



# Climate Change and Disaster Risk Newsletter



## Towards a post-2015 integrated strategy for disaster risk management and climate change.

In July 2013, the Pacific will achieve a global first when two major regional conferences on disaster risk management (DRM) and climate change (CC) convene for a joint meeting to discuss the pathway towards an integrated regional DRM and CC strategy.

The Joint Meeting of the Pacific Platform for Disaster Risk Management and the Pacific Climate Change Roundtable will be held during the week of July 8-11 2013 at the Sofitel Resort and Spa in Nadi, Fiji.

The meeting is jointly organised by SPC, the United Nations Office for Disaster Risk Reduction and the Secretariat of the Pacific Regional Environment Programme and will be hosted by the Government of Fiji.

The broad objective of the Joint Meeting is to progress discussions and political commitment on the development of an integrated DRM and CC regional strategy by 2015.

An integrated strategy will supersede the current Pacific Disaster Risk Reduction and Disaster Management Framework for Action 2005-2015 and Pacific Islands Framework for Action on Climate Change 2006-2015.

Following the Joint Meeting, the text of the proposed integrated strategy for DRM and CC is scheduled to be completed by April 2014 for consideration and endorsement by the governing councils of SPC and SPREP later in the year.

The endorsed integrated strategy will then be considered by Pacific Leaders at the Pacific Islands Forum in August 2015. If approved the integrated strategy will be implemented from 2016.

Follow SPC at the Joint Meeting via Facebook [www.facebook.com/spc.int](http://www.facebook.com/spc.int) or Twitter [www.twitter.com/spc\\_cps](http://www.twitter.com/spc_cps) or visit the SPC website [www.spc.int](http://www.spc.int)

### For more information contact:

Moseses Sikivou, Deputy Director Disaster Reduction Programme,  
Applied Geoscience and Technology Division,  
[moseses@spc.int](mailto:moseses@spc.int), +679 338 1377

## Table of Contents

Towards a post-2015 integrated strategy for DRM and CC.....	1
Introduction from Dr Jimmie Rodgers, SPC Director-General.....	2
Continued support for low-carbon electricity in RMI.....	2
Assisting food security in Solomon Islands Choiseul province.....	3
End-to-end approach featured in <i>Nature Climate Change</i> .....	4
The win-win approach to addressing climate change.....	5
News in brief.....	6-7
Climate change and mosquito-borne disease.....	8
The challenge for health services in the Pacific.....	8
SPC EU support for Kiribati health system.....	9
Development of consumer energy smart calculator.....	10
Legislation on standards and labelling of appliances.....	10
Story time children.....	11
Staff profile.....	12



Welcome to the first issue of SPC's Climate change and disaster risk newsletter – our new quarterly newsletter.

Climate change adaptation and disaster risk management present crucial issues for Pacific Island countries and territories (PICTs). If these challenges are not managed effectively

they will undermine PICTs' ability to meet their development aims.

This first edition of the Climate Change and Disaster Risk Newsletter describes how SPC is supporting our island members in tackling the cross-cutting challenges of climate change and disaster risk. Across its technical programmes, SPC has for several years been assisting members to identify and implement measures to increase their resilience to the projected impacts.

The newsletter informs our key stakeholders of the progress being achieved in addressing the challenges across the sectors we work in, together with our partner organisations. The aim is to highlight the results of our work throughout the region – to share knowledge gained from on-the-ground activities, draw attention to recent policy and research outcomes, and demonstrate successful approaches to climate change and risk management at the country level.

Climate change adaptation and disaster risk management need to be viewed holistically if response measures are to

deliver maximum effectiveness. This is best demonstrated by an innovative multi-sector approach being applied in Choiseul Province of Solomon Islands. The newsletter describes how SPC's technical divisions are working with each other and with regional partner organisations to promote an integrated multi-sector approach to managing climate change and disaster risk in Choiseul.

Since SPC began in 1947, the atmospheric concentration of carbon dioxide has grown from an estimated 312 parts per million to around 400 ppm today. In the space of only 66 years the world has achieved a level of carbon dioxide concentration that has not been exceeded for at least three million years. This is not encouraging news. But it underpins the reason why we must all work together to limit the build-up of greenhouse gases in the atmosphere at the same time as we try to respond effectively and adapt to the emerging impacts of climate change.

The stories in this newsletter give just a brief overview of the work SPC does to assist our members to better understand and build resilience against climate change and disaster risk. We hope you find them interesting and informative. We also hope our joint efforts will contribute to making the Pacific Islands region more prosperous and resilient.

Dr Jimmie Rodgers  
Director-General, SPC

## Continued support for low-carbon electricity in the Marshall Islands

The European Union announced a further funding of € 1 million (USD 1.3 million) in May to support outer island electrification in the Republic of the Marshall Islands (RMI). These funds are in addition to the € 14.44 million (approx. USD 18.6 million) already committed under the North Pacific ACP Renewable Energy and Energy Efficiency Project (North-REP) in RMI, Federated States of Micronesia and Palau.

North-REP, which is implemented by SPC's Economic Development Division, is increasing access to electricity and reducing dependency on fossil fuels through energy efficiency and increased penetration of commercially proven renewable energy technologies.

The additional assistance will allow



North-REP solar panel installation



RMI to complete its outer island electrification programme, according to Andrew Jacobs, European Union Ambassador for the Pacific.

By the end of the first quarter of 2013 North-REP had installed 496 solar home systems (SHS) in RMI, providing 2465 people with access to basic electricity services for the first time. The

installation of an additional 500 SHS progressed during the period April–June 2013. The project is on track to deliver 1500 SHS across 14 outer island atolls, providing electricity for the first-time for more than 6000 people.

North-REP will also install solar photovoltaic systems in outer island schools.



Following the announcement of additional funding, the Finance Minister for Marshall Islands, Dennis Momotaro, said, ‘The outer islands solar programme has already shown good results and its potential impact is significant ... the programme provides school children with more opportunity to study and it has increased the opportunity for women to extend income generating activities, such as the production and sale of handicrafts.’

The project is designed to be sustainable, with households providing a USD 100 deposit to the Marshalls Energy Company to cover ongoing system maintenance and replacement parts by local technicians trained in renewable energy technologies. GIS mapping is used to identify the layout of electrified households for government administration, system maintenance and cost-recovery purposes.

In addition, family members in newly electrified households receive training on SHS care and operation. North-REP is also working with the Environmental Protection Agency and the Office of Environmental Planning and Policy Coordination to develop a battery recycling scheme in anticipation of batteries reaching the end of their system life and requiring replacement in the years ahead.

The comprehensive nature of the project was further illustrated with the production of education and awareness raising materials, including a website and Facebook page with an innovative North-REP ‘energy game’.

**For more information visit**

[www.spc.int/northrep](http://www.spc.int/northrep) or [www.facebook.com/northrep](https://www.facebook.com/northrep)

**or contact:**

Avnita Goundar,  
Policy and Research Advisor,  
Economic Development Division,  
[avnitag@spc.int](mailto:avnitag@spc.int), +679 337 9281

## Assisting food security in Solomon Islands Choiseul province

Like many communities in the Pacific, villagers in the province of Choiseul in Solomon Islands depend on subsistence agriculture for their livelihoods. With a population of approximately 26,000, Choiseul is located north-west of Honiara – one of the most remote provinces in Solomon Islands.

Recognising the need to prepare communities for the effects of climate change, the Government of Solomon Islands identified Choiseul province as a pilot site to implement a ‘ridge to reef’ integrated climate change adaptation programme. The Choiseul Integrated Climate Change Programme (CHICCHAP) focuses a number of initiatives in one geographical area with the aim of linking multiple sectors at the provincial and community levels, including agriculture, livestock, fisheries, forestry, education and meteorology.

CHICCHAP is coordinated through national and provincial authorities and supported by a partnership between SPC, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the United Nations Development Programme (UNDP), the Pacific-Australian Climate Change Science and Adaptation Planning Program, the Secretariat of the Pacific Regional Environment Programme and The Nature Conservancy.

A joint team from CHICCHAP, comprising personnel from the Solomon Islands Ministry of Agriculture and Livestock, SPC, GIZ and UNDP, visited the communities in Sepa, Loimuni, Loloko, Sasamunga and Vouza villages in April to establish food security priorities. The five communities were consulted to identify adaptation strategies to address land-based food security issues.

Over the next few months, SPC will deliver equipment and supplies to communities in Choiseul to establish community nurseries and agro-forestry and small livestock demonstration farms. The nurseries and farms will include climate-ready crops, which are more tolerant to drought, water-logging and salinity. Climate-ready crop varieties are stored and distributed to governments and communities throughout the region by SPC’s Centre for Pacific Crops and Trees (CePaCT) based in Fiji.

Training will also be provided by technical specialists from SPC’s Land Resources Division and Applied Geoscience and Technology Division. Participants will include community and/or government department personnel and the training will cover a range of skill sets, including plant propagation techniques, nursery management, better land use and farming practices, forestry management, water catchment, disaster risk management planning and satellite geographic information systems (GIS) mapping technology.

The contributions of SPC to CHICCHAP are made possible through funding support from USAID and AusAID.

Food security has received increased attention from Pacific Islands Forum Leaders since 2008. Governments have committed to ensuring that people have, at all times, access to sufficient, safe, nutritious food to maintain healthy and active lives. SPC, on behalf of its member governments, is responding to this need through multiple partnerships and projects across the region and across a range of sectors, including agriculture, livestock, forestry, health, education, fisheries, trade and transport.

**For more information on CHICCHAP contact:**

Vuki Buadromo, Project Manager - Enhanced CC Resilience of FPS - USAID Project,  
[vukib@spc.int](mailto:vukib@spc.int), +679 3370733 ext. 35350



## End-to-end approach gains recognition in journal *Nature Climate Change*



Johann Bell

The June edition of the journal *Nature Climate Change* features an article from SPC and partners entitled ‘Mixed responses of tropical Pacific fisheries and aquaculture to climate change.’

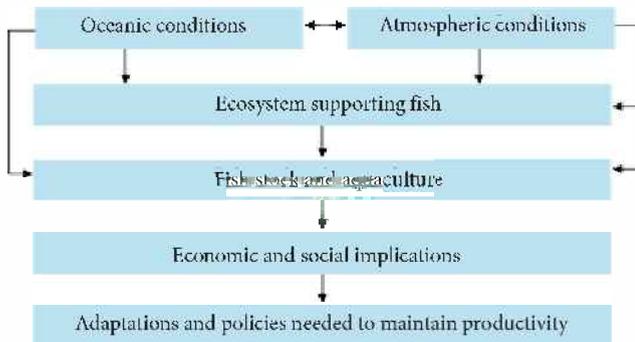
*Nature Climate Change*, launched in 2011, is dedicated to publishing the most significant and cutting-edge research on the science of climate change. It belongs to the stable of journals produced by Nature Publishing Group, founded in 1869 with the journal *Nature*.

The article in *Nature Climate Change* grew out of the extensive research effort that went into the publication of the book *Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change* by SPC in 2011. The 3-year research project received support from AusAID.

Johann Bell, SPC’s Principal Fisheries Scientist (Climate Change), was the article’s lead author and here he talks to us about its publication.

‘I think the reason the article was published in *Nature Climate Change* is that it covers such a significant area of the globe and a wide range of fisheries and aquaculture activities. Our 22 member countries and territories span a vast area of the Pacific Ocean, which supports the world’s largest tuna fishery. The region also has diverse coastal fisheries, freshwater fisheries and aquaculture operations,’ says Bell.

‘The article goes from physics-to-fish-to-fisheries-to-adaptations. It’s what we call an end-to-end approach.’



Summary of the end-to-end approach used to assess the vulnerability of tropical Pacific fisheries and aquaculture to climate change

‘A lot of the science that’s published in this particular field normally focuses on the effects of climate change on the stocks that underpin fisheries. The implications for national economies and food security are not normally dealt with, and neither are adaptations and policies. I think the multi-disciplinary ‘end-to-end’ approach that we adopted was attractive to the journal.’

*Nature Climate Change* receives a high volume of manuscript submissions, according to the publisher’s website and more than 90% necessarily do not make the cut.

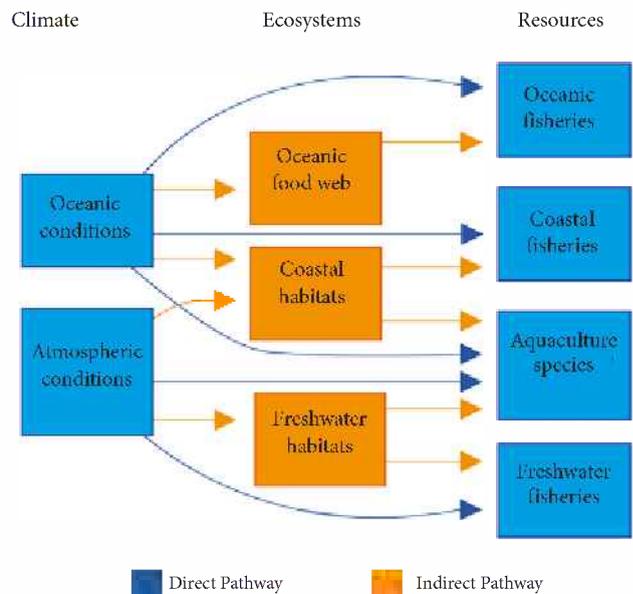
‘It’s significant because, together with the journal *Science*, contributions in *Nature* journals have a high impact. They are read widely and influence policy.’

The impact factor for *Nature Climate Change*, a measure of the relative importance of the journal, is due to come out this year. Similar to *Nature*, the main parent journal, it is anticipated to be high.

‘What’s particularly good is that our article has been published in time to be considered for the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). The IPCC made a special point of noting in their 4th Assessment Report that there were relatively few peer-reviewed scientific papers about climate change originating from the Pacific. Our work is helping to fill the gap for fisheries and aquaculture.’

### For more information contact:

Johann Bell, Principal Fisheries Scientist (Climate Change), Fisheries, Aquaculture and Marine Ecosystems Division, [johannb@spc.int](mailto:johannb@spc.int), +687 262000 ext. 31337



Pathways used to determine the direct and indirect effects of increasing greenhouse gas emissions on oceanic, coastal and freshwater fisheries, and aquaculture, in the tropical Pacific.



Fish market in Honiara, Solomon Islands

## The win-win approach to addressing climate change

Effective adaptation to climate change will be one of the most profound challenges facing the Pacific region in the years ahead.

‘Context is really important, and so is perspective,’ says Johann Bell, SPC’s Principal Fisheries Scientist (Climate Change) and lead author of ‘Mixed responses of tropical Pacific fisheries and aquaculture to climate change’ in the latest (June) issue of *Nature Climate Change*.

‘What we stress in the article and also in our recently published book *Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change* is a win-win approach to adaptation for fisheries and aquaculture. The win-win approach addresses the problems we are facing now in a way that will not be adversely affected, and hopefully even enhanced, by climate change.

‘The multi-disciplinary team led by SPC that produced the research data for the publications tackled important questions, including: How do we maintain fish stocks as demand from growing human populations increases? How do we best maintain inshore fish habitats with more people using the coastal zone? These are some of the big issues that Pacific Island countries and territories need to address today. They have little to do with climate change at this point, but handling them in the right way will also help island nations adapt effectively.

‘It’s important that we see climate change in the context of other development issues, such as population growth and environmental degradation. We’ve come to realise that responding appropriately to these ‘drivers’ actually results in some of the best adaptations to climate change.

‘When it comes to coastal fisheries, for instance, getting our house in order by managing fish habitats and stocks well will predispose us to adapting to climate change. If they are well managed, natural resources will be able to make the most of whatever natural adaptive capacity they have to adapt to the changing climate. But if natural resources are stressed by the impacts of poorly managed development they will struggle to use whatever natural capacity they have to cope with global warming and ocean acidification.

‘Win-win adaptations are key – they allow Pacific Island countries and territories to optimise benefits from fisheries and aquaculture now, and simultaneously build their resilience to the changing climate,’ says Bell.



## News in brief

### SPC receives DigitalGlobe Award

SPC's Applied Geoscience and Technology Division (SOPAC) received the 2013 DigitalGlobe Asia Pacific Innovation Award in May. It recognises excellence in satellite geographic imagery technology application. The award was presented to Deputy Director-General Fekitamoeola 'Utoikamanu in Suva, Fiji. 'This has been a real stepping-stone to improving the service to Pacific Island countries. Already we are seeing economic and social benefits and I am looking forward to these benefits being realised throughout the Pacific and a closer partnership with DigitalGlobe,' said 'Utoikamanu. SOPAC uses geographic information systems (GIS) to assist SPC member countries and territories utilise GIS imagery for climate change, food security, forestry, land management and disaster risk reduction and management applications.

### European Union provides water supply technical assistance to Kiribati

SPC was chosen by the Government of Kiribati and by the European Union as the implementation partner for a Euro 4.8 million project to improve drinking water supply in Kiritimati Island (Christmas Island). The project aims to provide 85% of the island's households with improved water supply; and 75% of households, schools and hospitals in London and Tennessee with continuous water supply. The project is also intended to assist the people of Kiritimati to better adapt to climate change, which could affect the salinity of groundwater and see a worsening of periodic drought. Kiritimati is Kiribati's second most populated island, with a high population growth rate. Water supply on the island is a significant issue, with most families unable to access water for more than a few hours every couple of days. (Source: European Union)

### National summit on climate and agricultural resilience in Vanuatu

More than a hundred government agriculture, forestry and environment extension officers from around Vanuatu met in Lenakel on Tanna Island for an agro-meteorology summit and climate field school from 20-24 May. Participants received training in the identification and application of agro-meteorological products and services, including crop advisories, seasonal forecasts and El Niño Southern Oscillation (ENSO) guidance handbooks. The improved skills and knowledge will assist extension officers to better prioritise and

apply climate change adaptation technologies for crops, trees and animals, and integrate traditional cropping calendars with available meteorological information. The events were jointly hosted by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in partnership with SPC, along with the Vanuatu Meteorological and Geo-hazards Department, the National Advisory Board on Climate Change and Disaster Risk Reduction and the Department of Agriculture and Rural Development. Funding was provided by SPC-GIZ and the European Union through the Global Climate Change Alliance.

### Cook Islands receives SPC EU support for climate change adaptation

Cook Islanders living on low-lying atolls are receiving on-the-ground climate change adaptation assistance from the European Union worth € 0.5 million (approx. NZD 0.8 million) over two years. The assistance is being delivered through the Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) project, which is implemented regionally by SPC. The project will be implemented nationally by the Cook Islands Government and will focus on the northern group of islands, including Manihiki, Penrhyn, Rakahanga, Pukapuka and Palmerston Islands. Communities here will be supported in implementing a range of activities to increase the resilience of their livelihoods to climate change, particularly in the economically important pearl and fishing industries. The project will include provision of equipment and technical training in the operation of water quality monitoring buoys by SPC's Applied Geoscience and Technology Division.

### Improved access to meteorological information for Pacific Islands

Directors and representatives from eleven Pacific Island national meteorological services and land survey divisions met in Nadi from 30 April to 3 May to discuss delivery of services from the Climate and Oceans Support Program in the Pacific (COSPPac) project, which is funded by AusAID. COSPPac, which was established in July 2012, will facilitate increased access to products, training and services provided by the Australian Bureau of Meteorology, Geoscience Australia and SPC's Applied Geosciences and Technology Division.



## Solomon Islands delegation visits Fiji to learn about REDD+

A ten-strong delegation from Solomon Islands visited Fiji in May for a one-week Reducing Emissions from Deforestation and Forest Degradation (REDD+) study tour. The main objective of the tour was to learn from Fiji's well-developed REDD+ readiness programme and strengthen the capacity of Solomon Islands to develop a national REDD+ approach. The delegation met key stakeholders in Fiji, including the Fiji REDD+ Secretariat and Steering Committee, the Fiji Forestry Department, the University of the South Pacific, Fiji Pine Limited, Tropik Woods, Conservation International, Live and Learn Environmental Education and landowners. The tour was funded by UN-REDD programme and facilitated by SPC's Land Resources Division, in collaboration with the Fiji Forestry Department and SPC-GIZ Coping with Climate Change in the Pacific Island Region project.

Fiji and Tonga, which are at risk from taro leaf blight. This is due to the narrow genetic base of taro in these countries, as was the case also with the variety that was decimated by taro leaf blight in Samoa. The spread of taro leaf blight is expected to become more problematic with climate change, particularly the predicted warmer night temperatures. The manual is intended to be used for training purposes, and both the training and the publication of Taro leaf blight manual are supported by the AusAID-funded International Climate Change Adaptation Initiative Phase 2. SPC's Centre for Pacific Crops and Trees (CePaCT) has an extensive taro research programme, supporting efforts to propagate drought-tolerant taro that is resistant to leaf blight.

## New computer model strengthens tsunami and climate change planning in Tonga

SPC has developed a world-leading computer model to help the Government of Tonga understand how Tongatapu, the main island in the Kingdom of Tonga, would be impacted by a tsunami created by a magnitude 8.7 earthquake. The model was developed by SPC's Applied Geoscience and Technology Division, together with Geoscience Australia, with funding from AusAID. The model includes data input following the tsunamis that devastated Samoa in 2009 and Japan in 2011. 'The tsunami computer model given by SPC has provided the government with a wonderful tool to help us really understand the risks of different scenarios and to prepare in the best ways that we can,' says Leveni 'Aho, Director of Tonga's National Disaster Management Office. The project is part of SPC's assistance to Tonga in connection with its Joint National Action Plan for Climate Change Adaptation and Disaster Risk Management, approved by Cabinet in July 2010.

## New publication: Taro leaf blight manual

The work of Tolo Iosefa in Samoa is well known to many working in agriculture in the Pacific region. His experience has been captured in a new publication that provides step-by-step instructions for farmers and researchers trying to breed taro. The manual will, for example, be invaluable in Cook Islands,



Taniela Amani, 13 (left) and Alipati Simione, 10 (right) from Nagado village in Sabeto, Fiji collecting firewood. Their village is receiving equipment, supplies and training to increase food security and disaster preparedness through the SPC USAID Enhanced Climate Change Resilience of Food Production Systems project. The project is also working with other communities in Fiji, Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu.



## Climate change and mosquito-borne disease in the Pacific

Predicting how communicable disease pathogens and disease-transmitting vectors will respond to climate change poses a challenge to public health professionals. Vector borne epidemics are the results of complex interactions between virus, vector and human host. Many human and environmental factors affect these interactions, and climate change adds further complexity to the job of epidemiology, the branch of public health that deals with the incidence, distribution and control of disease in a population.

Of particular concern is the mosquito, a vector that is responsible for the spread of many viruses in the Pacific, including familiar foes like dengue fever and malaria, and also newer threats such as chikungunya. Mosquitoes lay their eggs in still water – puddles, ponds, lakes and tidal pools – and the abundance of these bodies of water varies with rainfall, humidity and temperature. Wetter and warmer weather typically sees an increase in the number of mosquitoes. Climate change could have a direct influence on mosquito-borne disease epidemiology through its effects on seasonal durations, rising temperatures and modified rainfall patterns. Increased temperatures might also affect the pathogens themselves, which are spread by mosquitoes.

‘Climatic conditions play a key role in epidemic dynamics and have an influence on several levels,’ says Adam Roth, Team Leader, Surveillance and Operational Research (Epidemiologist) with SPC’s Public Health Division. These influences include vector density, the vector’s development cycle and the evolution of the virus within the vector.

To deal with current and coming unanticipated health threats, there are already several mechanisms in place in the Pacific. Climate change is an additional variable that needs to be factored into public health regimes. Dr Yvan Souares, SPC focal point for Climate Change and Health, says, ‘Climate change poses a threat to the health status of PICTs. Disease surveillance is an important adaptation activity for monitoring the health status of the population. Existing surveillance systems such as the Pacific Public Health Surveillance Network (PPHSN) should be built on, rather than creating new duplicate systems. The PPHSN is a voluntary network of countries and organisations promoting public health surveillance and response in 22 PICTs.’

SPC’s Public Health Division is working to help PICTs strengthen their health information systems. A current example is the support being provided, in partnership with the World Health Organization, to the Government of Solomon Islands to conduct a needs assessment for an integrated national epidemiology unit. The unit would be located within the Ministry of Health and Medical Services and would become the

### The challenge for health services in the Pacific

The warm, humid, tropical environments of the Pacific are home to many diseases transmitted by mosquitoes. How these diseases and their vectors will respond to climate change is not entirely clear and further research is needed in this area. SPC’s Public Health Division is working with health services in member countries and partners throughout the region to monitor the situation and help national and regional health systems adapt to a changing environment.

#### **Dengue**

Dengue fever is a serious threat to the Pacific and several outbreaks are currently being experienced. Thousands of cases have been reported in Solomon Islands, placing an extreme burden on the health system. Similarly, New Caledonia has reported more than 10,000 cases of dengue since September 2012. The disease is spread by the Aedes mosquito. Severe dengue fever can be fatal.

Dengue is one of the priority diseases of the Pacific Public Health Surveillance Network (PPHSN). SPC’s Research, Evidence and Information Programme, which is the focal point of the PPHSN Coordinating Body, is heavily involved in efforts to control the disease. The programme is currently working with PPHSN partners to provide cost-effective solutions for dengue diagnosis in the Pacific.

#### **Malaria**

Malaria is endemic in Papua New Guinea, Solomon Islands and Vanuatu. It is transmitted to a person by the bite of an infected Anopheles mosquito. There are ongoing efforts in the Pacific to control and eliminate the spread of malaria, which can be fatal.

#### **Chikungunya**

Chikungunya is characterised by fever and severe joint pain and is spread by the bite of an Aedes mosquito. There are currently outbreaks in Papua New Guinea

and New Caledonia. Dr Paul Horwood from the Institute of Medical Research in PNG has been tracking the spread of the virus and said in April, ‘We’d have to say that there have been tens of thousands of cases around the country.’ Several cases of chikungunya were reported in Queensland, Australia at the beginning of 2013. In February, SPC’s Public Health Division reported this on PacNet (the PPHSN early warning system) and issued recommendations to the region, including strategies for surveillance, case management, vector control, laboratory confirmation, and communication. Adam Roth, Team Leader Surveillance and Operational Research, says, ‘In a region where many countries struggle to meet International Health Regulation requirements, the management of the current threat of chikungunya in the Pacific is likely to have implications for other parts of the world.’



central focal point for coordination, monitoring and assessment of disease. There is a definite need to evaluate how national public health systems can be supported to provide faster, more integrated and more accurate diagnostic and case management services, and to align with the current important mechanisms of EpiNet teams (the national outbreak response teams of PPHSN) and International Health Regulations (IHR) focal points.

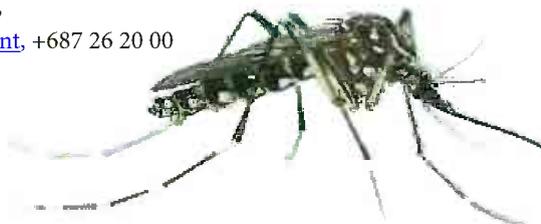
Providing health professionals with timely data and information is one aspect of this challenge. Another is the region's geography. Definitive identification of pathogens currently involves transporting blood samples in vials from patients to reference laboratories. This process can involve vast distances requiring inter-island or international transport. There are associated difficulties including delays, customs, temperature regulation, leakage and significant cost.

SPC will soon trial a possible alternative that will make the job easier and more affordable. The Public Health Division will work with partners in PPHSN, specifically PPHSN's Public Health Laboratory Network (LabNet). The pilot project will be conducted in Solomon Islands and two other yet to be determined PICTs and will use a medical grade filter paper to send dried blood and serum samples using regular mail services. This method was evaluated for the diagnosis of dengue fever by a team from the Pacific, including Salanieta Elbourne-Duituturaga from SPC, and published in the *Journal of Clinical Virology* in 2012. Because they pose a low risk to health, dried blood spots on cards of filter paper are exempt from dangerous goods requirements and regulations in a number of countries. This allows samples to be transported over thousands of kilometres, at ambient temperatures, to reference centres for analysis.

The pilot project aims to further prove the usefulness of this method for surveillance in a resource poor setting. It could potentially provide health services in the Pacific region with an efficient and economical means to improve health surveillance and response for dengue fever, and potentially other vector-borne diseases as well. And in the context of climate change, where vector-borne threats may be amplified, an initiative like this is an adaptation that allows faster detection of and response to emerging diseases, and thereby will enable health services to adapt to an evolving epidemiological environment.

#### For further information contact:

Yvan Soares, SPC focal point for Climate Change and Health, Deputy Director, Research, Evidence and Information Programme,  
[yvans@spc.int](mailto:yvans@spc.int), +687 26 20 00



The *Aedes aegypti* mosquito is found in most Pacific Island groups. It can transmit dengue and chikungunya viruses, as well as yellow fever in endemic countries.

© Institut Pasteur de Nouvelle-Calédonie/Institut Agronomique Calédonien

## SPC EU support for Kiribati health system

The Government of the Republic of Kiribati and the SPC recently agreed on a Euro 500,000 project design that will contribute to the prevention and control of climate sensitive diseases by improving environmental health surveillance and response.

The project, 'Improving Implementation of Environmental Health Surveillance and Response to Climate Sensitive Health Risks in Kiribati' will increase the surveillance capacity of the Ministry of Health and Medical Services (MHMS) and enable the Environmental Health Unit (EHU) to meet minimum standards in the areas of food and water safety and vector control. EHU staff will be trained and equipped to monitor and respond to vector-borne disease, especially dengue fever, and other climate-sensitive health impacts such as poor water quality, food poisoning and ciguatera.

The project includes refurbishment and the provision of additional equipment to the MHMS laboratory and the establishment of a new laboratory within the EHU. The new equipment will provide a boost to national diagnostic capacity. It includes a comprehensive package of hospital grade tools and supplies as well as specialised equipment, including an autoclave, a filtration system, a vacuum pump and some microscopes.

Technical assistance and training will be provided to national health staff by the SPC Public Health Division, the World Health Organization and the National Institute for Weather and Atmospheric Research (New Zealand). The MHMS and EHU will benefit from a range of Public Health Surveillance Network (PPHSN) services and capacity building activities. There will also be an outreach component, providing public education on water and food safety and vector-borne diseases. This will focus especially on vulnerable groups, including children, the disabled and those with pre-existing illnesses. Project activities will be implemented in collaboration with several other climate change adaptation projects currently ongoing in the health and water sectors in Kiribati.

This project is implemented by the Government of the Republic of Kiribati. It is one component of the European Union-funded Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) project, which is implemented by SPC. The GCCA: PSIS is delivering tailored climate change adaptation support projects to nine Pacific Island countries – Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tonga and Tuvalu.

#### For further information contact:

Gillian Cambers, Project Manager – Global Climate Change Alliance: Pacific Small Island States Project,  
 Strategic Engagement, Policy and Planning Facility,  
[gillianc@spc.int](mailto:gillianc@spc.int), +679 337 9450



## Energy smart calculator to help consumers choose energy efficient appliances

Consumers in Pacific Island countries (PICs) will now be able to make more informed choices when purchasing new refrigerators and freezers. An energy smart calculator has been developed by SPC's Pacific Appliance Labelling and Standards (PALS) programme.

The energy smart calculators can be used by consumers to calculate the estimated running costs of refrigerators and freezers before they purchase the item.

Energy Efficiency Adviser at SPC and project manager for the PALS programme, Makereta Sauturaga, says the main consideration for consumers when purchasing an appliance is the upfront price. The calculators will permit consumers to also factor energy efficiency and ongoing running costs into their purchasing decision.

Using the calculator is simple: you identify the energy consumption (kWh per year) provided in the red box on the energy rating label attached to the appliance. Then select the same or the closest energy consumption from the calculator and it provides you with an estimated running cost.

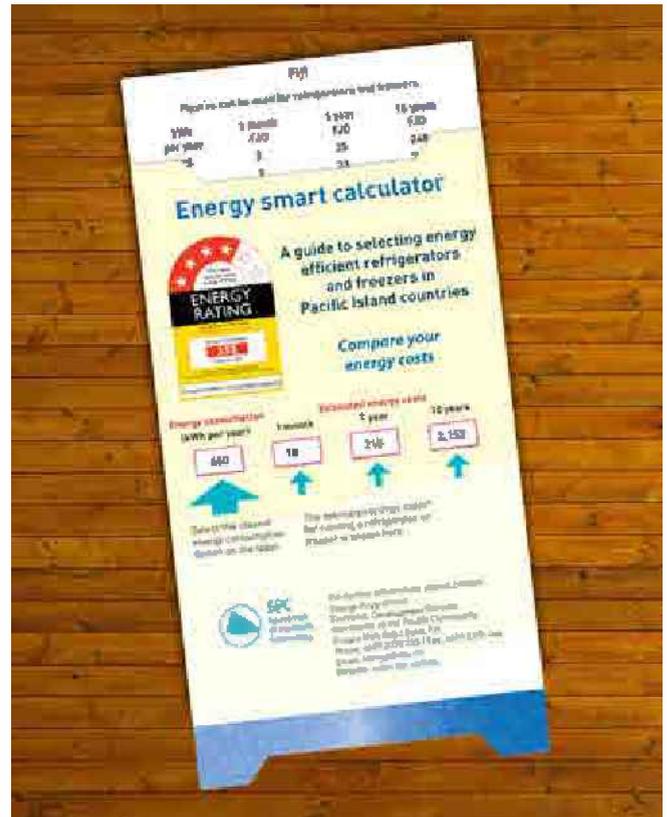
Currently, the calculator is developed for refrigeration appliances only, as the majority of electrified households in the Pacific region have refrigerators. For example, recent studies conducted by SPC indicate that about 95% of electrified households in Fiji, 73% in Tonga and 61% in Samoa have refrigerators.

So far, SPC has developed calculators for Fiji, Samoa and Kiribati with work on a Tongan version in progress. The calculators are intended to be tailored and rolled out to all twelve PICs that participate in the PALS programme.

The PALS programme, which is managed by SPC's Economic Development Division, is designed to assist PICs implement labelling and standards for energy-using equipment including refrigerators, freezers, air conditioners and lighting. The Australian government has committed AUD 3 million over two years (2011–2013) to support the initiative.

### For further information contact:

Avnita Goundar, Policy and Research Adviser,  
Economic Development Division,  
[avnitag@spc.int](mailto:avnitag@spc.int), +679 3379 281



## Legislation on standards and labelling of appliances progressing in Pacific

A workshop to progress the introduction of legislation on performance standards and energy labels for electrical appliances was held in Tarawa, Kiribati on 22 May 2013. The workshop was organised by SPC in partnership with the Kiribati Ministry of Public Works and Utilities.

The Government of Kiribati has approved the development of legislation that introduces energy performance standards and mandates energy efficiency labels on selected electrical appliances including refrigerators, freezers, air conditioners and lighting.

The draft legislation will be discussed with stakeholders before it is submitted to the Ministry of Public Works and Utilities in Kiribati. If the legislation is finalised this year, Kiribati will join Fiji as the first two Pacific Island countries (PICs) to have standards and labelling legislation. The Governments of Samoa, Tonga, Tuvalu and Vanuatu have also endorsed standards and labelling of appliances and the drafting of legislation is about to commence.

SPC's Energy Efficiency Adviser, Makereta Sauturaga, has said that these developments are in line with Forum Leaders' decision to promote energy efficiency in the Pacific region.



## Story time children



*Pou and Miri learn to tackle climate change cover illustration*

In June, 10,000 English and 5,000 Vosa Vaka Viti copies of *Pou and Miri learn to tackle climate change* were received by the Ministry Education in Fiji for distribution to primary schools around the country. Close to 15,000 copies in English and French will soon be shipped to the Ministry of Education and NGOs in Vanuatu. Other copies have been distributed to libraries across the region.

The Pou and Miri children's storybooks are proving increasingly popular among children in the Pacific. Pou, a young boy, and his best friend Miri, a fruit bat, introduce young readers to concepts related to climate change in the context of Pacific Island ecosystems. The series is produced by the SPC-GIZ Coping with Climate Change in the Pacific Island Region (CCCPIR) programme, which is funded by the German Federal Ministry of Economic Cooperation and Development (BMZ).

At a ceremony marking the occasion in Suva on 5 June, Alumeci Tuisawau, Director of Curriculum Advisory Services, said, 'There is a need to filter knowledge on climate change to our children in language that they understand.'

The same ceremony also celebrated the launch of a new and unique children's alphabet poster. The poster features endemic flora and fauna that are customary in the diet and culture of Fijians. The poster was produced by CCCPIR in partnership with NatureFiji-MareqetiViti nature conservancy trust. The posters will be distributed to primary schools and libraries.

While the alphabet poster does not deal directly with climate change, it is considered a curriculum aid that helps young children to learn about their natural environment and the building blocks of language. This information provides a

foundation for more complex concepts in later years.

'These wonderful resources will definitely contribute enormously to education about and awareness of climate change and disaster risk reduction,' said Director Tuisawau.

In April, 6,000 copies of the children's storybook *The Children Take Action – a Climate Change Story* were received by the Permanent Secretary for Education in Kiribati. These books will be delivered to all primary schools in Kiribati through the Curriculum Development and Resource Centre.

The book was developed by the Secretariat of the Pacific Regional Environment Programme with funding through the Australian International Climate Change Adaptation Initiative for an initial print run of 1500. The book was subsequently translated into te-Kiribati and a further 6360 copies were printed by SPC-GIZ CCCPIR.

The Guardian reported in March that climate campaigners and scientists claim that teaching climate change in schools has helped mobilise young people to be the most vociferous advocates of action by governments, business and society to tackle the issue. 'We would be abdicating our duty to future generations if we didn't teach these things in the curriculum,' said the UK government's former chief science adviser Professor Sir David King.

### For more information contact:

Hanna Sabass, Adviser Climate Change and Education,  
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ),  
[hannas@spc.int](mailto:hannas@spc.int), +679 330 5982 ext. 105



## Staff profile



**Name:** Logotonu Waqainabete, 33 years old

**From:** Poutasi village, Samoa

**Position:** Assistant Curator, Land Resources Division – Centre for Pacific Crops and Trees (CePaCT), Narere, Suva, Fiji

Waqainabete completed a Bachelor of Agriculture at the University of the South Pacific’s Alafua Campus in Samoa before gaining employment with Samoa’s agriculture ministry. She started her employment with CePaCT as a Laboratory Assistant in 2007 and later became a Research Technician and then Assistant Curator. The staff of CePaCT say they rely on each other to perform delicate work in laboratories that must be kept sterile, and they observe strict quarantine procedures. It’s a collective effort, and everyone’s contribution is equally valued.

Waqainabete is part of the team assisting Pacific Island countries and territories adapt their agricultural sectors to climate change. She is completing a Master’s thesis, linked to her work, examining the drought resistant qualities of four different types of taro, using in-vitro research. The study’s results and later field trials will further develop the comprehensive climate-ready collection of crop species housed at CePaCT.

The best part of her job, she says is: ‘knowing that it makes a difference in someone else’s life, especially at the community level. I’ve been to countries and I see the diversity of crop species we are providing to people. This is one of the best tools we have for adapting to climate change and increasing the resilience of communities to the effects of adverse environmental conditions and pests and diseases.’

## Subscribe to the newsletter

Subscribe to the SPC Climate Change and Disaster Risk Newsletter by emailing:

[cc-dr-newsletter@spc.int](mailto:cc-dr-newsletter@spc.int)

## Media and information enquiries

For media and information enquiries contact:

Sean Hobbs

Climate Change Communications and Information Officer

[seanh@spc.int](mailto:seanh@spc.int)

+679 337 9451

## Development partners

SPC wishes to acknowledge the support it receives from the following development partners:

The European Union



The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)



The Australian Agency for International Development



The United States Agency for International Development



For more information about SPC and the activities of its divisions go to [www.spc.int](http://www.spc.int)

For more Pacific climate change information and calendar events go to [www.pacificclimatechange.net](http://www.pacificclimatechange.net)

For more Pacific disaster risk management information and calendar events go to [www.pacificdisaster.net](http://www.pacificdisaster.net)

Copyright information: © Secretariat of the Pacific Community 2013

SPC Headquarters, B.P. D5, 98848 Noumea Cedex, New Caledonia

Telephone: +687 26 38 18