

## Capacity Development for Resilience to Climate Change in the Pacific: The EU-PacTVET project

Helene Jacot Des Combes, Pacific Centre of Environment and Sustainable Development, The University of the South Pacific, Suva, Fiji (corresponding author)

[helene.descombe@usp.ac.fj](mailto:helene.descombe@usp.ac.fj)

+679 323 2192

Private Mail Bag

Laucala Campus

Suva, Fiji

Sarah L. Hemstock, Economic Development Division, The Pacific Community, Nabua, Fiji

Tess Martin, Pacific Centre of Environment and Sustainable Development, The University of the South Pacific, Suva, Fiji

Leigh-Anne Buliruarua, Pacific Centre of Environment and Sustainable Development, The University of the South Pacific, Suva, Fiji

The Pacific Island Countries (PICs) are located on the Pacific Rim and within the cyclone belt of the South Pacific, making them very vulnerable to natural hazards. As a result, four PICs appear in the top ten countries at risk from natural hazards in 2016<sup>1</sup>. In addition to these risks, climate change impacts are expected to strongly affect PICs<sup>2</sup>. Sea level rise, ocean acidification, and changes in rainfall patterns and species distribution are projected to affect these countries, their food security, economic development and health, respectively. To be more precise, the land, and in some cases the mere existence, of islands is expected to be threatened by coastal erosion associated with sea level rise<sup>3</sup>. Ocean acidification associated with increasing sea water temperature is projected to damage coral reef, the main habitat for coastal fish and seafood for most of the PICs while change in rainfall patterns is expected to reduce agriculture yields. Both these impacts will affect food security for the Pacific islanders relying on fishing and agriculture for subsistence but also the economic development of some PICs where agriculture is one of the main economic sectors. Another essential economic sector is tourism which is also expected to suffer from climate change impacts<sup>4</sup> (references). Finally, some of the natural

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<sup>1</sup> Lars Jeschonnek, Peter Mucke, Julia Walter, Lotte Kirch, eds., *WorldRiskReport2016*, (Berlin: Bündnis Entwicklung Hilft, 2016), 49.

<sup>2</sup> IPCC, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], (IPCC, Geneva, Switzerland, 2014), 7, 14.

<sup>3</sup> IPCC, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], (IPCC, Geneva, Switzerland, 2014), 13-14.

<sup>4</sup> Leonard A. Nurse, Roger F. McLean, John Agard, Lino Pascal Briguglio, Virginie Duvat-Magnan, Netatua Pelesikoti, Emma Tompkins, and Arthur Webb, "Small islands", in *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)], (Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2014), 1616.

hazards PICs are exposed and vulnerable to are expected to worsen because of climate change<sup>5</sup>.

Since the PICs only account for less than 0.03% of Greenhouse gases, the priority for these countries is to build their resilience to both climate change and disaster risk management. However, capacity development is hampered in the region by the lack of local and regional capacity and expertise, due to the absence of sustainable training programmes and the limited number of institutions to offer them. There is also a lack of national capacity for quality assurance for training. The Pacific Leaders recognised the need for more capacity building in both climate change and disaster risk management and they included this topic in many regional and national policies (for example, the Framework for Resilient Development in the Pacific (FRDP)<sup>6</sup>, Tonga Strategic Development Framework 2011-2015<sup>7</sup>). As a result, these topics have been included in primary and secondary school curriculum in some PICs such as Tonga<sup>7</sup> and Fiji<sup>8</sup>. In addition the University of the South Pacific, the main tertiary education institution in the region has developed, through the Pacific Centre for Environment and Sustainable Development, a post-graduate programme in climate change including a post-graduate diploma, a Master degree and a PhD degree. This program is multi-disciplinary and covers the different approaches to climate change, from climate sciences to climate change adaptation and also disaster risk management. However, until recently, climate change and disaster risk management were not included in formal Technical and Vocational Education and Training (TVET) formal curriculum, There are many trainings on climate change and disaster risk management organised in the region but most, if not all, of them are *ad hoc*, so they are not accredited, not sustainable and do not provide participants pathways to continue to build their capacity.

To support capacity development in the Technical and Vocational Education and Training (TVET), the EU-PacTVET is funded by the EU, covers 15 Pacific ACP countries and is jointly implemented by the Pacific Community (SPC) in equal partnership with The University of the South Pacific (USP) over a period of 53 months. It commenced in August 2014 with an overall budget of EUR 6.1 million. It aims to:

- a) assess national training needs in Sustainable Energy (SE) and climate change adaptation (CCA) and existing informal and formal TVET training courses and training and education providers are identified and strengthened;
- b) develop and implement benchmarks, competency standards and courses on Training of Trainers (ToT) and create a pool of national trainers;
- c) develop and establish training courses and support facilities within TVET institutions; and

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<sup>5</sup> IPCC, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], (IPCC, Geneva, Switzerland, 2014), 7-8.

<sup>6</sup> Pacific Community (SPC), Secretariat of the Pacific Regional Environment Programme (SPREP), Pacific Islands Forum Secretariat (PIFS), United Nations Development Programme (UNDP), United Nations Office for Disaster Risk Reduction (UNISDR) and University of the South Pacific (USP), *Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management (FRDP) - 2017 – 2030*, (Suva, SPC, 2016), 2, 15.

<sup>7</sup> Secretariat of the Pacific Regional Environment Programme, “Tonga Integrates Climate Change and Disaster Risk Management into Education”, <https://www.sprep.org/climate-change/tonga-integrates-cc-and-drm-into-education>, accessed 31 July 2017.

<sup>8</sup> Government of Fiji, Ministry of Foreign Affairs, “Climate Change in School Curriculum”, <http://www.foreignaffairs.gov.fj/media-resources/media-release/77-climate-change-in-school-curriculum>, accessed 31 July 2017.

d) strengthen networking in SE and CCA.

National stakeholders guided project progress and led to **3 Global firsts** for the EU PacTVET Project with support from all 15 countries:

1. **Provisional regional, rather than national agreement on government sanctioned qualifications:** Regional Certificates 1-4 in SE and Regional Certificates 1-4 in Resilience.
2. **A new TVET subject area:** The development of formal qualifications at levels 1-4 on the PQF, which cover the subject area of “Resilience” CCA and DRR. Qualification strands include: agriculture and food security, coastal management, energy and infrastructure, fisheries, forestry, health, tourism and water resources.
3. **The recognition and professionalization of a ‘Resilience Sector’** via the creation of the Pacific Regional Federation for Resilience Professionals (PRFRP).

In the first phase of the project, a training needs and gaps analysis was conducted in all 15 Pacific ACP countries, and based on its results TVET qualifications in Resilience, which in the EU-PacTVET context includes climate change and disaster risk management, were developed to be regionally accredited. These qualifications were developed through a consultation process involving different stakeholders of the ‘Resilience Sector’ in the Pacific. TVET institutions in the 15 countries covered by the project will be supported by the project to be ready to offer these qualifications. The support will be based on country demand and may include: development of learning material, provision of teaching equipment and training of trainers. Institutions were identified in all 15 Pacific ACP countries, for example the College of Micronesia, the Solomon Island National University, National University of Samoa who will be supported to offer the qualifications in 2018.

Originally, the project was developed to focus on climate change and sustainable energy. However, when the training needs and gaps analysis was conducted, disaster risk management was identified as an essential skill set to add to the climate change qualifications. A reflection followed on the best way to incorporate disaster management in the climate change adaptation qualifications that were planned at the beginning of the project. Based on the current trend in the region to integrate climate change and disaster management at policy level, either in country, as illustrated by the number of Pacific ACP countries with a national joint action plan, or at the regional level with the endorsement of the Framework for Resilient Development in the Pacific (FRDP), work was done to develop integrated qualifications for both climate change and disaster risk management. TVET Qualifications were developed at levels 1 to 4 for ‘Resilience’. At present, Resilience includes Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR). These two were integrated in the qualifications because the skills necessary for CCA and DRR are very similar, especially regarding risk assessment and the identification of Resilience building solutions. After the consultation with stakeholders, it was decided that levels 1 and 2 would be generic while levels 3 and 4 would be organised in eight streams focusing on the main issues faced by the PICs when it comes to ‘Resilience’. The streams are: agriculture (including food security), coastal management, energy and infrastructure, fisheries, forestry, health, tourism, water resource management. Each country has the opportunity to select the stream(s) that are more relevant to their condition and to tailor the learning material to include their priorities, tools and circumstances. For example Fiji has several sources of water: rainfall, groundwater and rivers so the water resource management streams will include skills required to manage all these sources. In Tuvalu and Kiribati, the water resources only include rainfall and fresh water lens so these countries would not include river management skills. The qualifications were developed as a menu to give the country this type of flexibility. Similarly,

there are several ‘tools’ available to assess vulnerability and some countries have developed their own vulnerability assessment tool. The qualifications have been developed so that the learners obtain the skill to conduct vulnerability assessment but no specific tool is mentioned in the qualifications so each country can include in the learning resources the tool(s) they use.

The qualifications is a combination of both general skills and specific “Resilience skills. The general skills include health and safety, communication and teamwork while the specific skills include presentation of information about climate change and natural hazards, risk assessment, participatory process to identify relevant resilience building solutions, inclusion of traditional knowledge, community protocols and, for level 4, cost benefit analysis. Beside the need for training on climate change and disaster risk management, another training need was strongly identified during the needs and gaps analysis conducted in the first phase of the project. Consultations in all Pacific ACP countries identified project management as a key need. To address this need, the qualification contains at each level a skillset for project management. This skillset includes finance management skills, proposal writing, report writing, and monitoring and evaluation.

As mentioned before, at present, ‘Resilience’ includes CCA and DRR. A discussion is on-going on the inclusion of the disaster management skills, for example humanitarian response, logistics and recovery, in the Resilience qualifications. Disaster management is without a doubt a key element of Resilience; however it requires very specific skills that differ significantly from the skills required for disaster risk reduction and climate change adaptation. As a result, a specific reflection and exchange with other stakeholders is in progress on the best way to integrate this skillset in the Resilience qualification.

The qualifications have been finalised and are currently in the process of being accredited regionally by EQAP (provide explanation of what it means). Six of the P-ACP countries covered by the project have a national accreditation body and are also in the process of nationally accrediting these qualifications. However, having the qualifications are accredited is not the end of the road. Because the issues change very quickly in the ‘Resilience’ field, and so are science and technology, it is essential to review and, when necessary, update the qualifications and associated skillsets on a regular basis. However, such regular review does not match with a project with a specific, relatively short lifetime. The EU-PacTVET project thus reflected and looked for a sustainable process to sustain the qualifications that are the main outcome of the project. In order to support the regular revision and update of these qualifications and to support the professionalization of the ‘Resilience’ Sector in the Pacific, the EU-PacTVET project supported the establishment of a regional professional association: the Pacific Regional Federation of Resilience Professionals (PRFRP) which will ensure the sustainability of the project’s outcomes.

The Pacific Regional Federation for Resilience Professionals (PRFRP) is an initiative by the EU PacTVET project provide a sustainable model to contextualize the linkages between CCA and DRR. The PRFRP presents a trans-boundary “one-stop-shop” approach to development and accreditation of qualifications, quality assurance of training delivery, professionalization of the resilience industry and certification of resilience practitioners. As a resilient model it has the capacity to foster sustainability of the capacity-building based on the new ‘Resilience’ qualifications beyond the life of the EU PacTVET project. It will also support the work of the EU PacTVET project in developing quality assured TVET qualifications that facilitate transition from ad-hoc training provision via promoting accessibility to relevant qualifications and certification of practitioners. This will promote and facilitate an enabling environment for sustainable community climate change adaptation. At the same time it will also provide an agency to promote

networking and professionalize climate change adaptation and disaster risk reduction practice – collectively known as ‘resilience’. It will provide a code of ethics for practitioners to abide by, maintain a register of certified practitioners and promote relationships with relevant stakeholders (including multi-lateral and bilateral donors), international agencies and government ministries and departments to promote the use of best practices.

The PRFRP is also expected to raise the profile of CCA and DRR and their linkages to development and support the professionalization of the ‘Resilience’ sector in the Pacific. Membership is open to organizational and individual stakeholders such as: Non-Governmental Organizations, training institutes; Universities; private sector green and sustainable energy businesses; industry associations, utilities; government departments; multilateral and bi-lateral donors; international agencies; individuals.

Another important aspect of the work of the EU PacTVET includes improved national and regional education and training systems which incorporate an effective recognition system (RPL) to be applied in all areas of learning. A significant barrier to implementing RPL is the engagement and support of industry stakeholders. The PRFRP will provide a support mechanism and advocate the process of recognition of prior learning as a valid and quality assured process for obtaining formal accredited qualifications in resilience. In the SE field the Sustainable Energy Industries Association of Pacific Islands (SEIAPI) which works in cooperation with the Pacific Power Association (PPA) will provide a forum for interaction with stakeholders in the sustainable energy industry.

All activities under the PacTVET project and the PRFRP intend to build the capacity of Pacific islanders to become more resilient to the climate change impacts and natural hazards they are exposed to. It intends to train a cohort of professionals that will be able to work with communities, small businesses or other beneficiaries to assess the risks they face, identify, through a participatory process, the most relevant and cost-effective solution, implement these solutions and monitor the progress of the implementation. By targeting people without qualifications, in particular school drop-outs and community people with long experience, it is expected that more communities may develop and plan resilience building projects. The project management skills included in the qualifications is expected to allow the graduates to prepare proposals to access small grants or other sources of funding to support the implementation of their projects.

This will support the upscaling of project in the region, based on lessons learned and good practices and the input from the science and technology community shared through the qualifications. It is important for the region because, due to the geographic distribution of the islands, the communities that are furthest away from the main island are not often included in pilot projects because it is logistically complicated and expensive to implement pilot projects there. It is hoped that learners from these outer island communities will enrol in the training and graduate to implement projects back in their own communities. So, in addition to provide employment to people in the ‘resilience Sector’, it is expected that this project will also have an impact for many communities in the region. During the consultation in the Marshall Islands, one of the questions was if it would be possible for the learning resources could be translated into the local language so that the training could be conducted in Marshallese in the outer islands. One example given was the urgent need for people living on these outer islands to be able to sustainably manage their resources and maintain their solar energy systems because it was too expensive to have a specialist coming from the main islands and it took too long for that person to arrive. It is thus essential to have trained and accredited people locally to support the communities.

The accreditation aspect of the project is also extremely important. The current *ad hoc* technical trainings conducted in the region provide on completion of the training workshop a certificate of participation which rarely indicates the skills acquired or the level at which these skills were assessed. This situation has two consequences. First, the workshop's participants cannot use their certificates to enroll in formal programs to continue their studies. So the training, although useful for the program or project it is attached to, does not allow people to build their capacity in a formal way or does not constitute a pathway to formal training. Secondly, people awarded with a completion certificate will have difficulties to use it to find employment. Moreover such a non-accredited certificate does not provide the people who received it the self-confidence to apply the skills they gained during the workshop in other projects or activities. As a result, these non-accredited non formal *ad hoc* training helps the community to address the issues and challenges covered by the project organizing the training but do not empower them to build their resilience.

It is too soon to assess the outcomes of the project and to confirm that the regionally accredited qualifications developed within its lifetime and regularly updated by the PRFRP will address the challenges identified in the first phase of the project and significantly support resilience building and sustainable development in the 15 Pacific ACP countries where the project has been implemented. However, the interest shown by the different stakeholders in the region, illustrated by the first graduates in Vanuatu, a country which piloted the training, the strong will of countries to nationally accredit these qualifications and the different awards already received by the project seems to indicate a change in the approach adopted by the countries. The new approach that favors accredited formal training instead of informal *ad hoc* training is expected to empower Pacific islanders and is in alignment with the recommendations and goals of national, regional and global frameworks such as national joint action plans, the regional FRDP and the sustainable Development Goals and Sendai Framework.