

# Climate Change Adaptation Action Plans for two communities in the Cook Islands

Omoka Village(Penrhyn Island) Te Tautua Village (Penrhyn Island)

USP EU GCCA Project in collaboration CI SRIC<sup>1</sup> Programme



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## 1.0 Introduction

### 1.1 The USP GCCA EU Project

The USP-EU GCCA is a 4 year project allocating 8 million Euros to meet the challenges of climate change in the 15 Pacific ACP countries (Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu, Vanuatu) through Capacity Building, Community Engagement, and Applied Research. The objective of this project is to develop and strengthen the Pacific ACP (African/Caribbean/Pacific) countries' capacity to adapt to the impacts of climate change. This objective will be achieved through the training of local, national and regional experts on climate change and adaptation and the development and implementation of sustainable strategies for community adaptation to climate change, based on improved understanding of impacts of climate change and variability in the Pacific region. It is also expected that the project will contribute to the establishment of a network of local, national and regional specialists on climate change who will support communities, governments within PACP countries, NGOs, and regional organizations in their efforts to address the effects of climate change through a long-term, sustainable approach.

The Community Engagement component will help about 40 communities (demonstration sites) within the 15 Pacific ACP countries to adapt to climate change. The adaptation projects realised in the communities will cover the vulnerable sectors identified in each country by the countries National Communication Report. The national projects will be managed by in-country coordinators from each of the countries. A National Project Advisory Committee will be established in each of these countries and will assist the coordinators through the provision of technical and policy advice. This component also encompasses the creation of an information network (the Locally Managed Climate Change Adaptation or LMCCA<sup>2</sup> network) within these communities that will be later expanded to disseminate lessons learned at the demonstration sites to other communities in the region.

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<sup>2</sup> The Pa Enea Mayor's forum will serve as a network for disseminating information on the sites progress and lessons.

## **1.2 The Adaptation Planning Process**

The vulnerability and adaptation assessment involved a participatory component where communities identified issues and problems and their respective root causes in the various thematic areas, and suggested solutions to these problems. The findings were then used to verify the findings of the assessment team. Toward the end of the V&A assessment, the community were then tasked to prioritise the various thematic areas accordingly.

The assessment team<sup>3</sup> then used the findings and prioritisation to develop an adaptation plan guided by the PACE-SD Strategic Adaptation Framework.

The first draft of the adaptation plan was presented to the Cook Islands NPAC in September 2013 for their inputs and guidance. The drafted adaptation plan was then presented back to the community for further discussions and endorsement.

The nature of the Cook Islands NPAC team allowed for the circulation of the draft adaptation plan to relevant stakeholders including the Climate Change Division of the Office of the Prime Minister the lead agency in coordinating climate change activities in the Cook Islands. Their acceptance of the adaptation outline has progressed this document.

## **1.3 The Adaptation Strategy**

### **1.3.1 PACE-SD Strategic Adaptation Framework**

The Adaptation Plan for the two villages on the island of Penrhyn is based on the PACE-SD Strategic Adaptation Framework whereby climate-sensitive livelihood sectors are addressed first before sequentially addressing the adverse impacts of climate extremes through Disaster Risk Reduction (DRR) and then the adverse impacts on the natural resources and ecosystems. However, exceptions are made where communities have identified that the adverse impacts of climate change on sectors other than livelihoods are of high concern to them.

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<sup>3</sup> Cook Islands In-country Coordinator, Cook Islands National Council of Women Representative and NPAC rep, Island Council Rep of Te tautua, Island Council Rep of Omoka, Women in Development Officer/Penrhyn.

The approach taken in applying the PACE-SD Strategic Adaptation Framework is to facilitate a paradigm shift from project-based to programme-based climate change adaptation activities, effectively capturing and preparing communities to address the current, medium-term and long-term adverse impacts of climate change.

The approach has an added advantage in that it promotes integration through implementation and through participation from various stakeholders for the achievement of the ultimate goal of achieving resilient communities through sustainable development ideals and planning.

### 1.3.2 Awareness & Education

A strong awareness and education programme to cover the following: weather, global warming, climate change, water resources & management, health and sanitation, agriculture/food security, energy resources/energy efficiency, DRM, sustainable natural resources management and sustainable development will be prepared and delivered during the course of the project.

Once the community knows and understands the why, what and how of sustainable development, half of the work is accomplished and sustainability is respected.

## 2.0 Summary of the vulnerability & adaptation assessment findings

The results of the prioritization of sectors indicated that the development of their water supply, food security and coastal protection (DRM) were of highest priority to Omoka village. The Te Tautua community identified water supply, food security, and renewable energy demonstrations as their highest priority.

Sectors	Communities' Prioritization of Sectors	
	Omoka Village	Te Tautua Village
Water resources & Security – adding to their existing water harvesting infrastructure, repairing the spouting, roofing and connection to water harvesting storage connections, and a	1	1

management program going forward		
Food Resources & Security – setting up strategic atoll farming plots throughout both villages to supplement atoll food provisions – providing infrastructure and seedling to establish this (2 demonstration plots in Te Tautua, 5 in Omoka)	2	2
Disaster Risk Management – small boat harbour protection in Omoka	3	4
Sustainable Energy – demonstration lighting and cooking sites in Te Tautua	4	3
Natural Resources & Environmental -- ongoing support to current funded activities on the island	5	5
Health & Sanitation – ongoing support to current funded activities on the island	6	6

### 3.0 The Adaptation Plan

#### 3.1 The Generic Adaptation Plan

- In the two villages, water, food, disaster risk management, and renewable energy sectors were ranked highest as priority sectors through the community priority rankings and confirmed by the V&A assessment.
- For both villages, leadership and governance and human resources development need also be implemented. The GCCA project will initiate these, however the onus is on the communities themselves to plan and implement these components. These components are vital for sustaining the climate change programme and ensuring that sustainable development ideals are achieved by the project communities in the foreseeable future.

**A generic adaptation plan for the two villages based on the PACE-SD Strategic Adaptation Framework.**

Components	Activities	Time Frame	Responsible Agencies	Supporting Agencies
<b>A. Leadership &amp; Governance [Year 1 – Year 3]</b>				
Leadership & Governance	(i) to include more women into the governing structures of the villages and the island	1 year	Island council, women’s island council	CINCW/CLGF program
	(iv) Conduct training on leadership and governance (principles of good governance)	1 – 3 years	CINCW/CLGF/Pa Enea Gov Unit	Island Council and Office of the Prime Minister
Community Cohesion	Develop & implement programmes & activities that would promote community cohesion	On-going	CINCW/CLGF/Pa Enea Gov Unit	Island Council and Office of the Prime Minister
Community-Led Resource Mobilisation Initiative	Develop a plan to mobilize resources to support and or to fund the implementation of the adaptation & sustainable development plan	On-going		
<b>B. Human Resources Development [Year 1 – Year 2: Planning, Year 3 - Year 15: Implementation]</b>				
Community-wide awareness programme	Identify & deliver relevant topics for dissemination to community (Topics that would inculcate moral values, help improve livelihoods, protect the environment & natural resources and encourage entrepreneurship)	On-going	CINCW led, Island Council support	
<b>C. Water Resources [Year 1 – Year 5]</b>				
Documentation of an accurate baseline	(i) Establish baseline information on current system	6 months	Island Council and village rep	MOIP
	(ii) Establish baseline information on water quality	1 year		
Implement Water Management System	(i) Protect current water sources	1 – 5 years		
	(ii) Develop new water sources	1-5 years		
Awareness, Training & Capacity Building	(i) Provide general training on water quality and appropriate water management system	On-going	Water Committee	

	(ii) Provide training for water committee on water management & maintenance	On-going		
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#### D. Agriculture and Marine Resources and Food Security [Year 1 – Year 5]

Documentation of an accurate baseline				
	(i) Develop a detailed agriculture profile of each of the two villages	1 year	Agriculture	
	(ii) Develop an inventory of marine and fish stocks for each village	1 year	MMR	
Awareness, Training & Capacity Building		On-going	Agriculture/Fisheries	

#### E. Energy [Year 1 – Year 5]

Documentation of an accurate baseline	Develop an inventory of the existing type of energy for lighting, cooking, and other uses.	6 months	Is Council and REDD	
Lighting	Assess & improve energy efficiency of existing sources	1- 3 years	Is Council and REDD	
Cooking	Assess & improve energy efficiency of existing sources	1- 3 years	Is Council and REDD	
Development of Alternative Energy Sources	(i) Assess the potential of using solar power for lighting and other energy needs and set up demonstration site	3-5 years	Is Council and REDD	
	(ii) Assess the potential for biogas generation and set up demonstration site	3-5 years	Is Council and REDD	
Awareness, Training & Capacity Building		On-going		

#### F. Disaster Risk Reduction [Year 1 – Year 7]

Components	Activities	Time	Responsible	Supporting
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		<b>Frame</b>	<b>Agencies</b>	<b>Agencies</b>
Establishment of an accurate baseline	(i) Conduct a risk mapping exercise	6 months		
	(ii) Construct a risk map of the area	6 months		
Disaster Risk Reduction & Disaster Management Plans	Formulate a coastal protection strategy for the boat harbours in Omoka	1year	Disaster Manage't Comm and Is Council	
Minimisation of adverse impacts from coastal erosion & sea level rise		3-7 years	Disaster Manage't Comm and Is Council	
Awareness, Training & Capacity Building		On-going		
<b>G. Sustainable Natural Resources Management [Year 1 – Year 10]</b>				
Establishment of an accurate baseline	(i) Conduct a terrestrial resources inventory survey	1 year		
	(ii) Conduct a marine resources inventory survey	1 year		
Sustainable natural resources management plan	(i) Formulate and endorse a sustainable natural resources management plan	1-2 years		
	(ii) Implement the sustainable natural resources management plan	3-10 years		
Awareness, Training & Capacity Building		Ongoing		
<b>H. Business &amp; Investment Programmes [Year 1 – Year 15]</b>				
Business & Investment Plan	Formulate and endorse a business & investment plans	1 year		
Implement Business & Investment Plan	(i) Implement community-based cottage business and industries, relating to handicraft production and baitfishing supply	3 – 7 years		
Awareness, Training & Capacity Building		On-going		

#### **4. The Community-specific Adaptation Plan**

The detailed work plan of the two villages related to the specific sectors and components that would be funded by the USP EU-GCCA are annexed.

#### **5.0 Linkages to Cook Islands National Climate Change Joint Action Plans and Programmes**

This section serves to evaluate the relevance of the proposed adaptation strategy and plan to existing national climate change policies and programmes. Specifically it evaluates the adaptation strategy and plan against the Joint National Action Plans (JNAP) as it is an endorsed national plan of the Government to address the adverse impacts of climate change and disaster risk management.

The vision for the Cook Islands JNAP is to promote and ensure safe, healthy, secure and resilient communities to climate change impacts and disaster risks.

The findings of the V&A assessment and community prioritization carried out by the EU-GCCA project closely mirror the findings of V & A assessments conducted in similar atoll islands in the Cook Islands. particularly in relation to the water and livelihood sectors. Taking this into consideration, the best approach to address the adverse impacts of climate change, which are many and varied with their on-set occurring at various time-scales, and to ensure that sustainable development becomes the ultimate outcome of the adaptation activities, the adoption of the PACE-SD strategic adaptation framework is adopted as a way forward for the project proponents and project communities. The strength of the PACE-SD strategy is that it brings the climate sensitive sectors and the social and economic sectors into one frame and wholistically addresses them logically..

#### **6.0 Resource Mobilisation Plan**

The adaptation plan outline has been adopted by each of the project communities during the V & A visit and thus constitutes their adaptation programme, addressing the current and projected future adverse impacts of climate change. As the plan focuses on capacity building, sustainable resources management and development encompassing social, economic and environment themes, it aligns with the islands own sustainable development programme.

For the programme to be effectively implemented, all stakeholders need to collaborate in relation to the funding and implementation.

The USP-EUGCCA project would catalyse the implementation of the programme by firstly funding the livelihoods sectors as well as selected priority sectors identified by the project communities.

Consultations with other government and non-government stakeholders would then be undertaken during this period of implementation with the objective of obtaining commitment to funding and implementing the other thematic areas and activities prioritised in the plan.

Opportunities to obtain funding assistance from external donors would also be pursued, such as the GEF Small Grants programme and the SRIC programme.

Finally and most importantly, the communities need to embark on plans to fundraise themselves to assist in the implementation of the programme. The other important contribution of the community would be in the form of “in-kind”, such as providing labour for the various activities and providing meals and accommodation for project, technical and contracted personnel and teams.

## **7.0 Identified Risks and Proposed Counter Measures**

### **7.1 Identified Risks and Barriers**

The GCCA EU-USP project and its partners would do well in carefully considering these risks and barriers, though most of the project activities are community-based, and start to map out plans for those that are of relevance to the proposed activities listed in the adaptation plan.

#### **Risks & Barriers**

The risks and barriers identified were:

- Lack of coordination and collaboration between various stakeholders who have a vested interest in the adaptation plans.
- Lack of maintenance fund to maintain the water harvesting facilities and related equipments
- High costs to sustain and accomplish the planned activities:
- Limited human and capital resources to carry out the planned activities;

- Political will and commitment;
- Extreme climatic events;
- Land ownership and tenure issues;
- Uncertainty on projected trends of climate changes.

## **7.2 Proposed Counter Measures**

The following are the proposed generalized counter measures to address the identified risks and barriers, particularly related to the proposed community-based climate change adaptation activities as outlined in the adaptation plan.

- Seek for and collaborate with all key stakeholders (both internal & external) to implement the adaptation plan.
- Ensure the plan has a strong awareness and capacity building component for the project communities, implementation partners and officers of the responsible government agencies and other key stakeholders.
- Ensure that the leadership and governance system at each of the communities are strengthened to enable the community leader/s and management team to “step-up” from the norm to a higher level of management system.
- All partners and the community to acknowledge that it will require unwavering commitment, love for the community and love for the country and sheer hard work to implement the programme

## **8.0 Monitoring, Evaluation and Reporting**

The project will follow a project output-based monitoring system and an outcome-based evaluation system. Both systems will be guided by the PACE-SD methodology. Specifically the PACE-SD project cycle will guide the monitoring of the project outputs while the PACE-SD Strategic Adaptation Framework will monitor the programme outputs.

The indicators will be monitored and evaluated to determine the output and impact (outcome) of the project’s intervention in the 2 community demonstration sites.

## **9.0 Recommendation**

It is recommended that some key consultations and endorsements needed to take place before the programme gets implemented. Firstly all of the relevant stakeholders, including government institutions, need to be made aware of the programme and their role in the implementation of the programme. This is best achieved under two separate workshops or a series of workshops, one for the project communities' representatives and one for the representatives of relevant stakeholders. The formal endorsements from the communities and the Government representatives could then be signed and sealed after these consultation have been carried out.

### **Formal endorsement of the adaptation plan**

Formal endorsements from the communities has been confirmed in the Mayor's presentation in the island's V & A Assessment Report. Further discussions and confirmations of Cook Islands Government support can be in the form of a preface to this document, signed by the relevant government representative.

## Annex 1. Detailed adaptation plan for the two villages.

This adaptation plan is a long-term climate change adaptation programme and is inclusive of the three-year components funded by the EU/GCCA/USP project.

### (1) Omoka Village

Components	Activities	Time Frame	Initiating Agencies or Project/s	Responsible Gov. Agencies	Supporting Agencies
<b>A. Leadership &amp; Governance (Year 1 – Year 5)</b>					
Leadership	(i) Island council and village leaders are committed to implementation and understand their roles and responsibilities	1-3 years	Chiefs/Inter. Affairs/GCCA /	Pa Enuu Local Government	CINCW
	(ii) Conduct training on leadership and governance (principles of good governance including gender issues)			GADD	CINCW
Governance system baseline	Document the community's current governance system and structure				
Sustainable Development Plan	Formulate, endorse and facilitate the implementation of the sustainable development plan	1-3 years	Island Council	Pa Enuu LG Unit	CINCW
Mainstreaming	Facilitate the adoption and uptake of the adaptation strategy and sustainable development plan				
	Develop a community annual calendar based on the adaptation plan, with the incorporation of existing community activities				
Community-Led Resource Mobilisation Initiative	Develop a plan to mobilize resources to support and or to fund the implementation of the adaptation & sustainable development plan	On-going		Pa Enuu LG Unit	CINCW/CL GF
<b>B. Human Resources Development (Both Physical &amp; Spiritual Development) (Year 1 : Planning Implementation)</b>					
Documentation of an accurate baseline	Compile an inventory of community members with technical, management and professional skills. Categorise into those who	6 months			

	reside in the village, within Samoa & those who reside overseas				
Human Resources Development Plan	Formulate, endorse and implement a human resources development plan for the community				
Primary Education	Develop and implement an “improved” management of community primary school & a primary school students’ support programme	On-going			
	Facilitate relevant life-skills training to various sections of the community, including village youths	On-going			
Community-wide awareness programme	Identify & deliver important & relevant topics for dissemination to the community (Topics that would inculcate moral values, help improve livelihoods, protect the environment & natural resources and encourage entrepreneurship)	On-going			
<b>C. Water Resources (Year 1 – Year 3)</b>					
Governance	(ii) Develop an appropriate water management system which incorporates monitoring and maintenance		Island Council		
Establishment of an accurate baseline	(i) Establish baseline information on current system	6 months	Island Council	MOIP support	
	(ii) Establish baseline information on water quality		Island Council	Moip support	
Rain Harvesting	(i) Install appropriate number of household rainwater tanks.		Island Council	MOIP support	
Awareness, Training & Capacity Building	(i) Provide general training on water quality and appropriate water management system		Island Council	MOIP support	
	(ii) Provide training for water committee on water management & maintenance		Island Council	MOIP support	

<b>D. Disaster Risk Reduction (DRR)</b>	<b>(Year 1 – Year 3: Planning, Implementation)</b>
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Components	Activities	Time Frame	Initiating Agencies or Projects	Responsible Agencies	Supporting Agencies
Establishment of an accurate baseline	(i) Conduct a risk mapping exercise		Island Council		
	(ii) Construct a risk map of the area		Island Council		
Disaster Risk Reduction & Disaster Managn't Plans	Review and revise Disaster Risk Reduction Plan & a Disaster Management Plan	1 year	Island Council	EMCI	
	(i) Drought-proof water resources and supply system				
Minimisation of adverse impacts from coastal erosion & sea level rise	i) review coastal protection options available for coastal protection to wharf and airport	2 years	Island Council		
	ii) immediate remedial to boat harbours along Omoka foreshore (lagoon side)	1 year			
<b>A. Sustainable Natural Resources Management (Year 1 – Year 3: Planning, Awareness &amp; Training) (Year 3-Year10 : Implementation)</b>					
Governance	(i) Conduct a terrestrial resources inventory survey	1-3 years	Island Council	Agri support	
Establishment of an accurate baseline	(ii) Conduct a marine resources inventory survey			MMR support	
<b>B. Business &amp; Investment Programme (Year 1 – 3 Palnning and Implementation)</b>					
Governance	Formulate and endorse a business and investment plan (for handcraft and baitfish)	1-3 years	Leadership & Govern Comm		
Implement Business & Investment Plan for the women's handcraft and the baitfishing product	(ii) Expand businesses into new markets and investments				

(to insert google maps of Omoka)

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## (2) Te Tautua Village

Components	Activities	Time Frame	Initiating Agencies or Project/s	Responsible Gov. Agencies	Supporting Agencies
<b>D. Leadership &amp; Governance (Year 1 – Year 5)</b>					
Leadership	(i) Island council and village leaders are committed to implementation and understand their roles and responsibilities	1-3 years	Is Council, villagers, GCCA/	GCCA, Pa Enea Local Government	CINCW
	(ii) Conduct training on leadership and governance (principles of good governance including gender issues)			GADD	CINCW
Governance system baseline	Document the community's current governance system and structure				
Sustainable Development Plan	Formulate, endorse and facilitate the implementation of the sustainable development plan	1-3 years	Island Council	Pa Enea LG Unit	CINCW
Mainstreaming	Facilitate the adoption and uptake of the adaptation strategy and sustainable development plan				
	Develop a community annual calendar based on the adaptation plan, with the incorporation of existing community activities				
Community-Led Resource Mobilisation Initiative	Develop a plan to mobilize resources to support and or to fund the implementation of the adaptation & sustainable development plan	On-going		Pa Enea LG Unit	CINCW/CL GF
<b>E. Human Resources Development (Both Physical &amp; Spiritual Development) (Year 1 : Planning Implementation)</b>					
Documentation of an accurate baseline	Compile an inventory of community members with technical, management and professional skills. Categorise into those who reside in the village, within Samoa & those who reside overseas	6 months			
Human Resources Development Plan	Formualte, endorse and implement a human resources development plan for the community				
Primary Education	Develop and implement an "improved" management of	On-going			

	community primary school & a primary school students' support programme				
	Facilitate relevant life-skills training to various sections of the community, including village youths	On-going			
Community-wide awareness programme	Identify & deliver important & relevant topics for dissemination to the community (Topics that would inculcate moral values, help improve livelihoods, protect the environment & natural resources and encourage entrepreneurship)	On-going			
<b>F. Water Resources (Year 1 – Year 3)</b>					
Governance	(ii) Develop an appropriate water management system which incorporates monitoring and maintenance		Island Council		
Establishment of an accurate baseline	(i) Establish baseline information on current system	7 months	Island Council	MOIP support	
	(ii) Establish baseline information on water quality		Island Council	Moip support	
Rain Harvesting	(ii) Install appropriate number of household rainwater tanks.		Island Council	MOIP support	
Awareness, Training & Capacity Building	(i) Provide general training on water quality and appropriate water management system		Island Council	MOIP support	
	(ii) Provide training for water committee on water management & maintenance		Island Council	MOIP support	

<b>A. Energy</b>					
Establishment of an accurate baseline					
Lighting	Installation of a demonstration lighting unit at the Church grounds	Te Tautua IC			
Cooking	Three demonstration sites for biogas cooking	Te Tautua IC			
Development of	(i) Review demonstrations and design a village wide				

Alternative Energy Sources	renewable energy installation (and biogas project)			
Awareness, Training & Capacity Building		1-3 years		

<b>C. Sustainable Natural Resources Management (Year 1 – Year 3: Planning, Awareness &amp; Training) (Year 3-Year10 : Implementation)</b>						Est res
Governance	(i) Conduct a terrestrial resources inventory survey	1-3 years	Island Council	Agri support		
Establishment of an accurate baseline	(ii) Conduct a marine resources inventory survey			MMR support		
<b>D. Business &amp; Investment Programme (Year 1 – 3 Palnning and Implementation)</b>						Est res
Governance	Formulate and endorse a business and investment plan (for handicraft and baitfish)	1-3 years	Leadership & Govern Comm			
Implement Business & Investment Plan for the women’s handicraft and the baitfishing product	(ii) Expand businesses into new markets and investments					

## Annexe 2. Costed Adaptation Plan Priorities

### Omoka Village

Program Interventions	Estimated Amount
<p>1. Water Harvesting – supply of additional water tanks to inhabited households, with a package of maintenance and upkeep training and management, and spouting add ons for maximising water catching</p> <p><i>Installation of 35(6000 litre) water tanks for Omoka homes, including management program for roof and spouting maintenance for harvesting</i></p>	80,000
<p>2. Food Security – demonstration gardens with atoll friendly seedlings</p> <p><i>5 demonstration greenhouse arrangements in Omoka</i></p>	30,000
<p>3. DRM – coastal repairs to small boat harbours</p> <p><i>10 small boat harbours to protect</i></p>	30,000
	<b>140,000</b>

### Te Tautua

Program Interventions	Estimated Amount
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1. Water Harvesting – supply of additional water tanks to inhabited households, with a package of maintenance and upkeep training and management, and spouting add ons for maximising water catching  <i>About 15 homes</i>	40,000
2. Food Security – demonstration gardens with atoll friendly seedlings  <i>2 demonstration sites</i>	15,000
3. Renewable energy demonstration sites (lighting and cooking)	30,000
	<b>85,000</b>

**TOTAL USP/EU/GCCA PROPOSED PROGRAM SUPPORT FOR TWO VILLAGES = \$225,000 (NZ\$)**