mario**  
*Energy Project Officer*

**SOPAC Training Report 101**

*SOPAC TASK No(s): RT 1999.011, RT 1999.006, RT 1999.016 & TO 1999.002*

## GEOGRAPHICAL LOCATION OF TONGA



## CONTENTS

	<i>Page</i>
Geographical Location of Tonga	2
Acknowledgements	3
Introduction	4
Objectives	4
Summary of Activities	5
Annex – Mr Kilisimasi Lutui's Training Attachment Report	8

## ACKNOWLEDGEMENTS

Funding assistance provided by the Australian and New Zealand Governments to the SOPAC Energy Program is gratefully acknowledged.

To the Ministry of Lands, Survey and Natural Resources of Tonga, particularly to Mr Kilisimasi Lutui of the Energy Planning Unit for his cooperation, efforts and input during the training attachment.

And to the Community Lifeline Program (ICT and Energy) staff for the assistance provided during the course of the attachment.

## INTRODUCTION

This report outlines and summarizes Mr Kilisimasi Lutui's (Energy Technician Trainee with the Tonga Energy Planning Unit) training attachment with the SOPAC Community Lifelines Program (Energy and Information, Communications and Technology (ICT) Units) from the 09 to 19 April 2002. See also Mr Lutui's annexed report.

The effective and efficient performance of the various sectors in the Tongan economy is enhanced through capacity building. In light of this, the Energy Planning Unit of the Ministry of Lands, Survey and Natural Resources, which is responsible for managing renewable and non-renewable energy resources, policies and related energy issues, sought the opportunity to have its Energy Technician Trainee attached to SOPAC for a period of two weeks.

It was envisaged that through this attachment the Energy Planning Unit will enhance and further develop the skills base of its staff in providing the necessary technical and support services for the development of Tonga's energy sector.

The training attachment was conducted on specific tasks as in the following SOPAC Task Profiles.

RT 1999.011	Training and Technical Assistance
RT 1999.006	Energy Supply/Demand Database
RT 1999.016	Energy Technology / Information Database
TO 1999.002	Schools Energy Education Program (Tonga)

## OBJECTIVES

The objectives of the training attachment were:

- to develop the skills required to manage the Tonga energy information and supply/demand databases;
- to familiarise the trainee with the process involved in setting up networks, designing web-pages and web-sites;
- to assist in compiling the Tonga Schools Energy Education booklets and translate Class 1 and 2 booklets into the Tongan language; and
- discuss general energy sector issues such as planning, the status of existing projects and developing new project proposals.

## SUMMARY OF ACTIVITIES

Activities undertaken during the training attachment are as follows:

	<b>Discussions/Activities</b>
<ul style="list-style-type: none"> <li>Tonga Energy Information Database</li> </ul>	<p>The trainee was taken through the process of data entry, extracting data to be sent to SOPAC, carrying out searches in the database, and using the print / preview functions.</p>
<b><i>Follow up by EPU</i></b>	<b><i>Enter the remaining reports at EPU and provide an update to SOPAC by the end of June 2002.</i></b>
<ul style="list-style-type: none"> <li>Regional Energy Information Database</li> <li>Energy Supply/Demand Database</li> </ul>	<p>An overview of the features and purpose of the regional energy information database was provided.</p> <p>The ongoing difficulty in accessing petroleum data from oil companies has led to the slight modification of the petroleum sector to a national approach whereby petroleum data is logged-in as a country total. For this approach, petroleum data can be sourced from the National Statistics Office/Department.</p> <p>The trainee was taken through a detailed procedure in analysing, converting and forecasting energy data.</p>
<b><i>Follow up by EPU</i></b>	<b><i>Work on the dissemination of the sales figures into the end use sections of the Petroleum and Power sectors. Source and collate the power generation figures for the outer islands from Shoreline/TEPB. EPU to provide an update of progress to SOPAC in August 2002.</i></b>
<ul style="list-style-type: none"> <li>Internet, networking, web-page design</li> </ul>	<p>This activity is better approached through a longer-term (1 – 2 months) attachment with the SOPAC ICT Unit and if required this should be requested as a separate training attachment. During this period the trainee would spend time with the ICT staff in carrying out tasks such as network designing, trouble shooting, general servicing for computers and other relevant activities. As for web page designing, the current Windows 2000 have basic features, which will guide the user throughout the process. The trainee was briefly introduced to this web page designing guide.</p> <p>The discussions have provided the trainee with an overview of what services can be provided by the SOPAC ICT Unit. Some background information on basic ICT work was also discussed.</p>
<b><i>Follow up by the Ministry of Lands, Survey and Natural Resources (and/or EPU)</i></b>	<b><i>If required, the Ministry of Lands, Survey and Natural Resources (and/or EPU) can submit their request and proposal to SOPAC (Community Lifelines Program – Information, Communications &amp; Technology (ICT) Unit).</i></b>

- Team Project (Schools Energy Booklets for the Primary Schools)

Based on initial draft teaching modules supplied by the EPU/Tonga Education Department (Curriculum Development Unit) SOPAC has completed and edited this material so that the following booklets have been able to be compiled and digitised.

Class 1	Units 1 – 3 (English & Tongan versions)
Class 2	Units 1 – 3 (English & Tongan versions)
Class 3	Units 1 – 3 (English version only)
Class 4	Units 1 – 3 (English version only)
Class 5	only Unit 1 (English version only)
Class 6	Units 1 – 4 (English version only)

Actual tasks carried out by the Trainee are:

1. Translation of the Class 1 and 2 Units into Tongan
2. Assisted in the compilation and typing of the education booklets.

*Notes* (i) Certain Units in Classes 1, 2 & 6 have been extracted from the Fiji Schools Energy Education Booklets. As for Class 5, the only available Unit from Tonga is Unit 1, which does not seem to be in-line with the corresponding grade in the Fiji booklets.

(ii) There is still work to be done on the pictures and editing of the booklets.

(iii) Acknowledgement is made of the contributions by Ms Yogita Chandra, Energy Trainee at SOPAC, in digitising the education booklets.

#### **Follow up by EPU**

- (a) It is suggested that EPU consult the Tonga Ministry of Education for an outline of topics for Class 5 – this will enable the development of appropriate Units for this grade.**
- (b) EPU to comment on a letter of amendment (that will be forwarded to EPU) to the original MOU.**
- (c) EPU to follow up on the reconciliation of financial accounts for the Team Project. Note Payment for TOP 3550.00 was made by Bank Draft No. F 17 208 394 on the 24 February 1999 (Receipt No. 692085/1784 – Tonga Revenue). We understand that payment for art work carried out as part of the project still needs to be reimbursed and following this the balance of funds be reimbursed to SOPAC. The balance of funds in the project will then be allocated as agreed in the letter of amendment referenced above in para (b).**
- (d) EPU to liaise with the Ministry of Education to provide the continuity and inclusion of these booklets into the school curriculum.**

- General

- (i) An overview of the SOPAC Secretariat activities was provided to the trainee. He was also briefed on the general accepted procedure when requesting assistance from SOPAC.

- (ii) The trainee was also briefed on the SOPAC Energy Task Profiles for Tonga highlighting the current and complete projects.
- (iii) Should EPU have new projects where SOPAC assistance is required, a project proposal with a budget estimate should be submitted through the Tonga Representative to the SOPAC Council. However, it is also advisable to initially discuss the project concept informally with the SOPAC Energy Unit before preparing a detailed project proposal.

***EPU to follow up***

***Following the cancellation of the Rechargeable Battery Project due to the difficulties in identifying a suitable supplier of alkaline battery chargers that were compatible with the proposed 12 Volt DC output from a solar PV charging arrangement, it is necessary that EPU now carryout a reconciliation of financial accounts and reimburse any balance of money to the SOPAC Secretariat Energy Unit (these funds will then be made available for projects under Small Energy Projects Program).***

## ANNEX

### Training Attachment Report

*Kilisimasi Lutui; Trainee Technician, Energy Planning Unit, Ministry of Lands, Survey and Natural Resources, Kingdom of Tonga.*

#### INTRODUCTION

The Energy Planning Unit (EPU) of the Ministry of Land, Survey and Natural Resources requested a training attachment with SOPAC to provide experience in Energy Information Database, Energy supply/Demand database, Web page / Website Design and also Team Project (Energy Education Booklets for Primary School) in translated the Class 1&2 modules into Tonga. The South Pacific Geoscience Commission (SOPAC) approved the training attachment which was scheduled from 8<sup>th</sup> to 20<sup>th</sup> of April, 2002. The Ministry of Lands and Survey nominated Mr Kilisimasi Lutui, Energy Technician Trainee to attend the two-week training attachment at SOPAC, Suva, Fiji.

#### BACKGROUND

The Government of Tonga considers capacity building is an essential element of sustainable energy development for Tonga and the Energy Planning Unit, Ministry of Lands, Survey, Natural Resources, who are responsible for managing renewable and non-renewable energy resources in Tonga.

At present the current limited human resource capacity and financial constraints at the Energy Planning Unit cannot support its functions and roles in promoting sustainable energy development. Training opportunities are limited and reliable energy information cannot be obtained nor maintained due to limited skills and knowledge in energy information management.

The Energy Planning Unit's effective performance relies on resource capability and capacity. Thus capacity building is one of the measures, which will help to reduce the gap and enable the Energy Planning Unit to provide the support services necessary for sustainable energy development.

#### OBJECTIVES

To strengthen my capability and capacity to better manage energy information effectively and efficiently so as to improve the function of the Energy Planning Unit.

This to be achieved through skill development in sourcing and updating information, its analysis, dissemination and reporting.

#### EXPECTATION – OUTCOMES

At the end of the training expect to be able to source and sort energy information, manage the information, analyse and report appropriately. In addition, expect to be able to link the national energy information needs with the regional, as well as understanding the basic designing features for an energy website.

#### ACTIVITIES

##### Energy Information Database

During discussions on the Energy Information Database it was discovered that problems in managing the energy information database were due to the incomplete installation of the Access program in the EPU computers. As a result of this I had the opportunity to familiarize myself with the database program and have the ability /skills to reinstall this in



the EPU computer when I get back to Tonga; and upgrade the database from Microsoft Access 1997 to 2000, and to enter information into the database.

### **Energy Supply / Demand Database**

- (1) Because EPU still have the problems in getting petroleum data from oil companies the opportunity was taken during the attachment to simplify the format to enable the updating of the database to be completed.
- (2) Experience was gained in entering data into the database sheets and do calculations like converting to the correct units used in the database. This allowed familiarisation with the structure of the database.
- (3) I also now have the ability to verify the data and to ensure that actual sales equal total products consumed.

### **The Team Project (Energy Education Booklets for Primary Schools)**

- (1) Completing the Units for Class 1 & 2 using the Fiji Energy Education booklets as a guide.
- (2) Translated the Class 1 (Units 1 to 3) and Class 2 (Units 1 to 3) into Tongan and digitised.

### **Web page/Website Design**

The opportunity was taken to discuss with the SOPAC ICT Unit networking and web design, and to learn how to design a web page / website design. Information provided was as follows:

- (1) Although it is easy to design website and web page directly from program office 2000 it is important to have your own Sever and from that to operate the Web page/Website Design  
The ICT Unit inform me that are also available to conduct a longer-term training in ICT Unit if this is required enable a better knowledge in hardware, software, networking, and to look after and service computer.
- (2) SOPAC ICT Unit can assist the MLSNR to order new computers to ensure that computers are of high quality and have the complete installation of necessary programs.
- (4) SOPAC ICT Unit is also available to assist MLSNR to set up their network.

## **CONCLUSION/ACKNOWLEDGEMENT**

After the training attachment, all the objectives were reached at nearly maximum output. Finally I would like to thank the SOPAC Secretariat especially Paul Fairbairn, Anare Matakiviti, Rupeni Mario, Laisa Baravilala and Yogita Chandra for all their input in the arrangement of the training attachment. Also to the SOPAC ICT Unit, especially Timoci (Jim) Tora for all their assistance in providing information and on the possibility of providing more intensive training.

Malo `aupito.