

QUARTERLY PROGRESS REPORT¹

First Quarter 2009



- 1. Country:** Cook Islands, Fiji, Kiribati, Nauru, Niue, Papua New Guinea, Samoa, Solomon Island, Tonga, Tuvalu and Vanuatu
- 2. UNDP Award ID:** 00044633
- 3. Project Title:** Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project (PIGGAREP)
- 4. Implementing Partner:** Secretariat of the Pacific Regional Environment Programme (SPREP)
- 5. GEF Implementing Agency:** United Nations Development Programme (UNDP)

¹ This report is based on the PIGGAREP 2009 work plan and budget that was developed at the First Multipartite Review Meeting of November 2008.

6. Period Covered: 1st January – 31st March 2009

7. Summary of Overall Project Progress:

This is the first progress report on the 2009 Work Plan, attached as **Annex 1**, a work plan that has been designed based on the experiences with the slow delivery rate on the 2008 work plan. The multipartite review (MPR) meeting of November 2008 agreed that all PICs must only have an average of five activities each for the 2009 work plan but with the flexibility to increase or decrease based on capacity and delivery.

The general progress during the quarter was satisfactory.

The difficulty of drafting the Project Activity Summary (PAS) was identified during the MPR as a key constraint to the delivery of the 2008 work plan. The first activity for the quarter was therefore a regional workshop on drafting PAS and project proposals.

Of the eleven (11) activities for the quarter, implementation of two were completed, the PAS for four (4) were endorsed by the project steering committee (PSC) and are at their early stages of implementation, four (4) were drafted and reviewed and will be finalised for PSC endorsed next quarter and the PAS for only one (1 – Kiribati Public Awareness Campaigns) of the activities has not been developed.

Notable progress was made in the implementation of baseline activities. These include Fiji's Energy Legislation, biogas development as well as solar photovoltaic programmes. Good progress was also noted in the implementation of the IUCN / Italian-funded projects in the Solomon Is, Tonga, Tuvalu and Vanuatu. In some activities, e.g PNG 09-2: Biofuel Research, the progress in the co-financing activities is much faster than the incremental activities.

Some PICs are eager to implement all their five (5) activities as soon as possible and then to implement extra activities. These PICs have drafted PAS for activities in the third and fourth quarters and have indicated their desire to move the implementation of those projects forward.

Fiji introduced two (2) new activities (FJ 09-New 1 on hydro resource assessment and FJ 09-New 2 on biofuel) in which the implementation of their co-financing activities are progressing very quickly.

The general progress in the implementation of the 2009 work plan can be seen in Table 1 below. Baseline and Incremental Activities implemented in 2008 are also included for completeness purposes.

The general progress per PIC can be seen below:



Cook Is

No updates received for the quarter despite repeated requests.



Fiji

Fiji's co-financing activities include the following:

1) Energy Legislation

The project will develop a comprehensive Energy Bill that takes into account existing Regulations, Policies (Charters) and Acts (Laws) related to the energy sector. This Bill will be guided by the existing Government policies to ensure that energy sector developments contribute meaningfully to the overall socio-economic development goals of improving the livelihood of all the people. The TOR for the work has been developed and tenders were called.

Five tenders were received as follows:

- Enzen Technologies, Bangalore, India
- Fiji Institute of Applied Studies, Suva, Fiji
- Prem Narayan Barristers and Solicitors, Suva, Fiji
- Jagjit Singh, Lecturer, University of the South Pacific, Fiji
- ARD Power Plants Company Limited, Sigatoka, Fiji

The Department of Energy when analysing the tenders needed further clarification from one of the bidders, Enzen Technologies on project costs and time frame for completion and thus a request was sent to them.

Once this information is received, the Department will complete its evaluation and prepare a submission to the Tender Board for approval. The Department anticipates that the project will be completed by December 2009.

2) Biogas Programme

Ten biogas digesters will be installed in suitable farms to produce gas for cooking and heating purposes. Prior to the construction of the 10 digesters, we carried out a training of trainers in 2008. The training which was for one month was attended by 20 participants. The participants constructed a digester at the Ministry of Agriculture's Koronivia Research Station, as part of the training. A consultant from S. Africa was contracted by the Department to conduct the training. This aspect of the project was funded from the Department's allocation. The trainees who have undergone the training will be engaged in the construction of the ten digesters.

After the completion of the first training, there was a need for these trainees to undergo further training in building digesters so that they can be well acquainted with the construction work and be recognised (through certification) in building biogas digesters. It is to be noted that there is very limited skills available in-country for building digesters and it is important for the

sustainability of the project that while constructing the biogas digesters, capacity building is also taken into consideration.

Thus the Biogas Certification Training is an important aspect of the Biogas Program.

This year the Department of Energy continued with its certification training – four sites have been assessed and selected, the builders have been identified and four teams that ranges from two to five builders have been selected; materials purchased and transported to the four sites, and the actual construction work has commenced at Queen Victoria School, Ratu Kadavulevu School, Wainiyabiya Settlement and Namatakula village. The works are expected to be completed by June. The following are the details from the schools:

Queen Victoria School

The school requested for a biogas digester so they can use methane gas for cooking at the school dining hall. Currently the boarding school has about 700 students and they have been using LPG for cooking which costs \$2,000 per month. The school has a cattle farm as source of milk for the school's needs and a piggery farm as food source. There are some 200 pigs kept in a well maintained concrete shed. A 15m³ digester is currently being constructed at the school.

QVS Piggery Pen & Kitchen



15m³ Digester - QVS



Ratu Kadavulevu School

Similar to QVS, RKS also requested the biogas digester to assist in the reduction of use of LPG for cooking of student meals. In the past years they have been spending thousands of dollars per month for the purchase of LPG. The school has a roll of 700 students all of which are borders. RKS also has a piggery farm with a total of 300 pigs. A 15m³ digester is currently being constructed at the school.

Kitchen – RKS



Piggery Pen



Construction Site



Wainiyabiya Project

A family in Wainiyabiya settlement, Serua with eight members requested a biogas digester for cooking purposes and also as a means of proper disposing of pig wastes. They have a total of 8 pigs in a well maintained pen. The distance between the house and the piggery pen is about 35 meters. A 8m³ digester is currently being constructed at the site.

Piggery Pen



Excavation site



Namatakula Project



8m³ Digester- Namatakula



The Namatakula biogas site is located in Namatakula village, Nadroga and very close to the Queens highway. The household consist of seven people and the biogas will be used for cooking in the kitchen. The distance between the biogas site and the kitchen is about twenty meters. A 8m³ digester is currently under construction at the site.

Constraints

The major constraint in the initial phase of the project is the wet weather condition affecting the Fiji Group. The delay in the timely delivery of building materials to the four project sites also affects the construction works.

3) Biofuel Standards

The long-term aim is to provide an enabling environment for the eventual establishment of a sustainable National Biofuels Programme, aimed at the widespread application of the technology in all sectors of the country. Although biofuels are used in other countries, utilization in Fiji is sporadic and minimal.

The work on Biofuels Standards component of the project can be divided into two parts:

- i) Quality Standards for liquid biofuels: ethanol, bio-diesel and coconut oil.
- ii) Testing of vehicles with the Biofuels blends that will form a part of the National Mandate such as:
 - (a) E-10 which is blend of 10% ethanol + 90% gasoline;
 - (b) B-5 which is blend of 5% biodiesel + 95% diesel.

Quality Standards

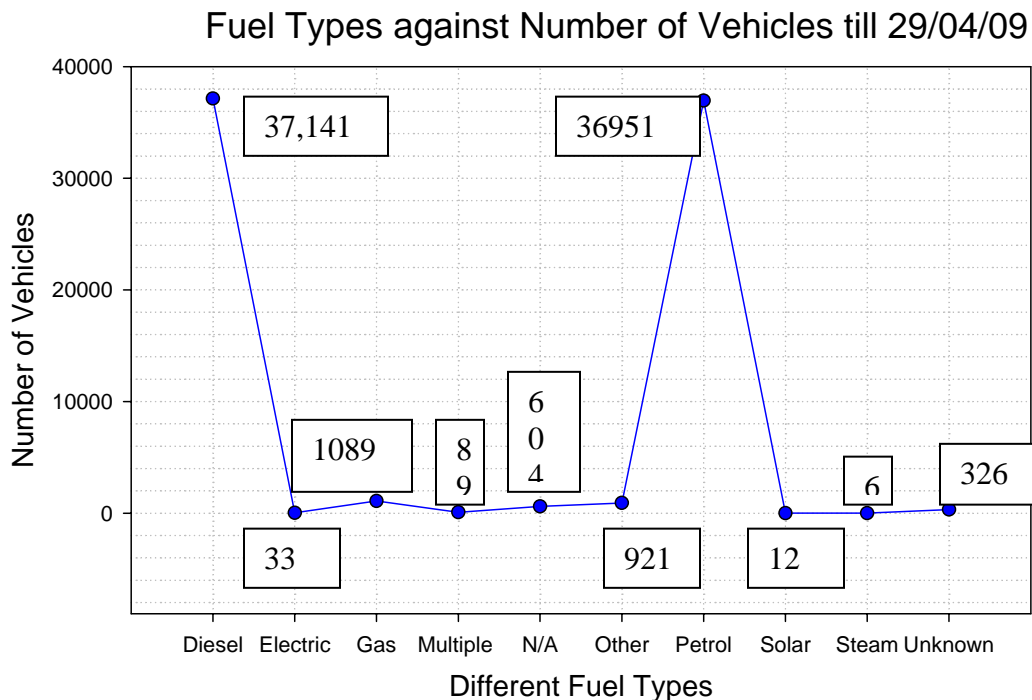
The draft standards for ethanol and bio-diesel were drawn up on the basis of quality standards for these two fuels that have been declared in Brazil, India, Europe and USA.

The draft standards for coconut oil were prepared by Dr Gilles Vaitilingom of the French national organization CIRAD who is a leading international expert on the use of pure coconut oil in diesel engines. The coconut oil standards will be finalized after testing coconut oil of different qualities in diesel engines. Costs for equipment required to measure the parameters in the standards, for testing the coconut oil in diesel engines and confirming the final coconut oil standards for diesel engines are presently being estimated.

Blend Testing

Vehicle data from the Land Transport Authority has been analysed and the number of vehicles on Fiji’s roads sorted out according to their year of manufacture. A summary of the information is provided below.

The figure shows the number of vehicles for different fuel types registered with Land Transport Authority, Fiji from 1st January 2008-29th April 2009. It is clear that Diesel and Petrol run vehicles comprise 98% of the total registered vehicles in Fiji. A report on the vehicle information is being prepared and will be finalised by the end of May.



4) Solar Home Systems

We currently have about 1000 solar home systems in the rural communities and we continue to maintain these systems. Each system comprises of 40 W of fluorescent lights and a power point for a small radio; 100 W_p of PV; 100 Ah, 12 V deep cycle battery with 8 A charge controller. The SHS program is designed such that the:

- Technical design, purchasing, and system ownership by FDoE
- Users will be self-selected and clustered in groups of a size that is appropriate for economically reasonable periodic maintenance by the RESCO
- Users will be required to pay a monthly fee that covers a portion of the capital cost of the installed system and the full cost of operation, maintenance and repair of the systems
- Maintenance and repair services are to be provided by private contractor RESCO operators with technical support, evaluation, certification and regulation by the FDoE.
- Financial controls and technical controls will be put into place and administered by the FDoE to ensure continuing financial and technical responsibility by the RESCO contractors

This year we commenced with the installations of 142 solar home systems in Vanua Levu and the details are provided as follows.

Name of Community	Province	No. of houses	Progress
Malawai Settlement	Macuata	31	Systems have been energized. Project completed
Muanidevo Settlement	Macuata	15	Systems have been energized. Project completed
Korokadi Settlement	Macuata	22	Systems have been energized. Project completed
Vunivere Settlement	Macuata	21	Installation in progress
Nabiti village	Macuata	3	Installation has been completed. Systems to be energised
Visoqo village	Macuata	3	Installation in progress
Matanidoi village	Macuata	8	Installation in progress
Nabubu village	Macuata	7	Installation in progress
Saolo village	Cakaudrove	12	Installation in progress
Nakawakawa village	Cakaudrove	11	Installation in progress
Daria village	Cakaudrove	5	Installation in progress
Nawaisomo village	Cakaudrove	4	Installation in progress



Kiribati

1) Implementation Plan

The development of an implementation plan for Kiribati's National Energy Policy (KNEP) in the Gilbert & Linnix Islands is awaiting Cabinet endorsement of KNEP. This KNEP is expected to be endorsed during the second quarter of 2009.

2) Solar Water Pumps

The funds for this Italian-funded project has been received and the implementation is anticipated to start on the second quarter of 2009 and to be followed by the PIGGAREP-funded incremental activities which will include training for water technicians and the recipient communities.

3) RESCO Manager.

The UNDP Project Document (baseline) has been approved. Awaiting signing of the Face form for processing payment of the second quarter budget.

Bio-fuel feasibility study in Kiritimati Island

This project has been approved for funding by the Italian government pending a final revision based on comments received on the Project Document.



Nauru

Arrival of the wind monitoring equipments at Nauru is expected to be in the second quarter and for the installation to be followed shortly thereafter.



Niue

The installation of the 35 – 55 kW grid connected PV system has been delayed until July due to a change in the arrival dates of the PV equipment at Niue. This is expected to be in late May and therefore the associated PIGGAREP-supported training will be conducted on the third quarter.

A PAS was developed on Strengthening Niue's National Renewable Energy Power Production Capacity. This has been commented upon and has not been revised.



PNG

Progress for this quarter has been slow again. PNGSEL and ATCDI were not successful in securing donor co-financing to start up some projects. PNGSEL has identified a new project and ATCDI continued to source co-financing possibilities.

PNG Sustainable Energy Ltd

There was no progress on the other projects discussed in the last quarter. PNGSEL has now selected a new hydro project for a PAS to be prepared. This project is the 2 MW Togarao hydro

power project located in the Autonomous Region of Bougainville. This project was not included in the 2009 PIGGAREP project matrix. A PAS has been prepared by PNGSEL and this will be submitted to PSC for consideration as the project sponsor has given the approval for its development.

ATCDI

Progress has been slow since the last quarter report. ATCDI has been informed that the Italian Government funding will not cover activities in PNG. The biodiesel PAS with comments from the PSC was given to Professor John Pumwa who is coordinating the biodiesel project to revise. The revision has not been completed.

ATCDI has been looking for co-financing partners for sometime without success.

A technical report on the 4.5 kW pico hydro power unit using the “pump as turbine” system for Paruparu village, which is a mountain community in Bougainville, was completed and sent to the donor and other stakeholders. The proposal on the O & M training has not been undertaken yet due to other work. The plan is to prepare a PAS to PIGGAREP to assist with co-financing of the training.



Samoa

Final consultations were carried out in the month of February with two of the villages identified for monitoring sites as part of the Hydro Data Collection Programme. This was an opportunity to seek permission from the village councils to install monitoring (water level gauges) at the pre-identified sites. These consultations were followed by site surveys to identify suitable locations to install the water level gauges

A Memorandum of Understanding between the Electric Power Corporation and the Ministry of Natural Resources and Environment is being finalised and this will help guide the implementation of this project.

The shipment of water level monitoring equipment has been finalised and paid for by ADB and it is expected to arrive in the country in the next quarter.



Consultation with one of the villages identified for hydro monitoring.

Sites that have been identified for the installation of the wind masts were revisited to re-engage the villages in a consultation process and to determine the amount of civil works required for each site. Most of the equipment for the wind monitoring equipment have arrived which have been paid for by PIGGAREP and installation is expected to start early in the next quarter.

The Upolu Wind Resource Assessment report has been completed and a site has been identified as having potential for a commercial wind farm. However more data collection must be carried out in order to confirm the results of the assessment.



EPC staff carrying out assessments of the sites earmarked for installation of wind monitoring equipment in Savaii.

The Final Project Document and Investment Plan for the Preparatory Phase of the Solar (PV) Rural Electrification Programme has been completed. EPC will now be looking for donor funding to implement this project.

EPC has now increased the percentage of its Coconut Oil Blending trials to 5% after the successful 2% trial (2% Coconut Oil: 98% Diesel). It is anticipated that the successful outcome of this trial will lead to a further increase in the blend percentages.



Solomon Is

The first quarter of 2009, was a slow start for Solomon Islands, in terms of implementing its RE activities. Though slow, due to financial constraints imposed by the Ministry of Finance and Treasury, the following RE activities or Projects progressed:

- i) Power needs Assessments and Installation of Solar PV Systems in Community High Schools funded by the Italian and Turkish Governments;
- ii) Building of the RE Information Center
- iii) Update Feasibility Study for the Huro and Rualae Mini-Hydropower Schemes (Government had just allocated funds for the implementation)
- iv) Bio-fuel Development and Expansion in SI

Power needs Assessments and Installation of Solar PV Systems in Community High School

In the first quarter of 2009, power needs assessments were done at the following secondary schools:

- i) Adua Provincial Secondary School (Malaita Province) - Italy
- ii) Pawa Provincial Secondary School (Makira Province) - Turkey
- iii) Su'umoli Community High School (Makira Province) - Turkey
- iv) Rokera Provincial Secondary School (Malaita Province) - SIG
- v) Buruku Adventist Community High School (Western Province) - Turkey

Of these assessed schools one school had been installed with Solar PV system. That is Buruku Adventist Community High School. Currently, Energy Technicians are currently doing the solar PV installations at Adua Provincial Secondary School.

The system at Buruku Adventist Community High School had a total capacity of 1.515 kW. The set consists of stand-alone systems installed in classrooms; dormitories; administration block and staff houses. The total capacity for Adua Provincial Secondary School solar PV system is about 2.0kW. That comprises of individual stand-alone systems for the administration block; dormitories; classroom and other amenities.

RE Information Center

The construction of the Renewable Energy Information Center is progressing well. So far most of the main structural works are near completion and the final touches would be followed. This will go along with the installation of the RE Equipment and the laboratory furnishing.



Side view of the building from where the biodiesel generator will be set-up



View of where the pico-hydro turbine will be installed

Bio-fuel Development and Expansion in SI

The Government (Cabinet) approved the setting of a Task force to spearhead the Bio-fuel development Program in March this year (2009). A Task Force was appointed already which comprise stakeholders from relevant Government Ministries like the Ministry of Agriculture, Ministry of Commerce, Ministry of Environment and Conservation and Ministry of Planning and Aid Coordination; Statutory bodies (Commodity Export Marketing Authority); SIEA; private sector and the Central Bank of Solomon Islands.

This Task Force will convene its inception meeting in two weeks' time, upon which another Cabinet Paper will be presented before the Cabinet on the full mandate of the Task Force, which will reflect upon the final budget allocation for the Bio-fuel Program.

Other Activities under the Rural Electrification Program

The following activities were completed in the first quarter of 2009:

- i) Installation of Aola Rural Health Centre Hybrid system (in Guadalcanal Province). This hybrid system comprises of 1.7kW solar PV system and a 6 kW biodiesel generator set.



A Hybrid System installed at AOLA Rural Health Centre (North Guadalcanal)



- ii) b) Power needs assessment of Rokera Provincial Secondary School. This is to look at options of replacing the diesel generator with a bio-diesel generator-solar PV Hybrid system. Funding will come from the SIG



Tonga

Rehabilitation of the Mango and Mo'unga'one PV project

The report on the technical, institutional, environment and economic impacts assessment of the Mango and Mo'unga'one Solar Photovoltaic Rehabilitation Project was completed and distributed among the key stakeholders during the quarter.

Solar Street Lighting

The Chinese Government through the Nuku'alofa Township Reconstruction Development project has endorsed solar street lighting to be installed all over the Nuku'alofa area. The institutional setup is still being worked out but the Energy Division has been approached to assist in catering for the training needs of these projects. The suppliers/installers of solar street lighting and solar water pumping equipment will participate together with PV operators/caretakers/technicians from Village Solar Water Committees.

Grid-connected Photovoltaic Systems

A team of 6 from Chinese Shanghai Construction (Group) General CO and the Energy Division will conduct a study during the first week of May to survey the infrastructure requirements to assist them to make recommendations to the Government regarding the development of large scale photovoltaic grid connected electrification in Tonga. This project will be funded from the AusAid fund being managed and coordinated by the Cabinet Sub Committee on Renewable Energy.

The grid connected PV pilot project being proposed for Saint Andrew High School has been approved for funding by the NZAID. A total capacity of around 3kWp is expected to be installed sometime soon.



Tuvalu

Tuvalu Photovoltaic Electricity Network Integration Project (TPVENIP)

The purpose of the Tuvalu Photovoltaic Electricity Network Integration (TPVENIP) is to decrease the cost of electricity production and reduce greenhouse gas emissions by integrating photovoltaic electricity generation into the electricity power networks on the island of Vaitupu.

The TPVENIP is funded by the Italian Government and include the installation and commissioning of a 40 kW grid-connected solar PV system with battery storage and is expected to bring about a reduction of 184 tonnes of CO₂.

In September 2008, the Consultant was recruited to carry out the scoping mission to Vaitupu Island. The Consultant found that the original project concept consisting of a grid-connected (grid parallel) solar system in the order of 40 kW peak should be dropped as the load pattern of

Vaitupu shows extended periods of 40 kW during the daytime. During the period from June to September 2008, the loads during the day even dropped below 40 kW occasionally. Under such conditions a small grid parallel PV system of 40 kW is clearly not feasible. Even reducing the system size to 20 kW would still risk instability and poor power quality in the system. The spiky load pattern which involves instantaneous switching of large loads in relation to the system load exacerbates the problem.

From the above mentioned reasons the Consultant and the taskforce agreed for the project to be dedicated for the only Government School named Motufoua Secondary School with a total capacity of 46 kW. This will provide the school with 24/7 of solar PV power supply. The system is to be tied-in to the main grid.

Tender was called and closed on 13th March 2009. Five tenders were received

- i) CBS-Fiji
- ii) Solargex / Solar World Singapore
- iii) Eco-Kinetics
- iv) Solar and Alternate Energy / Greenzone Singapore
- v) Arnold Jensen / MH Power Australia
- vi) Clay Engineering

The taskforce evaluated the tender and unanimously agreed to award the contract to Eco-Kinetics. The taskforce required clarifications from Eco-Kinetics to reduce its tender price. Eco-Kinetics was able to reduce its tender price by approximately 20%.

The taskforce also acknowledged the assistance and support of PIGGAREP in providing the financial assistance to meet the costs of the training component of the project. The training contract has been drafted by PIGGAREP and a few small issues remain to be sorted out with Eco-Kinetics.

The Supply, Installation and Commissioning contract is under review by the Attorney General's Office and anticipate for the two separate contracts to get signed before the end of May 2009.

40 kW Grid-Connected PV at Funafuti

The project has been working very well since its commissioning in February 2008. One minor problem faced by the project, the frequent tripping of the inverters caused by excessive heat in the 20 feet container, where the inverters were installed. The problem has been rectified by installing a new air-conditioning unit.

In the 14 months of the project has been in operation it was noted that significant savings were achieved as shown in Annex 1.



Vanuatu

EU Energy Facility Biofuel Project

Vanuatu has been fortunate in having three of its projects funded under the EU Energy Facility Call for proposals in 2006. The projects are: (i) Provision of renewable energy to 2 villages in TORBA Province using locally produced coconut oil, (2) Provision of renewable energy to 3 villages in PENAMA Province using locally produced coconut and (3) Provision of renewable energy to 4 villages in MALAMPA Province using locally produced coconut oil. These three projects have been bundled into one big biofuel project. Awareness activities have been completed on all the project sites including the three provinces and by August 2008, the 9 plots of land which the projects are to be situated were all marked and surveyed.

The technical designs for the generation and distribution were already completed by UNELCO including tender for the supply of generators and transmission lines. The tender is now awaiting evaluation sometimes very soon. During the quarter, Mr. Leo Moli, the Director of Energy was appointed as the Project Manager.

Sarakata Hydropower Project

The installation of the third phase of the Sarakata hydropower project was completed and commissioned on 8th January 2009. The capacity of the hydropower has now been increased from 600 kW to 1200 kW. The rehabilitation of the water canal and the painting of the power house is currently underway. The official handing over ceremony of the Sarakata hydropower will be on 25th May 2009. A team comprised of the Environment Unit, Forestry Department, Water Resource Department, Fisheries and Energy Unit will be conducting a hydro risk awareness and consultation meeting with the communities living close to the vicinity of the hydropower project. Also a technical, economic, environment and social evaluation study is scheduled for January 2010, a year after the commissioning of the project.

Energy Ecosystems and Sustainable Livelihoods Initiative (EESLI)

Under this project, there are three components:

- Wind Resource Monitoring
- Solar PV Rehabilitation
- Talise Hydropower Project

There has been some delays in implementing this project. However, USD13,100 has already been disbursed into the Vanuatu Government to start implementing some of the activities. The advertisement for the Project Coordinator has been made with the recruitment expected to be made in June. Scoping missions to 6 provinces to identify sites for installing the wind monitoring equipments will commence in June. There is already request for extra funds to carry out scoping missions to Santo and Malekula for the solar rehabilitation component.

GHD team and two officers from the Ministry of Land and Energy will be travelling to Maewo from 16 – 22 May to carry out a feasibility study on the Talise hydropower project. The study is also to cover the potentials of other renewable energy projects there. The final report for this study is expected in August 2009. From this report, a realistic budget for constructing the hydropower plant can be determined and if the funds provided under the EESLI is inadequate, then the Government of Vanuatu can source for extra funding from other potential donors.

Regional / PMO

Completed conducting the Project Activity Summary (PAS) / Project Proposal Writing Workshop at Auckland, NZ on 19 – 23 January. Following the workshop, more than 20 PAS were drafted to be further reviewed and finalised for the consideration of the Project Steering Committee. As a result of the workshop and through the participation of the REEEP, three national project proposals (Solomon Is, Tonga and Tuvalu) worth 300,000 Euros were developed and submitted to the Renewable Energy and Energy Efficiency Partnership's 7th Programme Cycle.

A regional energy proposal worth 9 million Euros was jointly developed with SOPAC and the CROP Energy Working Group and submitted for the consideration of the European Commission.

A planned 5th Project Steering Committee teleconference did not take place due to technical problems in the phone hook up. This meeting was then conducted virtually through emails. A short summary of the 5th PSC virtual meeting is attached s Annex 2.

The project manager was heavily involved in the preparations for the Regional Energy Meeting / Pacific Energy Ministers' Meeting (REM / PEMM) to be held at Tonga in April. The Climate Change Negotiations and the Opportunities for Renewable Energy, Energy Efficiency and Adaptation in the Pacific Island Countries. This was not only in terms of being in a core committee that review and vet meeting papers but also in terms of preparing two papers for the PEMM. One paper was on Renewable Energy and the other on The Climate Change Negotiations and the Opportunities for Renewable Energy, Energy Efficiency and Adaptation in the Pacific Island Countries.

8. Specific Outputs/Results Achieved (As per quarter work-plan):

The Specific Outputs / Results achieved during the quarter, as per the overall PIGGAREP Immediate Objectives / Outcomes and Indicators are covered in Table 1 below. Table 1 also shows the achievement of the project to date:

TABLE 1: SUMMARY REPORT ON THE IMPLEMENTATION OF THE 2009 WORK PLAN

	1 QTR 09 Activities		2-4 QTR 09 Activities		2008 Activities
Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment	
IMMEDIATE OBJECTIVES/OUTCOMES 1: Improved knowledge about RE resources potential and increase the number of successful commercial RE applications on the ground					
CI 08-1: Topographic and geotechnical survey of the Rarotonga Kiikii wind power site			Completed the topographic survey at a cost of about USD 28,000. Given the outcome of the topographic survey, it was recommended and agreed to by all the parties not to proceed to the geotechnical survey.		
CI 09-1: Mangaia Power System Upgrade			A PAS is yet to be developed.	A 3 QTR 09 activity with a budget of USD 10,000	
CI 09-2: Wind Power Feasibility Study			A PAS for USD 70,000 was drafted to install wind monitoring systems at a 'hot spot' site on each of the three islands, Mitiaro, Mauke and Atiu. PAS will be finalised and submitted for PSC endorsement on 2 QTR 09.	A 4 QTR 09 activity with a budget of USD 50,000 but has been advanced to 2 QTR 09	
FJ 09-1: Technical, economic & environmental evaluation of solar home systems project	5,000	Installations of 142 solar home systems in 4 Settlements and 8 villages in Vanua Levu have commenced. Each system comprises of 40 W of fluorescent lights and a power point for a small radio; 100 Wp of PV; 100 Ah, 12 V deep cycle battery with 8 A charge controller.	A PAS for USD 75,000 was endorsed via PSC 5 during the quarter. Letter from SPREP to Dept of Energy confirming financial support was sent 25/3/09. Activity include a review consultancy and study tour.	The big difference in the budget approved in the 2009 workplan and that in the PAS is noted.	
FJ 09-New 1: Hydro Resources Assessment at Nacomoto Village, Kadavu and Sese Village, Cakaudrove		Survey of eight hydro sites (Waivaka; Wainawaqa, Nauluvatu, Nacula, Vugalei, Nabalasere, Namalata, Namako. Installation of monitoring station and	A PAS for USD 20,000 was endorsed via PSC 5 during the quarter. Letter from SPREP to Dept of Energy confirming financial support was sent 25/3/09. The equipments have been ordered from	This activity was not on the 2009 work plan but has been introduced as a priority activity. Fiji DoE to provide an	

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
		<p>monitoring of hydro resources for 3 years</p> <p>Detail designing of 2 micro hydro Projects (Buca & Naikorokoro)</p>	NIWA in NZ.	update on the baseline / co-financing activities.
FJ 09-New 2: Biofuel Standards		<p>The work involves (i) Quality Standards for liquid biofuels: ethanol, bio-diesel and coconut oil and (ii) Testing of vehicles with the biofuels blends that will form a part of the National Mandate.</p> <p>The draft standards for ethanol and bio-diesel were drawn up on the basis of quality standards for these two fuels that have been declared in Brazil, India, Europe and USA.</p> <p>Vehicle data from the Land Transport Authority has been analyzed and the number of vehicles on Fiji's roads sorted out according to their year of manufacture.</p>	Incremental activity includes the study tour to Vanuatu's biofuel development (see REG 09-2: Technical visits to RE developments in Vanuatu).	
KI 09-1: National Training for Trainers in PV maintenance & Trouble Shooting			A PAS is yet to be developed.	A USD 45,000 activity for the 4 QTR 09.
NA 08-1: Nauru Wind power feasibility study		More than 20 AusAID-funded wind and solar for wireless internet and mobile phones were installed in 2008.	Contract was awarded second half of 2008. Monitoring equipments have been purchased and are expected in Nauru on 2 QTR 09. Installation is expected to begin late 2 QTR 09.	
NA 09-1: PV training		A solar grid-connected system with capacity of 40 kWp was installed at Nauru College in October 2008.	A PAS is yet to be developed.	A USD5,000 activity for 3 QTR 09.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
		60 stand-alone solar home systems each with 130 Wp panels was installed in 2008 through funding from Taiwan.		
NI 09-1: RE training in solar water heaters and other relevant RE technologies		Completed the installation of 240 solar water systems as part of the REP-5 programme.	A PAS is yet to be developed.	A USD10,000 activity with USD 5,000 each for 2 QTR and 4 QTR respectively.
NI 09-2: Network and System Modelling for the Grid Stability		Contract for the supply and installation of a 52 kW grid- connected PV system under REP-5 was awarded. Installation is planned for 3 QTR 09.	<p>A PAS was developed and endorsed by the PSC in 2008. The tender was issued and the offers were all above USD 100,000.</p> <p>A new PAS merging NI 09-2 & NI 09-3 was drafted and reviewed. Final version is yet to be submitted to be circulated for PSC endorsement.</p>	<p>A USD 50,000 activity for 2 QTR 09.</p> <p>Now merged with NI 09-3.</p>
PNG 09-1: Feasibility Study for the rehabilitation of Sohun hydro, Telefomin hydro and Yagusa Hydro (PNGSEL)		Expected Provincial Govt support and funding are not forthcoming.	A PAS is yet to be developed.	<p>A USD 50,000 activity for 3 QTR 09.</p> <p>PNGSDP has given the approval to PNGSEL to study and construct the 2 MW Togarao mini-hydro Project in the Autonomous Region of Bougainville. A new PAS will be prepared replace this activity.</p>
PNG 09-2: Biofuel research/study into coconut oil as a substitute fuel for diesel engines (ATCDI/UniTech)		USD 54,009 of co-financing has been received. The literature survey is in progress. Two 2-kW Diesel Engines have been purchased for comparative performance testing. An order has been placed for the purchase of the exhaust	A PAS was drafted and commented on. Final version to be circulated for PSC endorsement has yet to be received.	A USD 50,000 activity for 3 QTR 09.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
		gas analyzer. A site for the experimental set-up has been identified within the University.		
SA 09-1: Hydro data collection programme		<p>Final consultations were carried with two of the villages identified as monitoring sites. These were followed by site surveys to identify suitable locations to install the water level gauges</p> <p>The shipment of water level monitoring equipments have been finalised and paid for by ADB and they are expected to arrive in the country in 2 QTR 09.</p>	<p>EPC and MNRE entered into a MoU regarding cooperation on hydro-related data collection, analysis and management.</p> <p>EPC is recruiting a Technical Supervisor to be based at MNRE, paid by PIGGAREP, to collect, analyse and manage hydro data</p>	Project was endorsed by the PSC in 2008 and USD 81,000 was committed in 2008 for this.
SA 09-2: Wind resources assessments		<p>The Upolu Wind Resource Assessment report has been completed and a site has been identified as having potential for a commercial wind farm. However more data collection must be carried out in order to confirm the results of the assessment.</p> <p>EPC has finalised arrangements for a wind engineer to assist in the installation of the monitoring equipments.</p>	The monitoring equipments were ordered and most have been received with installation planned for 2 QTR 09.	Project was endorsed by the PSC in 2008 and USD 33,000 was committed in 2008 for this.
SI 09-1: Workshop /Training for users (schools) of the installed Solar PV systems	3,000	<p>Power needs assessments were conducted at 4 secondary schools. Started with the installation of a 1.515 kW solar PV systems at Buruku Adventist Community High School.</p> <p>Conducted the power needs assessment of Rokera Provincial Secondary School.</p>	<p>A PAS for USD 20,000 was endorsed via PSC 5 during the quarter. Letter from SPREP to Dept of Energy confirming financial support was sent 25/3/09.</p> <p>The request for proposals and the ToR is expected to be finalised and issued during 2 QTR 09.</p>	
SI 09-2 : Re-do feasibility		Solomon Is govt co-financing of USD	A PAS for USD 20,000 was endorsed via	A USD 21,000 activity with

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
study for HURO and RUALAE Hydropower schemes		55,000.	PSC 5 during the quarter. The request for proposals and the ToR is expected to be finalised and issued during 2 QTR 09.	USD 7,000 for each quarter 2 – 4 QTR 09.
TO 09-1: Review and Evaluation of the Niufo'ou SEIS			A PAS is yet to be developed.	
TO 08-1: Feasibility Study of the rehabilitation of the Mango and Mo'unga'one PV projects		Findings from the study were used as inputs into the supply tender documents.	The feasibility study report was finalised and distributed during 1 QTR 09. 4 locals participated in the study for capacity building and exposure / training purposes.	With a budget of USD 18,000
TO 09-2: Technical evaluation of the solar installations in Mango & Mo'unga'one	3,000	Tender for the supply contract was awarded. Installation is expected for the second week of May or as soon as the last lot of equipment arrives in the Kingdom.	A PAS was drafted and commented upon but yet to be finalised and circulated for PSC endorsement.	
TO 09-3: Awareness Training for solar water pumping and Solar Street lighting		The villages of Lakepa, Nakolo, Ha'alalo, Fu'amotu in Tongatapu (capacity of around 500kWp) and also Leimatu'a, Holonga and Pangaimotu in the Vava'u Group and Pangai, Hihifo and Ha'ato'u in the Ha'apai have been installed with solar water pumps. Fahefa, Niutoua, Holopeka and Faleloa are in the queue. The Chinese Government through the Nuku'alofa Township Reconstruction Development project has endorsed solar street lighting to be installed Around the Nuku'alofa township.	A PAS has been drafted, reviewed and finalised and will be circulated for PSC endorsement during 2 QTR 09.	A USD 11,000 activity for the 2 QTR 09.
TV 09-1: Support to TEC's		Completed the installation of a e8-		Funafuti project costed

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
outer island grid-connected renewable energy project		<p>funded 40 kW grid-connected PV system at Funafuti in 2008.</p> <p>Tender for the supply, installation and training with respect to the 46 kW system at Motufoua Secondary School was issued.</p> <p>Separate contract with PIGGAREP on the training.</p> <p>Evaluation and offer of contracts are planned for 2 QTR 09.</p>	<p>A PAS for USD 55,000 was endorsed via PSC 5.</p> <p>Activities include monitoring and training support to both the Funafuti and Vaitupu grid-connected PV systems, study tour and participation at the Niue grid-connected PV system workshop.</p>	approximately USD 412,000.
TV 09-2: Studies of wind potential in the outer-islands		Completed the wind monitoring assessment at Funafuti. The tower and anemometer supplied under PIEPSAP will be shifted and used in the outer island – see TV 09-4.	A PAS was drafted and reviewed and will be finalised for circulation among the PSC in 2 QTR 09.	A USD 10,000 activity for 2 QTR 09.
VA 09-1: Technical training on the O&M of the Sarakata hydropower project	3,000	<p>The additional 600 kW of hydropower capacity was commissioned in January.</p> <p>The official handing over ceremony of the Sarakata hydropower will be on 25th May 2009.</p>	<p>Training was completed in January. Trainee has yet to submit his training report.</p> <p>2 PAS for an awareness / consultation training on the risks to the Sarakata hydropower project and a social, economic and technical evaluation of the project in Jan 2010 have been drafted.</p>	
VA 09-2: Review of the 2002 Talise Mini Hydro Feasibility Study	50,000	<p>The baseline are in 3 components:</p> <ul style="list-style-type: none"> – Wind Resource Monitoring – Solar PV Rehabilitation – Talise Hydropower Project <p>The recruitment process for a local expert as Project Coordinator has commenced with the appointment expected to be made in June.</p>	<p>The consultancy contract for the Talise feasibility study was awarded to GHD of Australia for a maximum of USD 88,387 (may vary according to actual costs).</p> <p>2 local experts will participate and receive exposure training in the study.</p> <p>The Inception Report will be finalised</p>	The big difference in the budget approved in the 2009 workplan and the successful tenderer's offer is noted.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
		Scoping missions to 6 provinces to identify sites for installing the wind monitoring equipments will commence in June.	next in May and the field mission will take place in May too.	
VA 09-3: Feasibility Study of the Lowanau River (Tanna) hydro resource potential			A PAS is yet to be developed.	A USD 20,000 activity with USD 10,000 each for 3 & 4 QTR 09.
VA 09-4:Community Training on Biofuel at NE Malekula, Saratamata and Vanualava			A PAS is yet to be developed.	A USD 10,000 activity with USD 5,000 each for 3 & 4 QTR 09.
REG 08-1: Conduct training workshop on RET Application in Small Is States		Partly funded by Taiwan	Workshop completed and was attended by 27 people. Final report produced and distributed.	
RE 09- 1: REP-5 / PIGGAREP Workshop on grid-connected PV at Niue (Linked to NI 09-02 & TV 09-2)		A follow-up to REG 08-1 & 2. Completed PPA-e8 RE workshop in Nov 2008. Selected outstanding participants from workshop to come to Niue. Contract for the supply and installation of a 52 kW grid- connected PV system under REP-5 was awarded. Installation is planned for 3 QTR 09.	Workshop programme has been drafted with REP-5. Participants have been selected.	A USD 35,000 activity for 2 QTR 09. Activity has been moved to 3 QTR due to late arrival of the PV equipment in Niue.

Achievements to Date in relation to the Outcome Indicators

Output and Impact Indicators	Achievements to Date
<ul style="list-style-type: none"> i) 10 completed monitoring studies by 2012 ii) 4 RET application projects developed by 2015 iii) 10 completed feasibility studies (FS) iv) 7 FS leads to an approved, financed and implemented RET application projects by 2012 v) 5 completed demo projects that received TA from PIGGAREP by 2012 vi) 221 kW installed and integrated into existing and new power systems by 2012 vii) 2 ESCOs / IPPs engaged in the RET demo projects by 2012 viii) 16,000 additional people in PICs served with RE through the demo projects by 2012 ix) 4 PURE projects designed and implemented by 2012 x) 10 additional social services (schools, health centres, telecommunication, etc) in PICs using RE by 2012 xi) 10 completed training courses / workshops by 2012 xii) 200 trained people on RE assessments and RE system design, installation and O&M by 2012 xiii) 2 trained people establish own RE business by 2012 xiv) 5 RET application projects designed, implemented, operated and managed by local RE experts by 2012 xv) 2 draft quality and technical standards on grid-connected solar PV system components and installations xvi) 1 standard approved by 2012 	<ul style="list-style-type: none"> i) 8 hydro surveys in Fiji, wind and hydro surveys finalised to begin in Samoa, wind surveys finalised to begin in the Cook Is and biofuel surveys finalised to begin in PNG and the SI. ii) 2 micro hydro projects currently under design (Buca and Naikorokoro - Fiji) iii) 2 (Nauru wind & Vanuatu Talise) feasibility studies finalised to begin in 2 QTR iv) 3 Demo projects identified (Tonga, Tuvalu and Vanuatu) v) 22 kW of installed solar home systems (14.2 Fiji and 7.8 Nauru), 40 kW of grid connected PV installed at Funafuti, Tuvalu and 1.7 kW of PV and 6 kW of biodiesel installed in the SI. 6 kW of solar home systems for Tonga, 1.5 kW in the SI, 52 kW of grid-connected PV are still being finalised for Niue and Tuvalu (46 kW) for installation later in the year. vii) xxx people at Santo served with RE from the new additional Sarakata capacity ix) 3 Demo projects identified (Tonga, Tuvalu and Vanuatu) x) 1 health centre (Aola in SI) and 1 school (Nauru College) installed with a grid connected RE system. 1 school (Buruku Adventist School in the SI installed with solar home systems. 4 schools are to receive biogas digesters in Fiji. Schools in Kiribati will be installed with solar water pumps with Italian funding. xi) RET Application workshop for SIS completed, training of trainers on biogas completed in Fiji. National training workshops in Kiribati, Tonga, Tuvalu (Motufoua) and the SI as well as the regional grid-connected workshop at Niue are in the 2009 work plan and are at various stages of being finalised to be carried out. xii) 27 participants in the RET Application workshop for SIS. 20 participants in the Fiji biogas workshop. xiii) xiv) xv) xvi)

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
IMMEDIATE OBJECTIVES/OUTCOMES 2: Expansion of the market for RET applications				
FJ 09-2: Establishment of the Biogas market		<p>Ten biogas digesters will be constructed by locals under this Biogas Programme.</p> <p>Training of 20 local trainers in biogas construction completed.</p> <p>A biogas certification training programme has been put in place as part of the program.</p> <p>Four sites have been assessed and selected, the builders have been identified and four teams that ranges from two to five builders have been selected from the trained trainers; materials purchased and transported to the four sites, and the actual construction work has commenced at Queen Victoria School, Ratu Kadavulevu School, Wainiyabiya Settlement and Namatakula village. The works are expected to be completed by June.</p>	A PAS has been drafted but not yet finalised.	<p>A 3 QTR 09 activity with a budget of USD 10,000</p> <p>Queen Victoria School (QVS) QVS is a boarding school with a roll of about 700 students. It has been using LPG for cooking which costs \$2,000 per month. The school has a cattle farm as source of milk for the school's needs and a piggery farm as food source. There are some 200 pigs kept in a well maintained concrete shed. A 15m³ digester is currently being constructed at the school.</p>
SI 09-3 : Biofuel Development and Expansion		<p>SI government co-financing of USD 100,000.</p> <p>Cabinet in March approved the setting up of a Task force to spearhead the bio-fuel development program.</p>	<p>The PAS was endorsed by the PSC via PSC 5 for USD 39,000.</p> <p>Activity include consultancy study and study tours.</p> <p>The request for proposals and the ToR</p>	A USD 20,000 activity with 2 QTR (7,500), 3 QTR (7,500k) and 4 QTR (5,000)

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
		Task Force will have its inception meeting in QTR 09 and will submit its mandate and budget to Cabinet.	is expected to be finalised and issued during 2 QTR 09.	

Achievements to Date in relation to the Outcome Indicators

Output and Impact Indicators	Achievements to Date
<ul style="list-style-type: none"> i) 5 technically feasible RE projects in the PICs identified and studied by 2012 ii) 2 financially and commercially viable RE projects in the PICs designed and prepared for donors, financiers and investors by 2012 iii) 8 funded and implemented RE projects by 2012 iv) USD 13 million of investments in new RE installations by 2012 v) 2 completed training courses/workshops on the manufacturing and repair of RET system components by 2012 vi) 50 trained people on manufacturing and repair of RET system components by 2012 vii) 30 trained people engaged in the manufacture and repair of RET systems components by 2012 viii) 2 RET application projects in the PICs employing locally manufactured components by 2012 ix) 1 commercially viable equipment manufacturers/fabricators and suppliers of RET system components in the PICs by 2012 x) USD 50,000 of sales of locally manufactured/fabricated RE system components in the PICs by 2012 xi) 3 power utilities in the PICs that have RE Advisers/Units by 2012 xii) 1 power utility with corporate-approved business plans that include RE utilization and marketing activities by 2012 xiii) 3% increase in the financing for incorporation of RE in power generation in the PICs by 2012 	<ul style="list-style-type: none"> i) 1 study has been completed (Motofoua grid-connected PV project at Vaitupu, Tuvalu) and 1 has been finalised to being 2 QTR 09 (Talise hydropower project in Vanuatu is being studied). ii) iii) 3 proposals (SI, Tonga and Tuvalu) submitted to the REEEP 7th Programme Cycle and 1 proposal (Action Fiche) to the EU-funded EDF 10. iv) The Fiji Electricity Authority (FEA) and the Chinese Development Bank (CDB) signed a F\$132.45 million (US\$70 million) loan agreement to commence the construction of the Nadarivatu Hydropower project. v) 1 completed workshop in Fiji on the construction and maintenance of biogas digesters vi) 20 people trained in Fiji on the construction and maintenance of biogas digesters. vii) 20 trained biogas technicians in Fiji are now engaged in the construction of 4 digesters in 4 schools viii) ix) x) xi) xii) PPA has commenced the recruitment process for a RE Adviser to work for the member power utilities. The Electric Power Corporation of Samoa recruited a Renewable Energy Officer in 2008. Completed study for the establishment of a RE & EE Unit at the Tuvalu Electricity Corporation. Tuvalu's proposal to the REEEP 7th Programme Cycle was to fund a RE Adviser.

Output and Impact Indicators	Achievements to Date
xiv) 1 commercially viable RESCOs in the PICs by 2012 xv) 5 completed training courses/workshops on basic O&M of RET system installations and components by 2012 xvi) 80 trained rural residents on basic O&M of RET system installations and components by 2012 xvii) 6 trained rural residents that are actually operating and/or maintaining RET system installations and components in rural areas in the PICs by 2012	xiii) xiv) xv) Workshops on basic O&M of RET system installations and components planned for Kiribati, SI, Nauru, Niue, Tonga and Tuvalu. Workshops on risks / hazards awareness relating to the Sarakata Hydropower Project is planned for Vanuatu. xvi) xvii)

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
IMMEDIATE OBJECTIVES/OUTCOMES 3: Enhancement of institutional capacity to design and implement RE				
FJ 09-3: Technical Assistance (through consultancy) for strengthening the management of the Energy Information System	5,000		A PAS was drafted and reviewed. Awaiting final version to be circulated for PSC endorsement by 2 QTR 09.	
KI 09-2: Review of KSEC, Restructure, On the Job Business Training, Strategic Planning, Project Preparation, Management, Monitoring and Evaluation			A PAS is yet to be developed.	A USD 15,000 for 2 QTR 09.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
KI 09-3: Migrating RESCO Manager to an open source platform.		UNDP has approved a project proposal on Maintaining Renewable Energy Systems in Kiribati through Technical Training for USD 35,000. Awaiting signing of Face form for processing payment.	A PAS was developed and endorsed by PSC in 2008. PMO awaiting clarifications on the ToRs, the operationalisation of the consultancy contracts and the complementarity with the co-financing activities. Linkages	A USD 60,000 activity for 2 (10,000), 3 (20,000) & 4 QTRs (30,000) 09.
NA 09-2: Energy Database	10,000	SOPAC assisted Nauru to put establish its Energy Data Base	A PAS was drafted requesting mostly the purchase of computers. Advise was provided to Nauru to redesign PAS in order for the PIGGAREP to provide database training and other related activities.	
NA 09-3: Training needs assessment for RE		PPA has advertised the consultancy to conduct raining needs assessment in its member power utilities, including Nauru's.	A PAS is yet to be developed.	A USD 40,000 activity for 2 QTR 09.
TV 08-1: Study the best ways to establish a RE and EE Unit at the Tuvalu Electricity Corporation.		Tuvalu's REEEP proposal in Outcome 7 is to operationalise the RE and EE Unit. t	Completed in Sept 2008 for approximately USD 46,000. Report finalised and endorsed by the TEC Board.	
TO 09-4: Technical Assistance to the Tonga Energy Roadmap: 2010 – 2020		The Tonga govt has set a target of achieving 50% of grid-based electricity from RE within 3 years. The World Bank and Tonga are drafting an Interim Energy Sector Technical Report to be discussed in Sept 09 leading to drafting of the final Road Map to be completed by Feb 2010.	A PAS is yet to be developed.	To include relevant TA to the EDF 10 project too. A USD 15,000 activity for 3 QTR 09.

Achievements to Date in relation to the Outcome Indicators

Output and Impact Indicators	Achievements to Date
<p>i) 2 PICs that have National Energy/Climate Change Plans and Energy Laws and Policies in place and enforced by 2011</p> <p>ii) 2 PICs have set GHG emissions reduction and/or RE utilization targets by 2011</p> <p>iii) 3 PICs that annually prepare their national energy balance based on regularly collected energy supply and consumption data by 2010</p> <p>iv) 1 PIC with annual earmarked budget allocations for RET-related training in national energy plans starting 2009</p> <p>v) 3 PICs with established national coordination system & mechanism on energy matters that include the private sector by 2010</p> <p>vi) 3 proposed energy policies and laws in each PIC each year that were deliberated through the established national energy coordinating system and mechanisms starting 2010</p> <p>vii) average of 3 energy policies and laws in each PIC each year that were approved and enforced through the established national energy coordinating system and mechanisms by 2012</p> <p>viii) 8 competitive procurement processes each year for goods & services in the context of national energy activities where relevant national focal points are represented starting 2008</p> <p>ix) 1 RET projects/programs with parallel funding and/or cost sharing by 2012;</p> <p>x) 2 completed training courses/workshops on energy planning and energy project coordination and management (EP&EPC/M) by 2012</p> <p>xi) 6 trained people on EP&EPC/M by 2012</p> <p>xii) 6 trained people that work on EP&EPC/M either in the government or in the private sector in the PICs by 2012</p> <p>xiii) 6 successfully implemented energy projects, in general, and RET system application projects, in particular that were planned, coordinated, or managed by trained EP & EPC/M people in the PICs by 2012</p> <p>xiv) 3 PICs with well-staffed Energy Offices with clear mandates by 2010</p> <p>xv) 3 PICs with EOs equipped with updated databases for planning and policy making by 2010</p> <p>xvi) 3 PICs with EOs coordinating the implementation of their respective</p>	<p>i) Kiribati has finalised its National Energy Policy and submitted for Cabinet endorsement. Niue Cabinet has approved the drafting of a Climate Change Policy. SPREP has been approached to help, PIGGAREP is willing to support and is awaiting a ToR from Niue in order for a consultant to carry out this work.</p> <p>ii) Tonga in 2008 adopted a RE target of 50% within 3 years. PIGGAREP RE paper to the PEMM will highlight importance of having voluntary and achievable targets.</p> <p>iii) Nauru is assisted by SOPAC to establish its Energy Database. Energy Supply and Consumption Data collected for the GHG inventory chapter of the PICs' UNFCCC National Communications.</p> <p>iv)</p> <p>v) SI Cabinet approved the formation of a Biofuel Task Force. A Cabinet sub-committee on RE established in Tonga in March 2008, following the revival of the National Energy Committee in 2008.</p> <p>vi) Regulations for the Tonga RE Act are planned to be finalised through the National Energy Committee.</p> <p>vii) Tonga's National Energy Committee was the final clearing house for Tonga's RE Act before submission to Parliament. The Act was approved by Parliament in 2008.</p> <p>viii)</p> <p>ix) TERI and SOPAC are planning a regional energy planning workshop for 3 QTR 09.</p> <p>x)</p> <p>xi)</p> <p>xii)</p> <p>xiii)</p> <p>xiv)</p> <p>xv)</p> <p>xvi) Tonga Energy Division is coordinating the implementation of the kingdom's national energy / climate change mitigation plan</p> <p>xvii)</p> <p>xviii) 3 Energy Planner and 3 Energy Officer positions established and filled at the</p>

Output and Impact Indicators	Achievements to Date
<p>country's national energy/climate change mitigation plan by 2010</p> <p>xvii) Average of 3 energy policies formulated each year by the EO in each PIC starting 2010</p> <p>xviii) 8 additional EO positions funded by national budgets by 2012</p> <p>xix) 2 national energy databases reviewed and revised by 2010</p> <p>xx) 3 PICs maintain and use their national energy database every year starting 2009</p> <p>xxi) 2 completed workshops on energy data gathering system and operation and maintenance of the energy database</p> <p>xxii) 2 implemented energy policies and projects in the PICs that were based on the information in the energy database by 2012</p> <p>xxv) 1 national energy balances prepared by 2012</p> <p>xxvi) 3 national energy balances updated by 2012</p> <p>xxvii) 1 completed regional synthesis reports of energy sector GHG emission inventory by 2012</p> <p>xxviii) 33% reduction in regional energy sector GHG emissions (compared to that in 2005) in 2015.</p>	<p>Tonga Energy Division in early 2009.</p> <p>xix) Samoa's energy database reviewed and revised by SOPAC in 2008.</p> <p>xx) Fiji is recruiting a data entry clerk to support its data base work.</p> <p>xxi)</p> <p>xxii)</p> <p>xxiii)</p> <p>xxiv)</p> <p>xxv)</p> <p>xxvi)</p> <p>xxvii) Energy Supply and Consumption Data collected for the GHG inventory chapter of the PICs' UNFCCC National Communications.</p> <p>xxviii)</p>

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
IMMEDIATE OBJECTIVES/OUTCOMES 4: Improvement of the availability of funding for existing and new RE projects				
NI 09-3: RE and Existing Tariff Study		Contract for the supply and installation of a 52 kW grid-connected PV system under REP-5 was awarded. Installation is planned for 3 QTR 09.	A USD 40,000 activity for 4 QTR 09. A new PAS merging NI 09-2 & NI 09-3 was drafted and reviewed. Final version is yet to be submitted to be circulated for PSC endorsement.	Now merged with NI 09-2.

Achievements to Date in relation to the Outcome Indicators

Output and Impact Indicators	Achievements to Date
<ul style="list-style-type: none"> i) Completed study report on the real cost of electricity and other RE resources by 2010 ii) 1 PIC utilizes the energy pricing tool and the knowledge about the real cost of energy in their energy policy and decision making processes by 2012 iii) 11 government-supported RE-based rural productivity projects in 2012 iv) 5 RET application projects specifically designed to improve productivity and income in rural areas by 2012 v) 5 private sector entities investing in PURE and/or SURE projects in rural areas of the PICs by 2012 vi) 5 financial/banking institutions that participated in the regional workshop on RE investments vii) 50% of banks and financial institutions in the region that have committed financial support to RET application projects by 2012 viii) 1 training course for the banking/financial institutions in the PICs designed and conducted each year starting 2010 ix) 20% of targeted financial institutions in the PICs that committed to support RET application projects by 2012 x) 5 applicable RE financing schemes identified and designed by mid-2010 xi) 2 identified and/or designed applicable innovative financing schemes that are acceptable to banks and financial institutions in the PICs by end 2010 	<ul style="list-style-type: none"> i) 2 base tariff studies were completed by PIEPSAP in 2007 for the SI Electricity Authority and the Tuvalu Electricity Corporation. ii) Tuvalu Electricity Corporation approved setting up a RE and EE Unit based on the base tariff study recommendations iii) iv) 5 RET application projects specifically designed to improve productivity and income in rural areas by 2012 v) vi) vii) viii) ix) x) Samoa is setting up a Clean Energy Fund as part of its ADB Power Expansion Project xi) xii) xiii) Samoa is setting up a Clean Energy Fund as part of its ADB Power Expansion Project xiv) xv) xvi) xvii) Samoa is setting up a Clean Energy Fund as part of its ADB Power Expansion

Output and Impact Indicators	Achievements to Date
xii) 2 banks and financial institutions in the PICs that have adopted innovative financing schemes developed under the PIGGAREP by 2012 xiii) 1 existing operational funds in the PICs reviewed by end 2009 xiv) 2 committed seed fund contributors to a regional/national RE Fund (REF) by end 2012 xv) USD .5 million of confirmed seed funds for the REF by mid-2011 xvi) 2 completed and PICs-approved design of REF including the associated IRRs by end 2011 xvii) 1 operational regional/national REF supporting the implementation of RET application in the PICs by 2012	Project

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
IMMEDIATE OBJECTIVES/OUTCOMES 5: Strengthened legal and regulatory structures in the energy and environmental sectors				
FJ 09-4: Technical Support to the development of energy legislation		Tenders were invited for this consultancy. Five tenders were received and further clarifications are being sought from the bidders. Once this information is received, the Department will complete its evaluation and prepare a submission to the Tender Board for approval. The Department anticipates that the project will be completed by December 2009.	A PAS is yet to be developed.	An activity with USD 18,000 support from the PIGGAREP (2 QTR- 5,000, 3 QTR-8,000 & 4 QTR – 5,000)
KI 09-4: Consultations on the National Energy Policy and drafting of an Action Plan	7,000	The KNEP has been drafted with the assistance of SOPAC. It has been submitted to Cabinet for endorsement.	A PAS was drafted and reviewed during the PAS workshop in January. PAS is yet to be finalised.	Activity is to cover travel of 3 officers to Christmas Is to conduct consultation meetings. Kiribati advised to prepare a draft Action Plan in Tarawa to base the consultation on.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
TV 09-3: Support implementation of Policy and Strategic Action plan			A PAS is yet to be developed.	A USD 12,500 activity with USD 6,250 each for 3 & 4 QTR 09 respectively.

Achievements to Date in relation to the Outcome Indicators

Output and Impact Indicators	Achievements to Date
<ul style="list-style-type: none"> i) 11 PICs with endorsed national energy / RE policy ii) 5 strategic energy action plans have RE activities that are costed and financed iii) 5 RE policy studies conducted each year in each PIC starting 2009 iv) 1 formulated RE policies (including PURE/SURE policies and fiscal incentives) proposed to the government in each PIC annually starting 2009 v) an average of 1 proposed RE policies (including PURE/SURE policies and fiscal incentives) that are approved and adopted annually in each PIC starting 2010 vi) average of 1 sets of policy IRRs (inclusive of the legislation) that are approved in each PIC annually starting 2010 vii) 2 completed comprehensive energy pricing studies by 2012 viii) 2 PICs utilizing the pricing studies in their national energy planning and policy making by 2012 ix) 2 RE policies (including PURE/SURE) that are based on the comprehensive energy pricing studies by 2012. 	<ul style="list-style-type: none"> i) Kiribati's national energy policy submitted for Cabinet endorsement ii) The PAS for the Kiribati energy action plan has been drafted and reviewed iii) iv) v) vi) vii) The PAS for Niue's electricity pricing study drafted and reviewed viii) ix)

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
IMMEDIATE OBJECTIVES/OUTCOMES 6: Increased awareness and knowledge about RE among key stakeholders				
CI 09-3: RE / Green Award Programme for the tourism sector			A PAS is yet to be developed.	A 4 QTR 09 activity for USD 5,000
FJ 09-5: Technical visits to RESCO business operations in Kiribati (Kiribati Solar Energy Company).		See FJ 09-1 above under Outcome 1	This activity is included in the PSC-endorsed PAS for FJ 09-1: <i>Technical, economic & environmental evaluation of solar home systems project</i> (see Outcome 1). Preliminary contacts and planning have been made with the Solar Energy Company Ltd of Kiribati.	A USD 15,000 and USD 10,000 for 2 QTR 09 and 3 QTR 09 respectively.
KI 09-5: Public awareness campaigns	3,000		A PAS is yet to be developed.	A USD 12,000 activity for the year with USD 3,000 quarterly. The big difference in the budget approved in the 2009 workplan and that in the PAS is noted.
NI – Awareness programs on all sectors radio /TV / local newspaper / ¼ly / weekly bulletins			A PAS is yet to be developed.	A USD 15,000 with USD 5,000 each for 2, 3 & 4 QTR 09 respectively.
SA 08-1: National energy awareness campaign day			Completed at a cost of USD 9,000 and with the participation of about 400 students. Activity has been evaluated, documented and posted to the PIGGAREP web page.	
SA 09-3: National energy awareness campaign day			A PAS was drafted and reviewed but not yet finalised to be circulated for PSC endorsement.	A USD 10,000 activity for 2 QTR 09.
SI 09-4: RE Training for students at	2,000	Completed the installation of Aola Rural Health Centre Hybrid system (in	A PAS is yet to be developed.	A USD 8,000 activity with USD 2,000 quarterly.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
Willies and SICHE on Electrical Trade		<p>Guadalcanal Province). This hybrid system comprises of 1.7 kW solar PV system and a 6 kW biodiesel generator set.</p> <p>12 RE technicians recruited by the Energy Division.</p>	A PAS for USD 36,000 (20k for training and 16k for the RE Information Centre – SI 09-5) was endorsed via PSC 5 during the quarter. Letter from SPREP to Dept of Energy confirming financial support was sent 25/3/09.	The big difference in the budget approved in the 2009 workplan and that in the PAS is noted.
SI 09-5: Setup of RE Information and Exchange Centre		Construction of the Renewable Energy Information Centre is well underway. Most of the main structural works are near completion and the final touches would be followed. This will go along with the installation of the RE equipment and the laboratory furnishing.	<p>A PAS for USD 36,000 (16k for the RE Information Centre and 20k for training and – SI 09-4) was endorsed via PSC 5 during the quarter. Letter from SPREP to Dept of Energy confirming financial support was sent 25/3/09.</p> <p>The request for proposals and the ToR is expected to be finalised and issued during 2 QTR 09.</p>	
TV 09-4: Analysis of wind data and Preparation of a wind fuel savings project for Funafuti Island		Completed 1 year of wind monitoring assessment at Funafuti under the PIEPSAP.	A PAS was drafted and reviewed and will be finalised for circulation among the PSC in 2 QTR 09.	<p>A USD 50,000 activity for the 3 QTR 09.</p> <p>Equipments will be shifted and installed in an outer island – see TV 09-2.</p>
<p>TV 09-5: Public demonstration of Biodiesel, todi ethanol, gasification production</p> <p>Dissemination of biogas technology introduced by PIEPSAP</p> <p>Education tool for children in Tuvalu, USP & high school classes</p>		<p>The construction of the Amatuku Training Centre on Renewable Energy with a new piggery and biogas digester was completed in late 2007.</p> <p>Completed awareness workshop attended by more than 80 people.</p> <p>Production and Airing of daily radio series covering RE from Environment Day, June 5th – October 6th 2007.</p> <p>Printed and distributed 200 copies of the Our Planet Under Water comic in the Tuvalu language.</p>	A PAS is yet to be developed.	<p>A USD 10,000 activity with USD 5,000 each for the 3 & 4 QTR 09 respectively.</p> <p>ALOFA Tuvalu activities.</p>

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
		<p>Picture exhibition attended by more than 500 Tuvaluans.</p> <p>DVD distribution of events relating to environment and renewable energy in Tuvalu.</p>		
VA 09-5: Technical visits / study tour to community based pico/micro hydros in Solomon Is, Fiji and / or PNG			A PAS is yet to be developed.	A USD 25,000 activity with USD 10,000 for 2 QTR 09 and USD 15,000 for 3 QTR 09.
REG 08-2: Regional RE training workshop		e8-PPA workshop completed in Nov 2008 and attended by 24 participants from the power utilities.	PIGGAREP funded the participation of a participant each from the Kiribati and Tonga solar utilities.	
REG 09-2: Technical visits to RE developments in Vanuatu			<p>Linked to the PSC-endorsed PAS by Fiji (FJ 09-1), Solomon Is (SI 09-3) and Tuvalu (TV 09-1).</p> <p>PAS for other interested PICs has not been developed and / or yet to be endorsed by the PSC.</p> <p>Date has been fixed with the Vanuatu Energy Office for July 27 – 31.</p> <p>Interested PICs have been requested to send specific needs to assist in the planning and coordination of the event.</p>	A USD 40,000 activity for 3 QTR 09.
REG 09-3: Study tour of the Ha'apai Solar Electricity Inc.			<p>Linked to the PSC-endorsed PAS by Fiji (FJ 09-1), Solomon Is (SI 09-3) and Tuvalu (TV 09-1).</p> <p>PAS for other interested PICs has not been developed and / or yet to be endorsed by the PSC.</p>	A USD 40,000 activity for 4 QTR 09.

Achievements to Date in relation to the Outcome Indicators

Output and Impact Indicators	Achievements to Date
<ul style="list-style-type: none"> i) Average of 1 RE/RET awareness raising and promotion programs designed and carried out in each PIC each year starting 2009 ii) 10 power utilities in the region that are using RE in their power generation and/or operations by 2012 iii) 300 households in rural areas are using RE for their electricity and non-electricity needs by 2012 iv) 4 study tours conducted on RET applications and other non-conventional energy systems by 2012 v) 10 additional PIC nationals with a Certificate, Diploma, and/or university degree on the technical aspects of RE by 2012 vi) No of demonstration projects that achieved set technical and financial performance (e.g., MWh generation, CO2 emission reduction, payback period, IRR) targets by 2012 vii) 300 copies of the demonstration project report disseminated by 2012 viii) 20 project developers that utilize the report as reference for their RET application projects by 2012 ix) 2 RET application projects that replicate the demo projects by 2012 x) 2 established and operational RE Information Units in the region by 2012 xi) an average of 30 requests for information by other organizations (local and abroad) served by each RE Information Unit starting 2010 xii) 80% of clients of each RE Information Unit that are satisfied with the services provided starting 2010 xiii) 10 public and private entities in the region that are using RE to meet (fully or partly) their energy needs starting 2012 xiv) correctly identified collective CO2 emission reductions realized each year by the top 3 awardees starting 2010 xv) 300 visits to the PIGGAREP webpage each year starting 2009 xv) 80% of website users each year are satisfied with information contained in website starting 2009 xvi) 12 SPREP monthly articles on energy / climate change distributed each year starting 2009 xvii) 10 people and institutions that are familiar with the PIGGAREP each 	<ul style="list-style-type: none"> i) 2 PICs (Kiribati & Samoa) have awareness activities in their 2009 work plan. ii) 7 power utilities (Fiji, Nauru, PNG, Samoa, SI, Tuvalu and Vanuatu) have RE integrated into their grid. Niue will have grid connected RE power on 3 QTR 09. iii) 142 households in Fiji are being installed with SHS. XXX households in Santo get electricity from the newly commissioned Sarakata hydropower expansion. Sixty households at Mango and Mo'unga'one at the Ha'apai Group of Tonga will be installed with SHS 2-3 QTR 09. iv) 1 study tour by Fiji to Kiribati is planned. 1 study tour by Fiji, SI, PNG, SI, Samoa and Tuvalu to Vanuatu is planned for 3 QTR 2008. 1 Study tour to the Ha'apai Solar Electricity Inc. is planned for 4 QTR 09. v) 12 trainees in the SI are to undergo electrical certificates training with Willies Electrical. 1 student from the Fiji Dept of Energy currently doing MSc on Energy Planning and Policy. 1 student from the Tonga Energy Division is currently doing PhD on renewable energy at the Uni. of NSW. vi) vii) viii) ix) x) Construction of the SI RE Information Unit is currently underway and lab equipments and RE equipments have been ordered xi) xi) xvii) 1 health centre (Aola in SI) and 1 school (Nauru College) installed with a grid connected RE system. 1 school (Buruku Adventist School in the SI installed with solar home systems. 4 schools are to receive biogas digesters in Fiji. Schools in Kiribati will be installed with solar water pumps with Italian funding. xiv) xv) Still not able to put in a counter on the PIGGAREP page! xvi) 2009 is SPREP's Year of Climate Change with various promotional activities, including some on renewable energy

Output and Impact Indicators	Achievements to Date
year starting 2009 xviii) 80% of the stakeholders/target groups in the PICs fully understand the PIGGAREP by 2011	xvii) Anyone seriously working on RE in the region will come across PIGGAREP is discussions with others in and outside of the region. xviii) There is more and more appreciation of the PIGGAREP from its publicity work, tenders on joint activities with IUCN, REEEP publications and newsletters, etc.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
IMMEDIATE OBJECTIVES/OUTCOMES 7: Effective Management of the PIGGAREP				
INDICATOR: Project Activities are implemented within budget and on time, in close collaboration with other related and parallel activities in the PICs.				
RE 09-4: Regional Workshop on writing Project Activity Summary / Project Proposals	40,000		Completed and other than Nauru, 10 PICs attended. A workshop report has been produced.	
Effective Project Management			Completed PSC 5 virtually. Report is yet to be produced.	
Effective Project Management			Assisted in an EU audit of SPREP. Assisted with the audit of the PIGGAREP's 2008 activities and accounts.	
New funding for RE in the PICs			Completed a joint SOPAC-SPREP EDF 10 Identification Fiche (IF) for 9 million Euros. IF has been submitted via the Regional Authorising Officer (RAO) to Brussels.	
New funding for RE in the PICs			Assisted Solomon Is, Tonga and Tuvalu will developing their proposals, each 100,000 Euros, for the REEEP's 7 th Programme Cycle.	
Regional and International Cooperation and Partnerships			Participated in the first meeting of the Lead Authors for the IPCC Special Report on Renewable Energy.	Costs were paid for by WMO / IPCC.

Work Plan Activities	1 QTR 09 Budget (USD)	Status of baseline activities	Status of incremental activities	Comment
Regional and International Cooperation and Partnerships			Participated in the SOPAC-SPREP discussions on the Regional Institutional Framework.	EWG meeting and EDF 10 IF development coincided with the Suva RIF discussions.
Regional and International Cooperation and Partnerships			Participated in the REEEP-selected Steering Committee that shortlisted project concept for the REEEP's 7 th Project Funding Cycle.	Done virtually by phone and email.
Regional and International Cooperation and Partnerships			Participated in the CROP Energy Working Group preparatory meetings for the Regional Energy Meeting / Pacific Energy Ministers' Meeting (PEMM). Drafted 2 papers relating to renewable energy for the PEMM.	
Regional and International Cooperation and Partnerships			Coordinated the conduct of a Capacity Building Workshop on the Clean Development Mechanism on 2 QTR 09.	A 4 year EU-funded programme through UNEP.

9. Challenges/Issues Encountered

There is a marked improvement in the number of PAS being drafted and developed in relation to the 2009 work plan. Some national energy offices continue to show lack of interests in advancing their PIGGAREP activities but show keen interests in travel related activities.

The number of PIGGAREP supported activities on the ground has advanced to the “take off” stage and where extra manpower support to the PMO is now justified.

There are indications already from the first quarter’s performance that the work plan for 2009 is more realistic than 2008’s, however, the work plan must remain flexible to accommodate changes in direction and focus in the PICs. This flexibility must also take into account of the fact that a lot of achievements in relation to the project indicators are taking place but they are not listed as co-financing in relation to the activities in the 2009 work plan. For instance, a member of the Tonga Energy Office is currently doing his PhD on renewable energy and this directly relates to the indicator *10 additional PIC nationals with a Certificate, Diploma, and/or university degree on the technical aspects of RE by 2012* but the PhD study is not used by Tonga as a co-financing activity.

It is to be noted from Table 1 that there are a many activities in relation to Immediate Objectives / Outcomes 1 (Technical), 3 (Institutional), 5 (Policy) and 6 (Awareness) while there are only 2 under Market and 1 under Financial. It is however to be noted to that even though there are only a few activities under Market and Finance, the level of achievements on both is satisfactory.

There are some indicators will corresponding blank achievements. Some of these can only be achieved through regional interventions. Examples include activities relating to indicators such as:

- *2 completed training courses/workshops on the manufacturing and repair of RET system components by 2012*
- *1 training course for the banking/financial institutions in the PICs designed and conducted each year starting 2010*
- *2 completed training courses/workshops on energy planning and energy project coordination and management (EP&EPC/M) by 2012*
- *2 completed workshops on energy data gathering system and operation and maintenance of the energy database*

10. Solutions Applied (to address issues and challenges)

Given that there has been no further development in the joint IUCN / PIGGAREP position, PIGGAREP should use the opportunity to build capacity in the PICs through various short term attachments for specific tasks averaging 2 weeks to a month. These may include updating the PIGGAREP web page and designing the above workshops, among others.

The workshops mentioned in #9 above will be incorporated into the 2010 and future work plans. On this same approach, PICs should be encouraged to look at the indicators as a guide for

designing their co-financing and incremental activities and for the reporting of their quarterly achievements.

11. Recommendations for Future Action/Work Plan Quarter 2/2009

Please see the 2 QTR 09 column of the 2009 Work Plan, attached as Annex 1.

12. Project Finance

The Combined Delivery Report for 2008 was finalized during the quarter and is attached as **Annex 2**. The financial report for the quarter was done in UNDP's new Funding Authorization and Certificate of Expenditures (FACE) format, as attached in **Annex 3**. The total budget for the quarter was USD 185,000. Total expenditures were USD 151,839 (or 82% of the budget) with USD 31,407 (21%) being PMO-related costs and USD 120,432 (79%) being for PICs project activities and participation in regional activities. An analysis of the project finance to the end of the quarter can be seen in the following graphs.

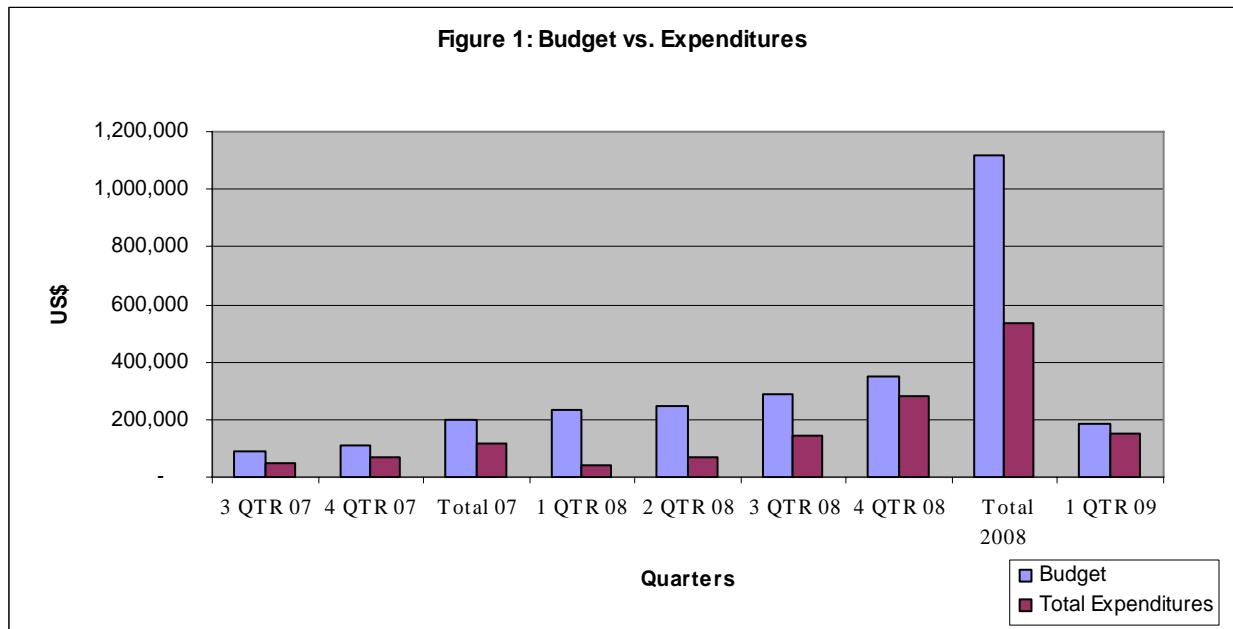


Figure 2: Delivery Rate (expenditures / budgets)

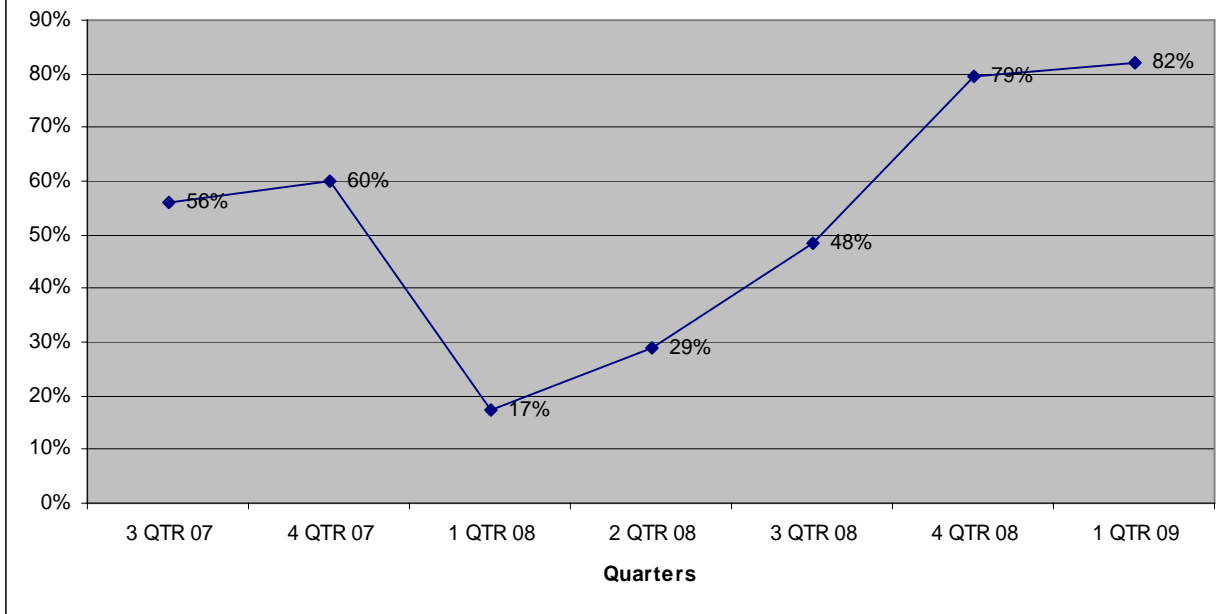
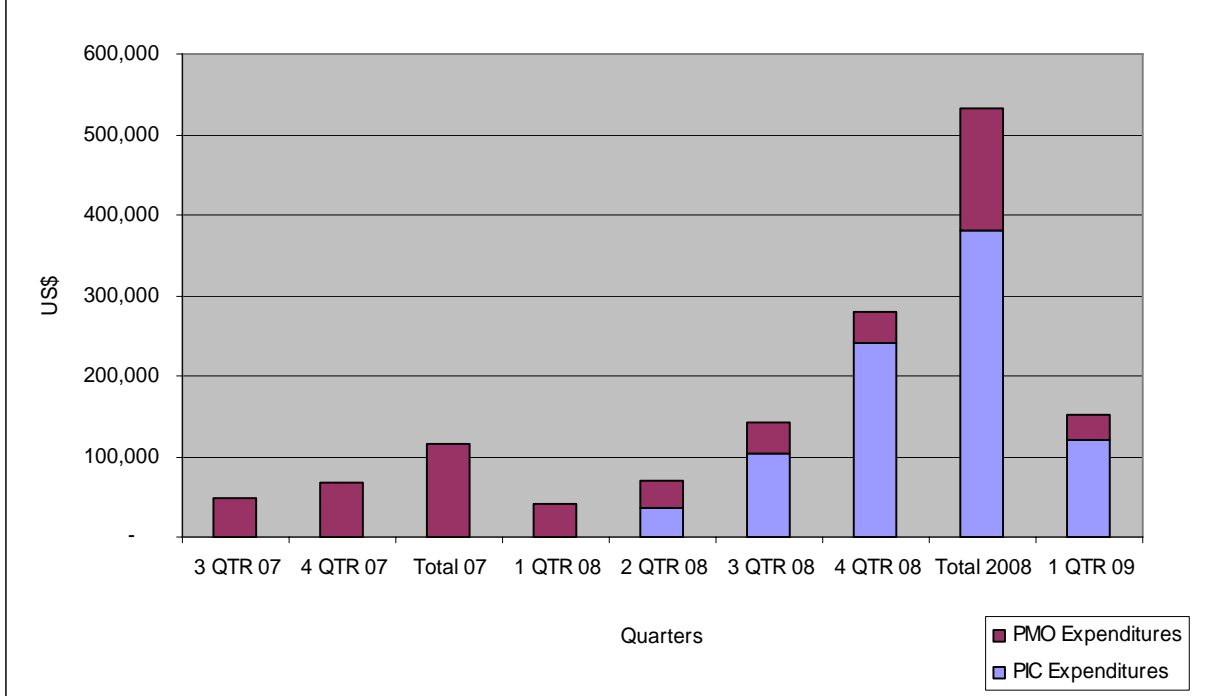
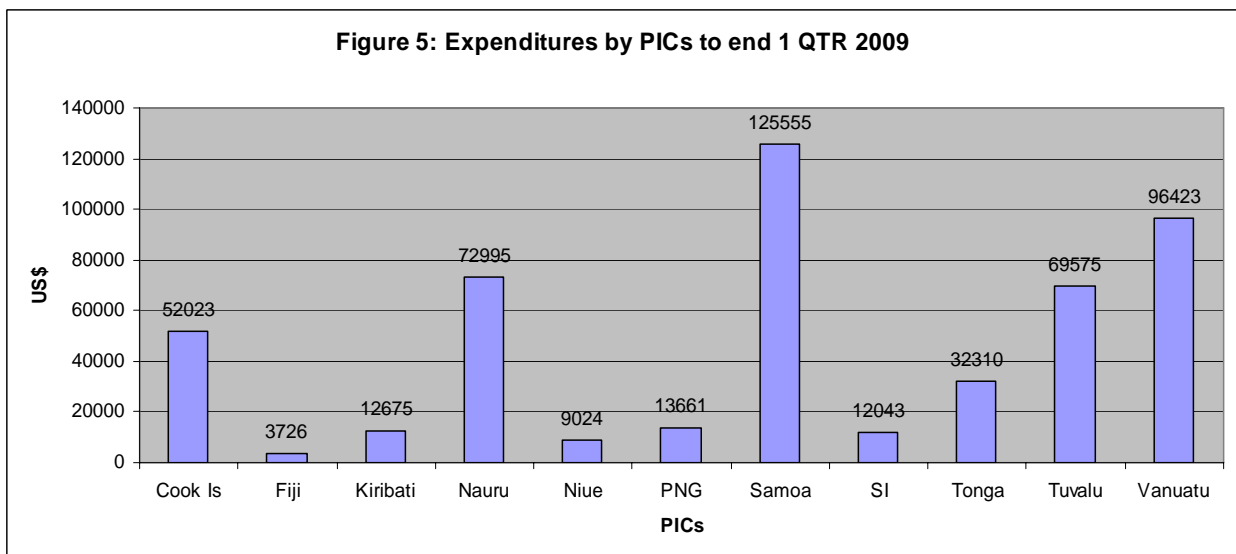
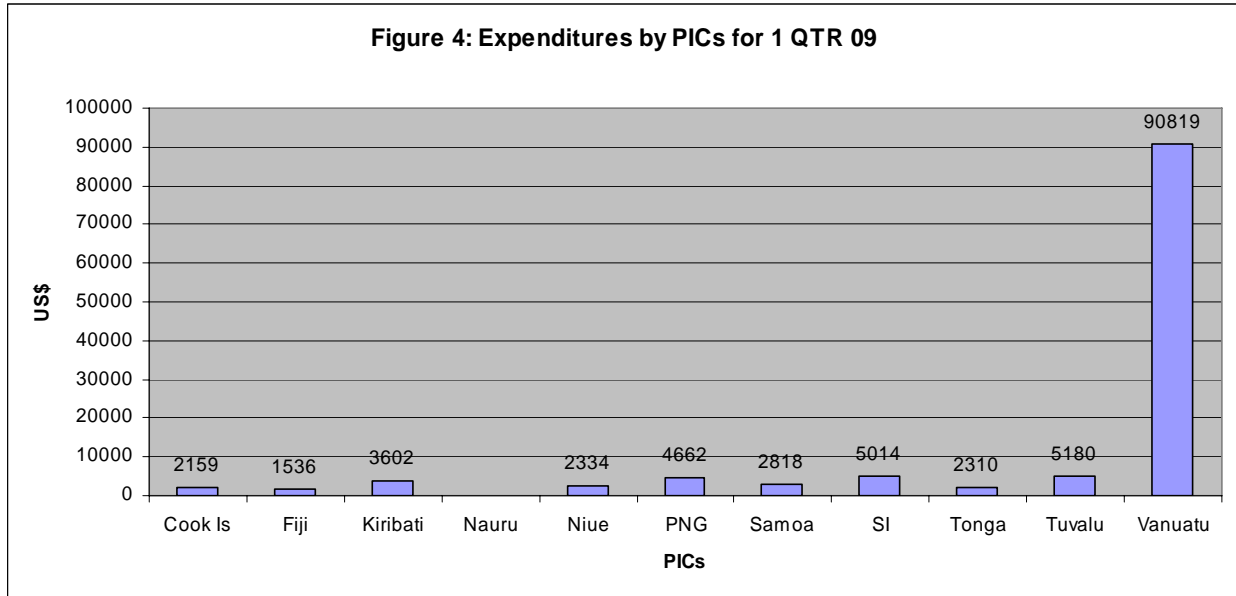


Figure 3: PICs vs. PMO Expenditures





The financial report for the quarter is attached as Annex 3.

13. Report Prepared By: Solomone Fifita
 Project Manager
 19 May 2009

Annex 1: 2009 Work Plan and Budget

Proj. Code	Activity	Outcome	Lead / Collaborating Agencies	Year 1 Quarters				2009 Total	Comments
				1	2	3	4		
1	Mangaia Power System Upgrade	Technical	French and Aust govts, SOPAC and MIC			10,000		10,000	
2	Wind Power Feasibility Study	Technical	Energy / TAU				50,000	50,000	
3	RE / Green Award Programme for the tourism sector	Awareness	Energy / Tourism				5,000	5,000	
	Sub-total Cook Is			0	0	10,000	55,000	65,000	
1	Technical, economic & environmental evaluation of solar home systems project	Technical	DoE	5,000	5,000	5,000	5,000	20,000	
2	Establishment of the Biogas market	Market	DoE			10,000		10,000	
3	Technical Assistance (through consultancy) for strengthening the management of the Energy Information System	Technical	DoE	5,000	10,000	5,000		20,000	
4	Technical Support to the development of energy legislation	Policy	DoE		5,000	8,000	5,000	18,000	
5	Technical visits to RESCO business operations in Kiribati (Kiribati Solar Energy Company).	Institutional	DoE		15,000	10,000		25,000	Moved from 1 QTR to begin 2 QTR 09.
	Sub-total Fiji			10,000	35,000	38,000	10,000	93,000	
1	National Training for Trainers in PV maintenance & Trouble Shooting	Technical	SEC				45,000	45,000	
2	Review of KSEC, Restructure, On the Job Business Training, Strategic Planning, Project Preparation, Management, Monitoring and Evaluation	Technical	SEC		15,000			15,000	Business training will be carried out by the TA and will be conducted at KSEC HQs to Senior Management staff for one week plus one week preparation
3	Migrating RESCO Manager to an open source platform.	Technical	SEC		10,000	20,000	30,000	60,000	Programming and Launching of the RESCO Manager V3 (Web - based). Changed to begin 2 QTR 09.
4	Consultations on the National Energy Policy and drafting of	Policy	EPU, MELAD, MISA	7,000				7,000	Workshops, awareness, stakeholders

	an Action Plan									
5	Public awareness campaigns	Awareness	SEC	3000	3000	3000	3000	12,000	Awareness raising activities linking RE projects to mitigating potential to climate change, and their benefits to environment and economy	
	Sub-total Kiribati			10,000	28,000	23,000	78,000	139,000		
1	PV training	Capacity building	NUA			5,000		5,000	EU-REP5	
2	Energy Database	Institutional	NUA/CIE	10,000				10,000	SOPAC	
3	Training needs assessment for RE				40,000			40,000		
	Sub-total Nauru			10,000	40,000	5,000	0	55,000		
1	RE training in all sector	Awareness	NPC	-	5,000	-	5,000	10,000	NPC Electricians/Private Sector	
2	Network and System Modelling for the Grid Stability	Technical	Consultant		50,000	-	-	50,000	Impact on any size RE connected to the Grid	
3	RE and Existing Tariff Study	Technical	Consultant				40,000	40,000	Impact of the 52 kW PV Grid Connected system	
4	Awareness programs on all sectors radio/tv/local news paper/1/4ly weekly bulletins	Awareness	NPC/Private Sector	-	5,000	5,000	5,000	15,000	Workshops/Monthly Programs	
	Sub-total Niue			0	60,000	5,000	50,000	115,000		
1	PNG: PNG: Feasibility Study for the rehabilitation of Sohun hydro, Telefomin hydro and Yagusa Hydro (PNGSEL/PIGGAREP)						50,000		50,000	
2	PNG: Biofuel research/study into coconut oil as a substitute fuel for diesel engines (ATCDI/Unitech & PIGGAREP)							15,000	15,000	
	Sub-total PNG			0	0	50,000	15,000	65,000		
1	Hydro data collection programme	Technical	EPC (lead) Energy Division, energy stakeholders, EPC, MNREM, SWA,					0	The 73,605 is deleted as this has been committed and reported in 4 QTR 08.	
2	Wind resources assessments	0	EPC (lead), Energy Division, Energy Stakeholders, SWA, MNREM,					0	The 12,000 is deleted as this has been committed and reported in 4 QTR 08.	

								0	
3	National energy awareness campaign day	Info & Awareness	Energy Division (lead), energy stakeholders, MNREM, MWCS, MAF, MWTI, MESC, RDIS, NUS, EPC, SSC, SAA, STA, Oil companies, gas companies, SUNGO, SAME, COC, MEDIA		10,000			10,000	
Sub-total Samoa				0	10,000	0	0	10,000	
1	RE Training for students at Willies and SICHE on Electrical Trade	Technical	SIG, SICHE, SITAFE	2,000	2,000	2,000	2,000	8,000	
2	Re-do a feasibility studies for HURO and RUALAE Hydropower schemes	Technical	SIG, SIEA		7,000	7,000	7,000	21,000	
3	Bio-fuel Development and Expansion in the Solomon Islands	Market	SIG, Private Sector, SIEA		7,500	7,500	5,000	20,000	
4	Workshop/Training for users (schools) of the installed Solar PV systems	Technical	SIG, Private Sector	3,000	3,000	3,000	3,000	12,000	
5	Setup of RE Information and Exchange Centre	Institutional	SIG, Private		20,000			20,000	
Sub-total Solomon Is				5,000	39,500	19,500	17,000	81,000	
1	Review and Evaluation of the Niufo'ou SEIS	Institutional	EPU		10,000			10,000	
2	Technical evaluation of the solar installations in Mango & Mo'unga'one	Technical	EPU, HSES	3,000				3,000	The whole installation must be evaluated and set platform for commissioning
3	Review and confirm the EDF 10's feasibility study						15,000		
4	Awareness Training for solar water pumping and TONGATAPU Solar Street light villages (Nakolo(NZ community FUND - install in DEC 2008), villages of the Tatakamotonga Districts	Awareness	EPU		11,000			11,000	The installation of solar street lights in Nakolo in December 2008 funded by NZ Nakolo Committee is the Baseline Activity. Changed to begin 2 QTR 09.
5	REM/FEMM 2009				20,000			20,000	Support the hosting of the REM/FEMM 2009 in Tonga
Sub-total Tonga				3,000	41,000	15,000	-	59,000	
1	Support to TEC's outer island grid-connected renewable energy project	Technical	TEC			20,000		20,000	

	Sub-total Regional Activities		40,000	35,000	40,000	40,000	155,000	
	PMO Costs							
	International Consultants (PM)		30000	30000	30000	30000	120,000	
	Local Consultant - PA		4000	4000	4000	4000	16,000	
	Local Consultant - APA		1000	1000	1000	1000	4,000	
	Administration Fess		5000	5000	5000	5000	20,000	
	Contractual Services - Ind		1000	1000	1000	1000	4,000	
	Travel, Audits and Reviews		10000	10000	10000	60000	90,000	
	Contractual Services - Co		1000	1000	1000	1000	4,000	
	Equip and Furniture		0	0	0	0	-	
	Comm & Audio Equip		0	0	0	0	-	
	Supplies		500	500	500	500	2,000	
	Info Tech Equip		1000	1000	1000	1000	4,000	
	Audio Visual and Print Prod		500	500	500	500	2,000	
	Total for PMO		54,000	54,000	54,000	104,000	266,000	
	GRAND TOTAL FOR 2009		185,000	362,500	370,750	395,250	1,313,500	



Selection Criteria :

Business Unit : WSM10
Period : Jan-Dec (2008)
Selected Award Id : 00044633
Selected Fund Code : 62000

Award Id : 00044633 PIGGAREP	Period :	Jan-Dec (2008)
Project # : 00052573 PIMS 3462: PIGGAREP	Impl. Partner :	02729 South Pacific Regional Envir
	Location :	Programme Associate -Enviromt

	Govt Disb	UNDP Disb	UN Agencies	Encumbrance	Total Exp
Fund : 62000 (GEF Voluntary Contribution)					
71205 - Intl Consultants-Sht Term-Tech	85,163.00	0.00	0.00	0.00	85,163.00
71210 - Intl Consultants-Sht Term-Supp	201,202.00	0.00	0.00	0.00	201,202.00
71305 - Local Consult.-Sht Term-Tech	18,480.00	0.00	0.00	0.00	18,480.00
71405 - Service Contracts-Individuals	116,160.00	0.00	0.00	0.00	116,160.00
71605 - Travel Tickets-International	82,165.00	0.00	0.00	0.00	82,165.00
71615 - Daily Subsistence Allow-Intl	9,322.00	0.00	0.00	0.00	9,322.00
72705 - Hospitality-Special Events	5,035.00	0.00	0.00	0.00	5,035.00
74525 - Sundry	15,594.00	0.00	0.00	0.00	15,594.00
Total for Fund 62000	533,121.00	0.00	0.00	0.00	533,121.00
Total for Project : 00052573	533,121.00	0.00	0.00	0.00	533,121.00
Award Total :	533,121.00	0.00	0.00	0.00	533,121.00

UNDP Note:

- The total amount under the Disbursement Column has been over-stated by \$582 as total amount took into account the figures from the 4th Qtr 2008 draft Finance Report, instead of the Final Report.
- An adjustment will be passed into the 2009 CDR figures to reconcile this over-statement.

Signed By:

Amber
(O.I.C.)

Date:

20th April 2009

Funding Authorization and Certificate of Expenditures

UN Agency: UNDP

Date: Report was prepared.

Country: SAMOA
 Programme Code & Title: Country Programme Action Plan 2008 -2012
 Project Code & Title: 00052573 - Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project (PIGGAREP)
 Responsible Officer(s): Solomon Fifita
 Implementing Partner: Secretariat of the Pacific Regional Environmental Programme (SPREP)
 Exchange Rate
 Currency: USD

Type of Request:
 Direct Cash Transfer (DCT)
 Reimbursement
 Direct Payment

Activity Description from AWP with Duration	UNDP Coding Fund Account		REPORTING				REQUESTS / AUTHORIZATIONS			
			Authorised Amount	Actual Project Expenditure	Expenditures accepted by Agency	Balance	New Request Period & Amount	Authorised Amount	Outstanding Authorised Amount	
			Jan - Mar 2009 A	Jan - March 2009 B	C	D = A - C	April - June 2009 E	F	G = D + F	
Opening balance brought forward from 2008			\$ 72,715.00				72,715			
Plus Advance received 1 Quarter 2009			\$ 112,285.00				112,285			
Available Balance										
Total Available			\$ 185,000				185,000			
Effective Project Management - International Consultants	GEF	71200	\$ 30,000	\$ 23,474	23,474		6,526	\$ 30,000	30,000	36,526
-Local consultants	GEF	71300	\$ 5,000	\$ 2,704	2,704		2,296	\$ 5,000	5,000	7,296
-contractual services-Individ	GEF	71400	\$ 1,000				1,000	\$ 1,000	1,000	2,000
-Travel	GEF	71600	\$ 10,000				10,000	\$ 10,000	10,000	20,000
-communi & audio Visual Equip	GEF	72100	\$ -				0	\$ -	0	0
-Supplies	GEF	72400	\$ 500				500	\$ 500	500	1,000
-contractual services-companies	GEF	72500	\$ 1,000				1,000	\$ 1,000	1,000	2,000
-information technology equipment	GEF	72800	\$ 1,000				1,000	\$ 1,000	1,000	2,000
-audio Visual & Print Prod costs	GEF	74200	\$ 5,000	\$ 730	730		4,270	\$ 500	500	4,770
-Facilitation & Administration	GEF	75100	\$ 500	\$ 4,900	4,900		-4,000	\$ 5,000	5,000	1,000
Financing Support - International Consultants	GEF	71200	\$ 10,000				10,000	\$ 20,850	20,850	30,850
-Local consultants	GEF	71300	\$ 600				600	\$ 10,000	10,000	10,600
- Travel	GEF	71600	\$ 2,500				2,500	\$ -	0	2,500
Information & Awareness - International Consultants	GEF	71200	\$ 20,000				20,000	\$ 20,650	20,650	40,650
-Local consultants	GEF	71300	\$ 2,000				2,000	\$ 6,000	6,000	8,000
-Supplies	GEF	72500	\$ 200				200	\$ 2,000	2,000	2,200
-Hospitality/Catering	GEF	72700	\$ 4,000				4,000	\$ 2,200	2,200	6,200
Policy & Regulatory Support - International Consultants	GEF	71200	\$ 24,000				24,000	\$ 47,700	47,700	71,700
-Local consultants	GEF	71300	\$ 1,000				1,000	\$ 10,000	10,000	11,000
-Hospitality / Catering	GEF	72700	\$ 1,200				1,200	\$ 4,000	4,000	5,200
Institution Strengthening - International Consultants	GEF	71200	\$ 3,000				3,000	\$ 28,275	28,275	31,275
-contractual services-Individ	GEF	71400	\$ 1,100				1,100	\$ 9,000	9,000	10,100
- Travel	GEF	71600	\$ 9,000	\$ 46,340	46,340		-37,340	\$ 9,000	9,000	-28,340
Market Development Support - International Consultants	GEF	71200	\$ 8,000				8,000	\$ 26,275	26,275	34,275
-Local consultants	GEF	71300	\$ 3,000				3,000	\$ 10,000	10,000	13,000
- Travel	GEF	71600	\$ 2,000				2,000	\$ 5,000	5,000	7,000
-Hospitality / Catering	GEF	72700	\$ 100				100	\$ 5,000	5,000	5,100
-Contractual services -individ		71400							0	
Tech Capacity Bldg - International Consultants	GEF	71200	\$ 34,300	\$ 74,092	74,092		-39,792	\$ 70,550	70,550	30,758
-Local consultants	GEF	71300	\$ 2,000				2,000	\$ 16,000	16,000	18,000
-Contractual services -individ		71400							0	
-Hospitality/Catering		72700							0	
-Supplies	GEF	72500	\$ 3,000				3,000	\$ 6,000	6,000	9,000
Total			\$ 185,000	\$ 151,839	\$ 151,840		\$ 33,160	\$ 362,500	\$ 362,500	\$ 395,660

CERTIFICATION

The undersigned authorized officer of the above-mentioned implementing institution hereby certifies that:

- The funding request shown above represents a estimated expenditures as per AWP and itemized cost estimates attached.
- The actual expenditures for the period stated herein has been disbursed in accordance with the AWP and request with itemized cost estimates. The detailed accounting documents for these expenditures can be made available for examination, when required, for

Date Submitted: 05 May 2009



Title: Officer-in-charge - SPREP

NOTES: * Shaded areas to be completed by the UN Agency and non-shaded areas to be completed by the counterpart.

Taiza John Roache

FOR AGENCY USE ONLY:

FOR ALL AGENCIES

Approved by: _____

Name: _____

Title: _____

Date: _____

FOR UNICEF USE ONLY

Account Charges	Liquidation Information
Cash Transfer Reference: SRQ/ref no., Voucher ref. no.	DCT Reference: Liquidation ref. no.
GL codes:	DCT Amount
Training	0
Travel	0
Meetings & Conference	0
Other Cash Transfers	0
Total	0

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New Funding Release	
Activity 1	0
Activity 2	0
Total	0