

Snapshots

DISASTER REDUCTION PROGRAMME

Snapshot 86

July - September 2014



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Secretariat of the Pacific Community's (SPC) Applied Geoscience and Technology Division through the Disaster Reduction Programme is committed to working with officials and communities around the Pacific to strengthen the ability of countries to protect people as much as possible from the impact of natural and manmade disasters.

From the managers desk



Mosese Sikivou

How time flies! We're well into October and yet it seems that just yesterday we were coming out of the Pacific Platform for DRM in June. Strange but true. The rigours of the work schedule causes one to lose track of time. Next thing you know Christmas will be upon us and we'll have to close the book on yet another year.

We've been part of some exciting initiatives over the course of the last few months and are happy to share some of them with you in this edition of Snapshots. Since the last edition in June, our team at the SPC Disaster Reduction Programme has increased further with the addition of 3 staff for the Pacific Catastrophe Risk Assessment & Financing Initiative, Phase 3 project. Amongst other activities, we've become the lead for a new programme of support for resilience building from the World Bank (more in future issues of Snapshots), have been progressing well in terms of the EU-funded Building Safety & Resilience in the Pacific project and helped to showcase the great work the region is doing on the integration of DRM and Climate Change at the SIDS conference held in September.

I hope you enjoy reading this edition. Stay tuned for more...just around the corner.

Mosese Sikivou

SPC supports countries in the lead up to the 3rd World Conference on Disaster Risk Reduction

The first Preparatory Committee (Prep Com 1) for the Third World Conference on Disaster Risk Reduction (3WCDDR) was held in Geneva, Switzerland on 14 – 15 July 2014. Prep Com 1 agreed to the rules of procedure for the 3WCDDR and also gave participating countries and major stakeholder groups the opportunity to provide comment on the main issues for consideration in terms of a Post 2015 Framework for Disaster Risk Reduction to replace the current Hyogo Framework for Action which runs its course in 2015.

Six countries from the Pacific region participated at

Prep Com 1 and SPC worked closely with the United Nations Office for Disaster Risk Reduction (UNISDR) to support national representatives in the formulation of country statements.

Prep Com 2 will be held in Geneva from 17 – 18 November and the Secretariat of Pacific Community (SPC), through the Disaster Reduction Programme will once again provide support for Pacific country representatives. An agreement between SPC and UNISDR will be finalised shortly to facilitate the funding of Pacific representatives to Prep Com 2.



Participants attending the FSM National Platform for DRM (Pohnpei)

First FSM and Fiji National Platforms for Disaster Risk Management

The first National Platforms for Disaster Risk Management (DRM) were successfully completed in the Federated States of Micronesia (FSM) in June and in Fiji in August 2014.

The National Platforms were made possible through the funding support of SPC's ACP EU-funded Building Safety and Resilience in the Pacific (BSRP) project and for FSM the joint funding from the USAID funded PREPARE program being implemented by the International Organisation of Migration.

The National Platforms are milestone achievements. All state DRM stakeholders converged to share experiences and learn from one another to strengthen DRM activities. One hundred participants attended the FSM National Platform and 128 attended the Fiji National Platform. Participants jointly agreed to meeting statements on a number of interventions that will be pursued in the next 12 months.

A highlight of the FSM meeting statement was the agreement to develop a State Joint National Action Plan on Disaster Risk Management and Climate Change (JNAP). The realisation of the plan is essential to ensure climate change adaptation and disaster risk reduction are coordinated and mainstreamed into the sectors such as infrastructure, agriculture, health, education, fisheries and coastal zone management.

A major outcome of the Fiji meeting statement is the recognition that many more communities are already affected by climate change and disasters and there is a need for more resources to address these issues. The meeting also highlighted the need for stakeholders to work in a more coordinated manner in order to avoid duplication of efforts. Further, it was agreed that Fiji will be embarking on the development of a Strategic Plan for Climate and Disaster Resilience.

Mr James Lukan, the Deputy Director of Emergency Management in the Office of Environment and Emergency Management in FSM said, 'I am relieved that the Platform had ended successfully and happy to note that the state Disaster Coordinating Officers have committed to strengthen disaster preparedness, response and recovery in the states'. Mr Lukan has been working tirelessly over the past three months coordinating the Platform meeting.

According to the Director of the National Disaster Management Office in Fiji, Mr Manasa Tagicakibau, 'the Joint Fiji National Platform was a success as it brought together a wide range of stakeholders from government right down to the village representatives who were very vocal on the challenges they are already facing and their need for adaptation assistance'.



Mr Andrew Yatilman, FSM Office of Environment and Emergency Management

Fire fighters better protected in the Cooks

The members of the Puaikura Volunteer Fire Brigade (PVFB) in the Cook Islands are now better protected in their new personal protective clothing. The uniforms were donated by the Fire and Rescue New South Wales (FRNSW) to improve the safety and working environment for the volunteers. The donation was provided under the auspices of the Pacific Islands Emergency Management Alliance (PIEMA). PIEMA was established in July 2013 as a mechanism to strengthen partnerships in emergency preparedness and response capacity building between Pacific Island countries and territories with counterpart agency members of the Australasian Fire and Emergency Services Authorities Council (AFAC). The FRNSW is a member of AFAC.

The AFAC has a long established commitment to the development and implementation of training competencies and best practice in emergency management operations. Associated with this goal, AFAC and a number of its member agencies, such as

FRNSW, have a long-standing partnership with the fire and emergency service organisations in Pacific Island countries. The co-ordination of the support from AFAC member agencies to Pacific Island countries is provided by the SPC as the Secretariat for PIEMA.

The PVFB is the oldest volunteer brigade in the Cook Islands, running for 11 years, and is currently staffed by CFO Barry Hill and 12 volunteer firefighters. The Puaikura Volunteer Fire Brigade responds to all emergencies as directed by the Police, Airport Rescue Fire and the Disaster Management Office.

The protective clothing has been refurbished and is part of the support by FRNSW to the Pacific Islands Fire Services Association (PIFESA). Over the last 12 months, the FRNSW has distributed approximately 1360 sets of personal protective clothing weighing approximately 776 kg to 11 Pacific countries including Timor and Cambodia.



Members of the Puaikura Volunteer Fire Brigade

Mapping Disasters

The Fiji National Disaster Management Office (NDMO) coordinates disaster preparedness and response activities in Fiji with the support of other Government agencies and partners. For the past 4 years it has received support from the Japanese International Corporation Agency (JICA) to develop its Geographic Information Systems (GIS) and Information and Communication Technology (ICT) capacity. Two JICA experts were seconded to the NDMO to work as key staff in developing a baseline inventory of hazards, communities, community assets and focal points.

The NDMO has, with Fiji Land Information System and SPC, worked to pull together essential datasets to support any disaster response effort. Part of this work has included a three-day training at SPC, for three NDMO staff to:

- Prepare baseline datasets such as administrative boundaries, community locations and critical infrastructure.
- Develop map templates that can be used to quickly produce maps of affected communities, facilities and services from damage assessments received.

During the session, additional work was identified to



Mereoni Ketewai of SPC taking Mereisi Rukulawe from the Fiji Government (NDMO) through the training exercises

strengthen disaster information management. These include:

- Standardised initial damage assessment templates.
- Preset templates to collate and map assessments whether at a community level, provincial or other administrative area.
- System to map and track resources as they are delivered to affected communities.

Further GIS support will be provided to the NDMO as well as officers from other divisions. This activity strengthens the capacity of the NDMO to support the National Emergency Operation Centre (NEOC).

Phase 3 of the Pacific Catastrophe Risk Assessment and Financing Initiative

Introducing the third phase of the SPC and World Bank lead project, the Pacific Catastrophe Risk Assessment and Financing Initiative 3 (PCRAFI 3).

PCRAFI aims to provide the Pacific Island countries (PICs) with disaster risk modelling and assessment tools. It also aims to engage in a dialogue with the PICs on integrated financial solutions for the reduction of their financial vulnerability to disasters and climate change. The initiative is part of the broader agenda on disaster risk management and climate change adaptation in the Pacific region.

This third phase of the project which officially commenced in late September 2013, will provide PICs with an upgraded disaster and climate risk platform, enhance capacity to use it, and an associated series of risk management applications for enhanced disaster risk reduction, risk management, and risk financing decisions. The project's main components involve the strengthening of the Pacific Risk Information System

(PacRIS), institutional capacity building on disaster and climate risk financing, as well as rapid disaster impact estimation.

SPC welcomes the PCRAFI 3 project team including Norensé Iyáhen, Project Coordinator and Risk Advisor, David Abbott, Public Finance Management Specialist, and Savita Chand, Finance and Administration Officer.



Norensé Iyáhen, Savita Chand, and David Abbott



Participants at the PIEMA meeting in Wellington, New Zealand

Inaugural meeting of the new Pacific Islands Emergency Management Alliance

Strong foundations for strategic direction were laid at the inaugural meeting for the Pacific Islands Emergency Management Alliance (PIEMA) on the 5 September 2014 in Wellington New Zealand. Co-convened by SPC and the Australasian Fire and Emergency Services Authorities Council (AFAC), the meeting was attended by a total of 30 delegates including 19 Senior Emergency Management Officers from NDMOs, Police and Fire Service agencies from 8 Pacific Island countries as well as the supporting agencies of SPC, New Zealand Ministry of Civil Defence and Emergency Management, AFAC, Australian and NZ Fire Services and the EU Delegation in New Zealand.

The meeting was held alongside the AFAC 2014 Conference. This was the first time that representatives from the NDMOs attended the AFAC Conference.

The participants agreed to the Pacific Islands Emergency Management Alliance Charter; a range

of draft strategies for consideration in the PIEMA Strategic Roadmap to be finalised in early 2015 and the finalisation and roll out of the Pacific Urban Search and Rescue Category 1 Course in the region.

The meeting was officially opened by Mr David Cliff, the Acting Deputy Commissioner Resource Management, New Zealand Police Service. He stressed that a trusting a relationship needs to be established well before an event takes place. Having a close working relationship between agencies during good times will go a long way when disasters strike.

The PIEMA meeting will be held every 2 years to allow for agreed outcomes to be implemented across the three key partners of the NDMOs, Pacific Islands Fire and Emergency Services Association (PIFESA) and Pacific Islands Chief of Police (PICP).

The PIEMA partnership strengthens emergency management across the Pacific with membership inclusive of National Disaster Management Offices, Fire & Emergency Service, and Police Services. PIEMA was endorsed by the NDMOs, PIFESA & PICP with the founding partners (SPC, AFAC, New Zealand Ministry of Civil Defence and Emergency Management, United Nations Office for the Coordination of Humanitarian Affairs, and the Asia Foundation) in July 2013 in Nadi, Fiji. PIEMA is supported by the European Union, and the Governments of Australia and New Zealand.



Japan's contribution to disaster reduction in the Pacific

For decades, Japan has been assisting countries in Disaster Risk Reduction (DRR) by sharing its own experiences, from having been affected by disasters. Japan in the recent years has experienced unprecedented disasters, including the Kobe Earthquake (1995) and East Japan Earthquake and Tsunami (2011). Just like Pacific countries, Japan is an island country constantly being affected by earthquakes, tsunamis, floods, landslides, typhoons and volcanic eruptions. Japan's long history of fighting disasters has built some of the world's leading science and technology in DRR. While Japan is known more for its infrastructural and technical measures, there is also an extensive knowledge base in non-structural DRR measures, including institutional building, end-to-end early warning systems, DRR education and community-based DRR. Despite this, the East Japan earthquake and tsunami caused 19,074 deaths and left 2633 missing. This proved that DRR measures are never sufficient and that Japan must continue to learn the lessons from other disaster experiences around the world.

By hosting the last two UN World Conference on Disaster Risk Reduction (Yokohama 1994 and Kobe 2005), Japan had also contributed to the development of the Hyogo Framework for Action (HFA: 2005 - 2015) – the global agenda for DRR. Next March, it will again host the 3rd World Conference on Disaster Risk Reduction in Sendai that will approve the post-2015 DRR global framework. The 7th Pacific Islands Leaders Meeting (PALM7) coming up in May 2015 in Fukushima will also flag assistance in DRR and climate change as one of the prioritised areas for cooperation.

Japan is now able to support countries in the Pacific to strengthen their DRR measures. Through agreement with the Japan International Cooperation Agency (JICA), Shohei Matsuura, joined the SPC Disaster Reduction Programme (DRP) as the JICA DRR Expert



Annual community disaster drill conducted at public primary school

for the Pacific Region to provide support to SPC as well as its partners and members. Shohei has extensive experience in formulating and managing DRR projects in Asia, Africa and South America including working with local governments of the affected areas from the 2011 East Japan earthquake and tsunami. He brings these experiences to support the activities of DRP and to develop and strengthen the collaborative partnership between JICA and SPC with programs and projects. Shohei aims to seize the opportunities of the 3rd World Conference and the PALM7 to scale up the collaborative partnerships between Japan, SPC and Pacific partners.



Unosumi District, Kamaishi City, Iwate Prefecture where the whole coastal neighbourhood was wiped out by the East Japan earthquake and tsunami in March 2011

SIDS conference showcases Pacific strategy on climate and disaster resilient development

Regional efforts on integrating climate change and disaster risk management were featured at the side event, Building Pacific Resilience – the Strategy for Climate and Disaster Resilient Development in the Pacific, held during the Third International Conference on Small Island Developing States (SIDS) in Samoa. The Government of Tonga led the event with support from SPC, the Secretariat of the Pacific Regional Environment Programme (SPREP) and the United Nations Office for Disaster Risk Reduction (UNISDR).

Discussions around resilient development for Pacific Island nations highlighted how countries and organisations have advanced or are planning the integration of strategies for climate change and disasters.

In his keynote address, the Prime Minister of Tonga, Lord Tu'ivakano said, 'the Strategy for Climate and Disaster Resilient Development in the Pacific highlights the importance of partnerships and this is certainly what this SIDS meeting is all about. A new mechanism to bring together climate change and disaster risk management practitioners at the regional level is being advocated'.

The new regional coordinating mechanism, the Pacific Resilience Partnership, will oversee the implementation of the regional strategy. It will build on existing structures and partnerships, such as the Technical Working Group established for the development of the strategy, which has been highlighted at the SIDS

Conference as a positive example of collaboration between various organisations and development partners in the region.

The event also highlighted the need for all stakeholders to recommit to addressing the impacts of climate change and disasters in the Pacific region, and reaffirmed that assistance for implementation of the strategy will require considerable and ongoing support from the international community.

The session was moderated by Margareta Wahlström, United Nations Special Representative of the Secretary-General for Disaster Risk Reduction. The discussion panel included the Hon. Faamoetaulua Ulaitino Faale Tumaalii, Samoa's Minister of Natural Resources and Environment; Mr Jacob Werksman, Principal Adviser for DG CLIMA European Union; Mrs Emele Duituturaga, Executive Director for the Pacific Islands Alliance of NGOs; and Mr Howard Politini, Vice Chair of the Pacific Islands Private Sector Organisation.



Prime Minister of Tonga, Lord Tu'ivakano

Support for Republic of Marshall Islands Joint National Action Plan (JNAP)

SPC North Pacific Regional Office Director, Mr. Gerald Zackios and Chief Secretary Mr Casten Nemra signed a Letter of Agreement which allows the European Union funded Building Safety and Resilience in the Pacific (BSRP) project to fund a coordinator for the implementation of the Joint National Action Plan on Disaster Risk Management and Climate Change Adaptation (JNAP).

The JNAP development was supported by regional organisations such as SPC and SPREP. It was adopted by Cabinet in early 2014 and is an effort to collectively plan to mitigate and, wherever possible, prevent risks posed by hazards and adapt to a changing climate.

Mr Nemra stated 'the funding will enable the Government of the Republic of Marshall Islands to effectively coordinate the implementation of the actions in the JNAP and assist in reducing vulnerabilities and enhancing resilience'.

The impacts of the changing climate to the Marshall Islands cannot be ignored as exemplified in the 2013 drought and storm surges and inundation which brought many lessons for improving coordination and collaborative approaches to risk management. Storm surges and inundation occurred again in 2014 causing damage to dwelling houses and rain water catchments in low lying atolls like Arno.

Innovative mapping solutions for the Pacific



The images show 24 cm resolution point cloud which is the lowest quality the UAV can produce. The resolution can be increased by a factor of 10 with adequate permit from Civil Aviation Authority

Unmanned aerial vehicles (UAVs) were the stuff of sci-fi geeks and conspiracy theorists. Now that technology has reached the Pacific and is being used in disaster assessments and coastal mapping.

In April this year a rotary-wing UAV, an “Oktocopter”, was used to assist damage assessment efforts in the Solomon Islands. The exercise proved that UAVs were a useful technology for rapid mapping in a disaster response situation. The digital surface models produced from that mission also provided the first aerial views of where the tailings dam of a large mine had been compromised thus a potential problem for communities downstream of the site.

In July 2014, a fixed wing UAV, TRIMBLE UX5, was purchased by the SPC to assist coastal mapping initiatives across the Pacific region. The UAV is part of a larger package; an Unmanned Aerial System which includes the hardware, software and requisite training to operate the UAV and analyse the data collected. A test run in Kiribati proved that not only is it possible to acquire very high resolution imagery in a relatively short period of time, it is also possible to capture elevation data. The long lasting battery

life (50 minutes) combined with the UAV cruising speed of 80 km/hour allows large areas to be mapped efficiently. Additionally, the quality of the mounted camera (SONY) brings the resolution of the output (orthophoto and point cloud) to a range between less than 3 cm to 24 cm depending on the programmed height of the UAV.

SPC has a small team of experts who are being trained to control the UAV and also analyse the data produced. Initial analysis of the data provided high resolution imagery and digital surface models of the area. Through the past month, the team has been analysing the data and processing this against good surveying observations to produce digital terrain models. Comparisons with Real-Time Kinematic GPS survey points show that the results are comparable and therefore a possible source of elevation data for areas where ground topography is limited. This dataset is particularly important for inundation studies.

It is anticipated that as the team uses the UAV under different conditions and analyses the data captured, other potential applications will become apparent.

TRAINING, TRAINING, TRAINING

Building capacity for resilient development



Despite recognition of the importance of disaster resilient approaches to development, many countries face challenges in identifying ways to effectively mainstream risk reduction considerations into national development planning processes. To address this, the SPC in partnership with the Asian Disaster Preparedness Centre held a one-week training workshop which focussed on how to mainstream DRR

into development.

The training, held in Nadi from 14-18 July, included participants from the Cook Islands, Fiji, Samoa, Solomon Islands, Tonga and Vanuatu with representatives of NDMOs and ministries responsible for national planning and finance. Representatives from the Pacific Islands Forum Secretariat (PIFS), SPC, SPREP and United Nations Development Programme (UNDP) also participated in this training workshop.

A mixture of theory, case studies and exercises were used to increase participants' knowledge and skills in areas such as risk assessment, understanding the links between development and disasters, selecting appropriate risk reduction options and identifying and entry points to mainstream risk reduction in development. The training workshop further builds on capacities of government planning officials in the Pacific region to plan and implement disaster resilient development through enhancing their understanding of the integration of DRR considerations in the development planning process.

Emergency shelter and evacuation centre training for Samoa

Eighteen representatives of Samoa's Welfare and Internally-Displaced People Sub-Committee of the Disaster Advisory Committee attended a training course in Emergency Shelter Cluster and Evacuation Centre Management facilitated by the SPC and the International Federation of Red Cross and Red Crescent Societies (IFRC) with the Disaster Management Office and Samoa Red Cross Society.

homes to fully reconstructing homes destroyed by a disaster. The training also provided the necessary knowledge and skills to select, maintain and manage evacuation centres.

The training is the first of its kind in the Pacific Island region and is part of the Disaster Management Office's commitment to improve the quality of emergency response in Samoa. The training was supported by the BSRP project and the European Commission's Humanitarian Aid and Civil protection department (ECHO).

The training provided participants with an understanding of the shelter needs of people affected by disasters and how national and international systems can work together to meet those needs. These can range from providing temporary shelter during and immediately after a disaster in evacuation centres, to providing support to repair damaged



Participants in Emergency Structures Training



Participants taking notes in Emergency Operations Training

Building capacity to manage emergency operations in Palau

Participants from Palau Government departments, Palau Red Cross and the media attended training in August 2014 on establishing and managing Emergency Operations Centers.

In 2012, Typhoon Bopha impacted Palau and affected hundreds of people and destroyed 70 homes, displacing 131 people, while in 2013, Super Typhoon Haiyan devastated the whole northern-most state of Kayangel, destroying 39 homes and severely damaging dwellings from Babeldaob to Koror. These two events highlighted the need for Palau to increase the number of personnel trained to manage the response to emergencies and to work in the National Emergency Operations Center. Through support from the SPC's BSRP project, work is underway with Palau to address this need by providing training in Emergency Operations Centers for 17 representatives of government, civil society and the media.

Ms Priscilla Subris, Coordinator of the NDMO, opened the week-long training by stressing the importance of all agencies working together and thanking participants for taking the time 'to learn how to be part of Palau's response to future emergencies'.

During the training, participants studied the establishment and management of Emergency Operations Centers. They learnt about the facilities and equipment needed to ensure smooth running of a center, and staffing requirements and staff roles and responsibilities. Information management – essential for effective decision making – was also covered in-depth. The training ended with a five-hour table-top exercise in which participants put their new skills into practice in responding to a simulated emergency.

Information management in Tuvalu



Participants of workshops in Tuvalu

In June, SPC through the Pacific Disaster Net team in the Disaster Reduction Programme, contributed to a collaborative team with GIZ and SPREP which went to Tuvalu to conduct an information and knowledge management assessment and to deliver training on Information Knowledge Management (IKM) processes and systems in relation to climate and disaster risks.

Participatory workshops were held with Government Ministries on climate risk entry points within policy and planning cycles as well as IKM needs in relation to climate and disaster risk institutional processes. The Pacific Disaster Net was showcased as a resource

and as best practice information management to assist ministries to plan for their information needs. Stakeholder consultations were conducted in order to analyse internal policy and decision-making processes with a view to strengthening the information management, coordination of climate change and disaster risk management initiatives and sharing within departments and ministries.

Fane Dinono of SPC's Disaster Reduction Program stated, 'the workshops and office engagement provided participants from the Tuvalu Government Ministries and stakeholders the opportunity to assess their information knowledge management needs and plan for managing their information in more effective ways'.



UPCOMING EVENTS:

November

- 10 - 28 44th Regional Training Course on Disaster Management, Bangkok, Thailand
- 17 - 18 Preparatory Committee, UN World Conference on Disaster Risk Reduction, Switzerland
- 17 - 18 Interdisciplinary international workshop on RISK information management, risk models and applications Training, Berlin, Germany
- 17 - 18 Risk Information Management, Risk Models and Applications Training, Berlin, Germany
- 17 - 19 Cost Benefit Analysis Training, Apia, Samoa
- 17 - 20 Introduction to Disaster Management Training, Taveuni Island, Vanualevu, Fiji
- 19 - 20 Initial Damage Assessment Training, Taveuni Island, Vanualevu, Fiji
- 25 - 27 Cost Benefit Analysis Training, Vanuatu
- 26 -28 Animal Emergency Management Course, University of Canterbury, Christchurch, NZ
- TBC CC/DRM Resilience Programs for National Broadcasters, Kiribati
- TBC CC/DRM Resilience Programs for National Broadcasters, Tuvalu

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