



Pacific
Community
Communauté
du Pacifique



Tropical Cyclone Pam Lessons Learned Workshop Report

June 2015



Tropical Cyclone Pam Lessons Learned Workshop Report

June 2015



Suva, Fiji 2016

© Pacific Community (SPC) 2016

All rights for commercial/for profit reproduction or translation, in any form, reserved. SPC authorises the partial reproduction or translation of this material for scientific, educational or research purposes, provided that SPC and the source document are properly acknowledged. Permission to reproduce the document and/or translate in whole, in any form, whether for commercial/for profit or nonprofit purposes, must be requested in writing. Original SPC artwork may not be altered or separately published without permission.

Original text: English

Pacific Community Cataloguing-in-Publication Data

Tropical Cyclone Pam: lessons learned workshop report June 2015

1. Cyclones — Oceania.
2. Cyclones — Tropics
3. Cyclone damage— Oceania.
4. Cyclones — Environmental aspects — Oceania.
5. Cyclones — Economic aspects — Oceania.
6. Cyclones — Social aspects — Oceania.
7. Hurricanes — Oceania.
8. Climate — Oceania.

I. Title II. Pacific Community

551. 551 309 95

AACR2

ISBN: 978-982-00-0990-5

CONTENTS

FOREWORD.....	iv
INTRODUCTION.....	2
Key Behaviours.....	2
TROPICAL CYCLONE PAM TIMELINE.....	11
Workshop Objectives.....	14
Program.....	15
Outcomes.....	16
CLUSTER SYSTEM.....	25
INTER-CLUSTER PANEL DISCUSSION.....	37
PLENARY SESSION – QUESTION AND ANSWER SESSION.....	43
Closing Remarks.....	45
Conclusion.....	45
ANNEX 1: Participation list.....	48
ANNEX 2: Timeline	56
ANNEX 3: Cluster Reports.....	57
1. Gender & Protection Cluster Lessons Learned Report	
2. Lessons Learned from TC Pam: Health and Nutrition Cluster	
3. Emergency Response to Cyclone Pam, National WASH - Lessons Learned, Workshop	
4. Vanuatu Education Cluster, Tropical Cyclone Pam Response Lessons Learned	
5. Vanuatu Shelter Cluster, Tropical Cyclone Pam, Response Lessons Learned, June 2015	
6. Cyclone Pam Vanuatu Logistics Cluster Response	

Foreword



Mr Jesse Benjamin

On behalf of the Vanuatu Government, I wish to thank all participants who attended the Tropical Cyclone Pam – Lesson Learned Workshop and all the agencies, sector partners, communities and individuals who supported the relief efforts. Allow me to also thank the Pacific Community (SPC) for their generous assistance in funding this very important workshop and this report so that we can learn from the experience to 'Build Back Better – and Safer.' I also want to thank the National Disaster Management Office (NDMO) for organising and arranging all the work required to hold the meeting here in Port Vila.

Vanuatu has experienced one of the worst natural disasters in recorded history. Tropical Cyclone Pam has affected an estimated number of 188,000 people more than 80 per cent of the population. The people of Vanuatu are still smiling but continue to need support.

The response to Tropical Cyclone Pam tested all areas and levels of emergency response, including legislation, governance, policy and planning, community resilience and the livelihoods of all people. In the wake of the cyclone, the Government of Vanuatu as a sovereign nation with established management procedures, has led and coordinated the relief efforts. Collaborative partnerships at all levels led to generous donations of funds, labour and goods.

The cyclone caused major damage to both public and private infrastructure. In some locations, 90 per cent of houses, almost 70 per cent of health facilities and more than 50 per cent of schools were damaged or destroyed. Along with this, 68 per cent of rain water catchments were destroyed. Extensive damage to gardens and livelihoods will mean a long recovery for the People of Vanuatu, especially now with the current El Nino event.

As the push to return to normality continues, communities across the country have started to rebuild and re-construct. Students are returning to schools – some in temporary classrooms. Health facilities have re-opened, gardens are being replanted, water and sanitation systems are being repaired, but the need for assistance remains. The Government of Vanuatu, with the support of humanitarian partners, continues its work to meet the needs of the community as we move into the Rehabilitation and Reconstruction Phase.

Alongside the immediate humanitarian response, extensive work was done to support the restoration of livelihoods and self-reliance of the affected people and to re-establish and strengthen basic services across all affected areas.

The Government of Vanuatu wishes to wholeheartedly thank the international community; donors, UN Agencies and International NGOs for their support during this event. Vanuatu is ranked as the most vulnerable country in the world to multi-hazard natural disasters. The recommendations of this Lessons Learned Workshop Report, building on our historical customary resilience and traditional coping strategies, will provide a template for pragmatic future planning and response.

Mr Jesse Benjamin
Director General
Ministry of Climate Change and Chair of the
National Disaster Committee

Foreword from Pacific Community Director-General



Colin Tukuitonga

The impact Tropical Cyclone Pam had on Vanuatu was devastating but the resilience from the community to recover from this disaster shows the sense of community and strength that exists within Pacific Island countries to respond to disaster when they inevitably strike.

The Vanuatu Lessons Learned Workshop and subsequent report outlines clear recommendations on how, with coordinated support, we can learn from this disaster and increase our resilience into the future both directly within Vanuatu and more broadly across the region.

Tropical Cyclone Pam was the most intense cyclone to hit Vanuatu in recorded history with wind gusts of up to 320/km per hour. We know with the impact of climate change these disasters are predicted to become more intense and for this reason we recognise the fact it's more critical to ensure the region is able to prepare for, respond to and recover from these disasters in a more collaborative way.

As part of supporting this process the Pacific Community's (SPC) 'Building Safety and Resilience in the Pacific Project,' supported by the European Union has worked with key stakeholders from the Vanuatu government, affected communities, the civil and private sector along with non-government and international response agencies to create this report.

This report is a compilation of recommendations on how to best prepare disaster response agencies into the future whilst supporting the long-term recovery necessary across the country of Vanuatu. Furthermore, SPC supported communities with technical assistance and post disaster assessment needs immediately after devastation struck almost 12 months ago.

We are privileged to be able to support such resilient communities and help provide technical assistance and support into the future to ensure the entire Pacific community becomes more resilient to disaster hazards into the future.

Colin Tukuitonga
Director General
Pacific Community

Foreword – European Union



Amb. Leonidas Tezapsidis

It is with great pleasure that the European Union has supported the critical work of the Vanuatu Lessons Learned Report as part of the Building Safety and Resilience in the Pacific (BSRP) project, implemented by the Pacific Community (SPC).

The European Union recognises the critical need to help develop disaster-resilient communities. The countries in the Pacific region are already witnessing the effects of climate change, which is expected to increase the intensity of disasters in the future.

Vanuatu's people, government and emergency response agencies have shown real resilience in the face of Tropical Cyclone Pam in the way they prepared for, responded to and recovered from the 250 km/h winds that tore through the country last March.

It is through projects like the BSRP that the European Union helps communities in the Pacific region better respond to the increased challenges of climate change and natural disasters.

We will continue to ensure this support reaches those who most need it. It is therefore with great pleasure that we are able to support such a valuable report to ensure the lessons from Cyclone Pam are best applied to Vanuatu and other countries in the Pacific region.

Ambassador Leonidas Tezapsidis
Head of the European Union Delegation to
Solomon Islands and Vanuatu

A man with a beard, wearing a high-visibility yellow and black safety vest over a dark shirt, is using a chainsaw to cut a large, thick tree branch. He is positioned in the upper right of the frame, looking down at the saw. The branch is horizontal across the middle of the image. The background is filled with dense green foliage and bare tree branches, suggesting a tropical environment after a storm. The lighting is bright, casting shadows on the leaves.

Tropical Cyclone Pam Lessons Learned

Source: Vanuatu NDMO

Introduction

A national debriefing workshop to identify lessons learned following Tropical Cyclone Pam (TC Pam) was facilitated by the Vanuatu National Disaster Management Office (NDMO) with support from the Pacific Community (SPC) and the European Union (EU). Technical support was also provided by SPC through the Building Safety and Resilience in the Pacific (BSRP) project and in close cooperation with sector partners.

The Tropical Cyclone Pam Lessons Learned Workshop was held in Port Vila, Vanuatu, from 24 to 25 June 2015 to review key aspects of coordination, including preparation and response. This report summarises the discussions and outcomes from that workshop.

Key Recommendations

Coordination	Recommendations
Early Warning Systems and Communications	Increase the reach and use of HF radio network and SMS to enable warning messages to more effectively reach communities.
	Review the content of messages that are being shared with communities (translate into languages, such as Bislama, that will make sense to people).
	Information sharing strategies to consider who communities are likely to listen to/ take advice from and devise a strategy for sharing information around this.
Provincial Level Response and Coordination	Community Disaster Committees (CDCs) are very useful – these groups should continue to be set up and provided with ongoing, consistent support. Vanuatu communities are resilient in many ways; community-based Disaster Risk Management (DRM) interventions must recognise this fact and build upon it.
	Continue to strengthen Provincial capacity for risk management.
	Revise the existing risk management legislation and develop corresponding standard operating procedures (SOPs) to specifically address provincial level systems, security protocols and the role of emergency response agencies.
Evacuation Centres (ECs)	Inclusive communication between national-provincial-community levels needs to be improved.
	Provincial Institutions: Rural Training Centres (RTCs) and the Technical Vocational Education and Training (TVET) Centres could be utilised.
	Formulate operation and institutional framework for Camp Coordination and Camp Management (CCCM) (SOP, standards for evacuation centres, Guidelines).
	Adoption of a 'National Standard' for the selection and assessment of ECs, that takes into account minimum criteria for safe and accessible location, structural standard (minimum for Category 4 cyclones), capacity, water, sanitation and hygiene, safety and protection, emergency power supply and communications.
	Where schools are rehabilitated or newly constructed, design should include a secure storage room to protect books, desks and equipment, during the time when the school is used as an EC.
	Identification of alternative ECs available for longer-term sheltering, to reduce the reliance on schools.
	Formal authorisation of ECs through review against the criteria from the 'National Standard' (as suggested above).
	Mapping, planning, monitoring and upgrading of Evacuation Centres, including evaluation infrastructure and assets (including logistics).
	Capacity Building at local, provincial and national levels (training and simulations).
	Communication DRM planning focused on evacuation (Traditional Knowledge and Early Warning).

Coordination	Recommendations
National Level Coordination	<p>Increase disaster management related funding for disaster management and capacity building throughout Vanuatu at all levels of the disaster management system.</p> <p>Strengthen linkages between responding agencies in the field and the central government agencies. Work out what support functions central agencies can provide. What training and exercising/ simulations for staff would assist them in fulfilling those roles.</p> <p>Development of a web-based information management system to allow improved disaster management communications at National, Provincial and Area Secretary levels for all ministries and agencies involved in preparedness, response and recovery to share information.</p> <p>Review/rewrite SOPs that clearly set out policies and procedures of different elements within NDMO and Emergency Operating Centres (EOCs) and other government agencies to suit different scenarios.</p> <p>Review the National Disaster Management Act and improve awareness of roles within the legislation: Sourcing of technical assistance to support the review of the Act is underway. It is expected that a revised Act can be presented to Parliament in 2016. There needs to be greater awareness of the National arrangements so that all government agencies are better prepared and understand their roles in disaster response and relief.</p> <p>Train surge personnel from across government to support critical functions within the NEOC.</p> <p>Recruit CCCM, information management, media and communications, logistics and coordination staff for the NEOC.</p>
National Emergency Operations Centre (NEOC)	<p>Strengthen the link to, and utilise the Joint Police Operations Centre (JPOC) which has the capacity to provide useful resources before and during the time of response.</p> <p>Regular NEOC meetings and simulations: Hold regular simulations and briefings of senior NEOC staff to ensure a 'common operating picture' is shared and well understood among the key stakeholders. Pursue ongoing training for NEOC personnel.</p> <p>Increase funding for NEOC and Provincial Emergency Operation Centres (PEOCs), investing in capacity building and strengthening links between the NEOC and PEOCs.</p>
Cluster System	<p>Cluster System role: A high-level decision-making group – including government and non-government members – should meet in order to determine how the Cluster System should be developed and how it should function in the future.</p> <p>The Cluster System and inter-cluster coordination should be as purposeful and efficient as possible without adding additional workload though lengthy meetings.</p> <p>Clear Terms of Reference and SOPs need to be developed for the clusters' roles and operations.</p> <p>Cluster meeting schedules should be well coordinated to avoid timing conflicts.</p> <p>Clusters and inter-cluster coordination should be a strategic and decision-making forum, rather than a reporting forum.</p> <p>Data collection, collation and sharing between clusters needs to be improved.</p> <p>The Shelter and Evacuation Working Groups should develop stronger relationships to progress common issues.</p>
The Vanuatu Humanitarian Team (VHT)	<p>VHT role review: The VHT should undergo peer review to evaluate its role as a supporting mechanism for the NDMO and to analyse its relationship with other bodies, such as cluster leads, Office for the Coordination of Humanitarian Affairs (OCHA)/United Nations Disaster Assessment and Coordination (UNDAC). This will ensure provision of timely, well-coordinated and appropriate support to the NDMO when it is requested.</p>

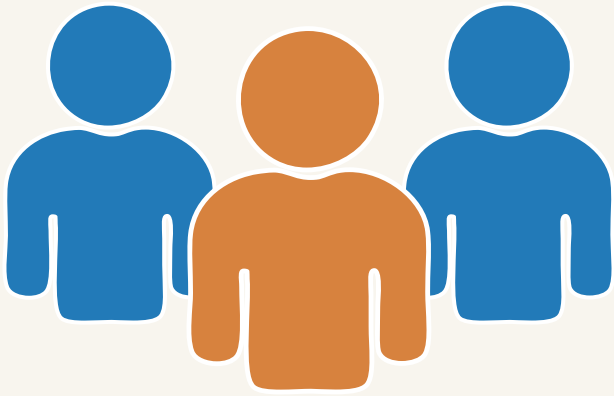


Coordination	Recommendations
The Vanuatu Humanitarian Team (VHT)	<p>Responsibilities: The VHT coordinators should discuss with the Pacific Humanitarian Team (PHT) their respective roles, responsibilities and operational relationships in preparedness and response operations in support of the Government of Vanuatu (GoV) post TC Pam.</p> <p>VHT and PHT coordination: The VHT coordinators and PHT should provide a brief on the outcomes of these discussions to the GoV and the NDMO.</p> <p>Accreditation processes for voluntary workers should be put in place with Vanuatu procedures for entry and governance processes, respected.</p> <p>M&E: Reporting by VHT to the GoV on auditing and reporting of fund sources, fund flows, expenditure and recipients/beneficiaries to enable the GoV at central and provincial level to better coordinate and manage response.</p>
Coordination – Donors	<p>GoV sovereignty: Donors should complement the requests of the Government of Vanuatu in ensuring appropriate and timely relief is deployed.</p> <p>Respect towards needs and procedures of a Sovereign Nation: There should be a disciplined approach to provision of relief and personnel, respecting the needs of the government. Auditing and reporting mechanisms back to the Ministry of Finance and to the Prime Minister's Office must be complied with.</p> <p>Humanitarian preparedness should be well integrated into the cluster system and corresponding government and non-government agencies. External support for enabling this could be explored.</p> <p>Coordination with non-traditional donors needs to be improved.</p>
Regional Coordination – Regional Mechanisms	<p>FRANZ partners and the Melanesian Spearhead Group (MSG) played a significant role in supporting government-led interventions. These mechanisms need to be strengthened in the context of Pacific Island countries supporting each other.</p> <p>The role of Vanuatu's Ministry of Foreign Affairs in the requests and approval of inbound teams is essential and should be consistently considered as a matter of protocol.</p> <p>There is a need to strengthen the protocol linkages, as well as International Disaster Response Law to ensure sovereignty and national ownership is maintained and respected.</p>



Source: Vanuatu NDMO

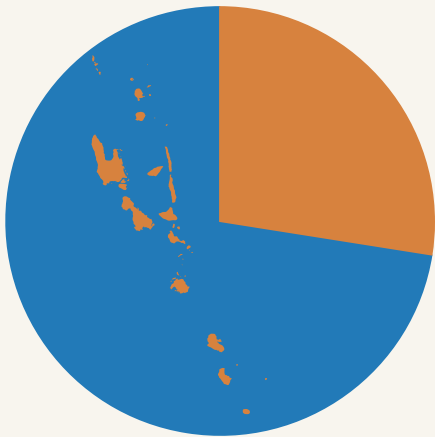
Coordination	Recommendations
International Coordination – International Mechanisms	<p>Strengthen the national (and sub-national) structures in disaster management and ensure international teams are aware of the local context and coordination mechanisms.</p>
	<p>UN Central Emergency Relief Fund (CERF), Flash Appeal and Joint Humanitarian Action Plan (HAP): There is a significant need to enhance awareness and understanding of international funding mechanisms and operational processes, such as the UN CERF, Flash Appeal and Joint HAP.</p>
	<p>UN coordination and funding mechanisms should be adapted to Vanuatu's operational context and support government-led coordination efforts.</p>
	<p>Tracking of international funding provided through UN partners, including Flash Appeals and WFP funding, needs to be more transparent, with clearly identified mechanisms through which the government can identify strategic direction and priorities for response.</p>
	<p>The UN is encouraged to engage systematically with the Government of Vanuatu prior to disasters in order to appropriately complement government's capacities in relation to the activation of Flash Appeals and response coordination, and support stronger alignment of Flash Appeal content with government-led disaster response.</p>
	<p>Establish a certification or accreditation process and registration for international emergency workers and agencies to enable identification of those authorised to engage in emergency response.</p>
	<p>Regional and international linkages could be formalised through Memorandums of Understanding (MOUs) to provide clear legal policy and operational frameworks.</p>
	<p>Revision and/or development of Sector humanitarian and disaster response plans needs to be undertaken.</p>
	<p>Seek agreement for longer deployments (minimum of six months) of surge personnel in key positions for large-scale emergencies. This will likely lead to improved operational stability through reduced staff turnover and strengthened internal coordination of succession planning.</p>
	<p>All offers of international assistance by states and inter-governmental organisations are to be directed to the Ministry of Foreign Affairs through the appropriate embassy or diplomatic mission via Diplomatic Note or Note Verbale.</p>



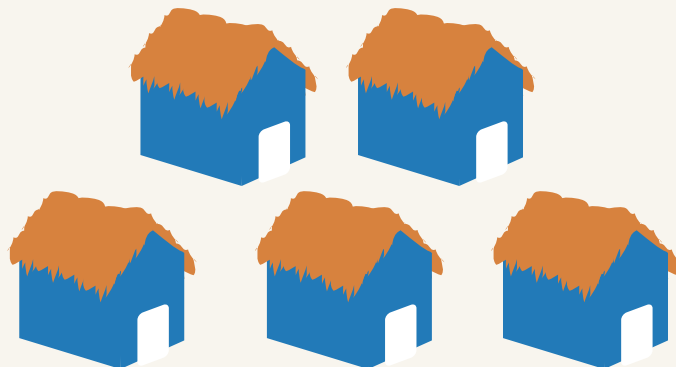
188,000
Est. people affected



96% of agricultural crops
wiped out in affected areas



65,000 people
displaced from their
homes



81% of homes in affected
areas sustained some level of
damage

CROSS CUTTING ISSUES

Gender and Protection (G & P) at Community Level

Work with community leaders to ensure that men, women, boys, girls, People Living With Disabilities (PLWD) and other vulnerable groups have equal access to any community-based Disaster Management (DM) training opportunities.

Ensure information is shared in simple ways so that everyone, including PLWD, can access and understand.

Enable and encourage communities to develop household DM plans to ensure that all family members have clear roles and responsibilities.

Develop inclusive Provincial DRM plans in consultation with representatives of all groups (women, men, boys, girls, PLWD) and ensure that the plans include monitoring indicators for gender and protection issues.

G & P at Provincial Level

Nothing About Us, Without Us: Full participation and inclusion of representatives of all groups in decision-making on projects discussed at Provincial-level for communities.

Representation on Provincial Disaster Committees (PDCs): Ensure representation of women, men and PLWD on Provincial Disaster Committees.

Encourage consultations on sensitive issues and/or when appropriate at all levels, to be disaggregated (men, women, youth) to ensure that all important topics are properly addressed.

Inclusive Consultation: Ensure that 'hidden' people are consulted (e.g. PLWD).

Identify female 'champions' at national and cluster levels and actively seek their input into policies and plans by including gender issues in all clusters and ensuring gender balance of clusters.

G & P at National Level

Community coping strategies: National planners need to have a better understanding of community coping strategies to ensure that traditional ways to mobilise women's capacities can be enhanced.

Clarify definition of 'household': Develop a clear definition of 'a household' to ensure that we do not exclude women, children and other vulnerable groups.

Kitchen house assessment: Include reference to 'kitchen houses' in assessments. 'Households' and 'sleeping houses' are captured but not 'kitchen houses', where women spend most of their time with their children.

Information Management and Assessments: Data Preparedness and Tools

Establish, coordinate and maintain an Information Management (IM) System for disaster response in NDMO: This should include the core/essential datasets for disaster emergency response needs and be built from data available from various sources (National Statistics Office (NSO), Health, Communications, Police, Area Secretaries).

Establish IM units for data preparedness and response within agencies and clusters, actively seeking support from the NSO for technical resources to assist with data preparedness.

Establish MOUs for data sharing and protection of intellectual property across agencies.

IMWG focal points: Each cluster and relevant ministry must nominate an IM focal point for the IMWG.

Establish a full time, permanent IM position within NDMO and seek support from relevant external partners for capacity building for this position (in particular), and the IMWG (in general).

NDMO's Information Management Working Group (IMWG)

IMWG and NDMO IM equipment: Seek support for equipment and software required to support the IMWG and NDMO IM Officer.

IM customised products and services support in-country capacity to develop more visual products with the aim of improving coordination and decision-making.

Explore appropriate technologies to enable access to datasets for all users (including provincial offices) as soon as possible for decision-making.

CROSS CUTTING ISSUES

NDMO's Information Management Working Group (IMWG)

Situation reports or Sitreps and the value they add to efficient and timely response, should be carefully considered. Clusters should identify trained people and ensure disaster-readiness to contribute information towards Sitreps. Current procedures for the maintenance of Sitreps and contact lists must be reviewed to ensure they are kept up-to-date and consistently utilised.

Assessment instrument training: Trained personnel must be available during response to ensure initial assessments are undertaken by local women and men in a timely manner. PDC and CDC members must, therefore, participate in appropriate training on the use of forms, as well as transmission of data to central data collection points.

Investment should be made to review the processes required for completion of multi-sector, inter-agency assessments realistic to the Vanuatu context. The review must include consideration of the: timing; forms; appropriate people; processes; suitable communications systems; funding for assessment logistics at the provincial level; and suitable technology solutions. The review should contribute to the preparation of detailed SOPs at National, Provincial and Community levels and apply guidance from the Vanuatu Humanitarian Team (VHT), United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), Cluster Leads and other selected partners.

Assessment Recommendations

The application of advanced media technology to serve humanitarian preparedness should be encouraged through cluster systems and coordinated by NDMO.

Standardized assessment forms for provinces: Develop agreements with the provincial authorities to ensure that standardized assessment forms from the NDMO are used to complete assessments. Only assessment forms developed in-country are to be used to ensure that other agencies are not conducting assessments without government knowledge and approval.

Informal assessment capture: Ensure that informal assessments (general public completing forms and letters) from remote locations that arrive at the NDMO are fed back into the appropriate provincial assessment reports.

Data analysis capacity: Review and build capacity at national and provincial levels to analyse data.

Strengthen clearance of goods at port authority/customs: Put relevant processes/policies in place to expedite and to check that goods coming in are requested and needed.

Useful items list: Establish and share a list of useful items, endorsed by GoV, needed for response. All offers of international assistance handled outside the established coordination structure and that are not in line with the agreed priorities and standards set by the Vanuatu Government will be deemed "unsolicited donations". It is important to raise awareness with donors and communities abroad of donation needs and the additional burden on already stretched systems to deal with clearance, handling and storage of unsolicited items. Unsolicited donations are strongly discouraged by the Vanuatu Government; however, if unsolicited items are sent, the GoV requests that this is after a certain timeframe (e.g. one or two months) to avoid blocking the system for managing requested items.

Logistics and Coordination

Identify appropriate organisations/personnel to deal with unsolicited items and support them to work with biosecurity, customs and quarantine officials.

Review legislation for disasters to regulate international assistance.

Regional best practice: Share experiences of good practice related to prepositioning and handling of unsolicited goods.

CROSS CUTTING ISSUES

Logistics and Coordination -International Assistance

Integration of international assistance: The interface of international assistance with provinces needs to be better integrated. A system needs to be established, whereby international teams coming into a community to conduct assessment or work come through the provincial system, i.e., be introduced to relevant authorities, Chiefs, etc. There is a role for strong national level coordination; however, this should not undermine the capacity and role of provinces and communities.

Provincial CivMil Centres: Develop capacity at provincial level to manage any response involving CivMil operations, specifically, and logistics, generally.

Partner logistical agencies: Key agencies with strong logistical capacity, i.e. Vanuatu Police Force (VPF), Vanuatu Mobile Force (VMF), Red Cross to support the Logistics Cluster at national and provincial levels.

Logistics and Coordination - Civil Military Deployment (CivMil)

Strengthen mechanisms for coordination and information sharing between CivMil and government agencies.

Strict guidelines on the use of military assets need to be communicated to government to then relay to NGOs and Provincial agencies.

GoV CivMil Policy: Vanuatu Government should have a clear policy/mandate on how to engage with CivMil operations. Any CivMil deployments need to conform to diplomatic channels and protocols.

Prepositioning of stock and authorisation at Provincial level: Guided by NDMO, establish guidelines with Provincial authorities on establishing, replenishing, release and reporting on prepositioned stock, once Provincial management capacity is reached. PDCs should have the authority and capacity to distribute these items efficiently and equitably.

Community Disaster Committee kits: Supply CDCs with prepositioned tool kits.

Kit standardization/culturally appropriate kits: Establish through better feedback from communities what actually needs to be prepositioned – ‘standard kits’ from abroad may not always fit the Vanuatu context.

Logistics and Coordination -Preparedness and Prepositioning

Standard Operating Procedure: Establish SOPs related to distribution of non-food items at National and Provincial levels.

Provincial Disaster Committee planning: Prepositioned stocks should match up with PDC disaster plans.

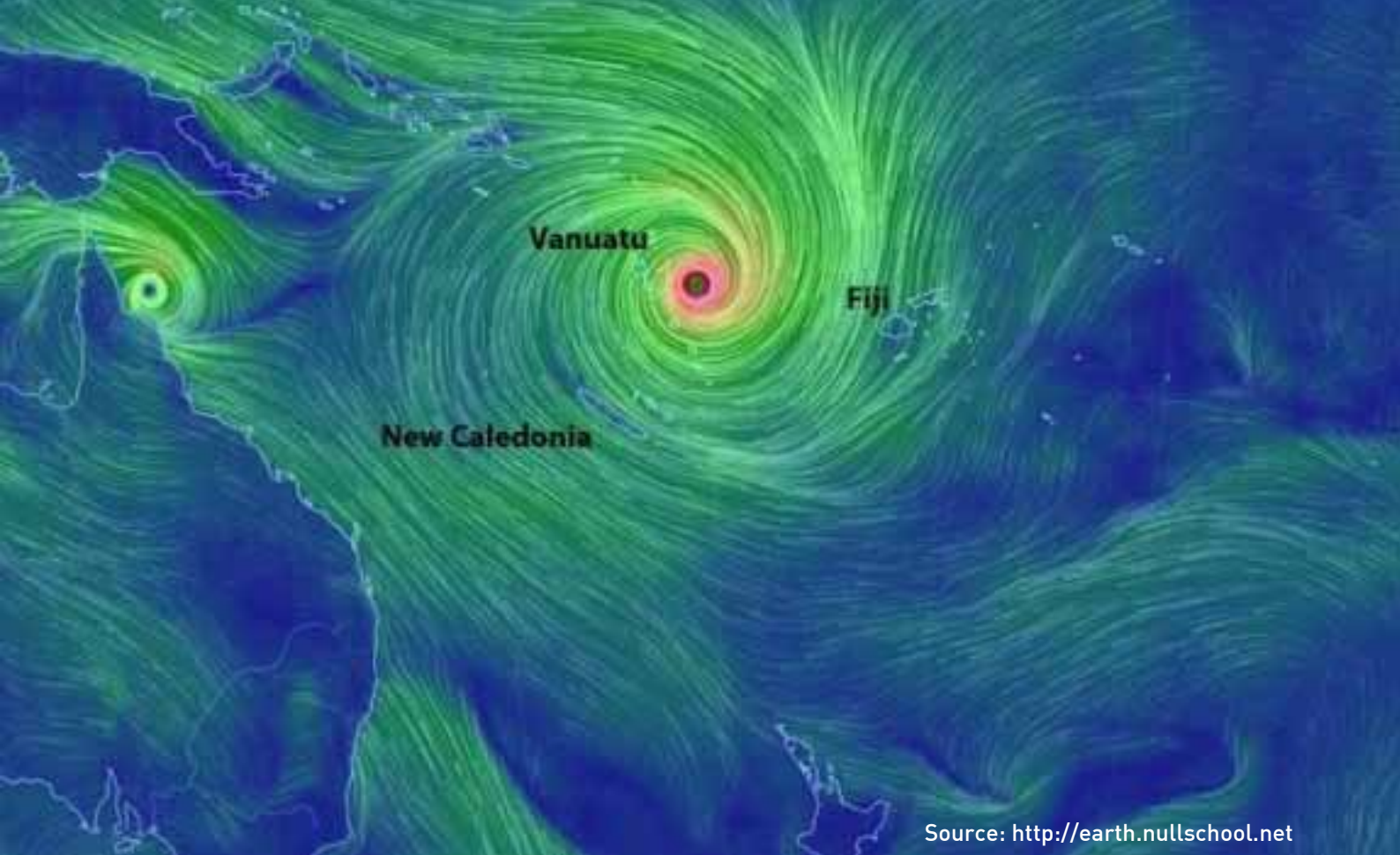
NDMO/EOC to prioritise, coordinate and move heavy duty equipment to clear roads to priority areas in order to move supplies and personnel in the first days following the impact of a disaster.

Accurate data sets (including disaggregated data sets) to be available at Provincial level to aid effective and equitable planning, coordination and distribution.

MOUs and commercial contracts with private suppliers and service providers are tendered, negotiated and signed to ensure stock and services for government response to disaster/emergencies as needed (food, fuel, water containers, tarps, toolkits, shipping, communications, aviation services, logistics).



Source: Vanuatu NDMO



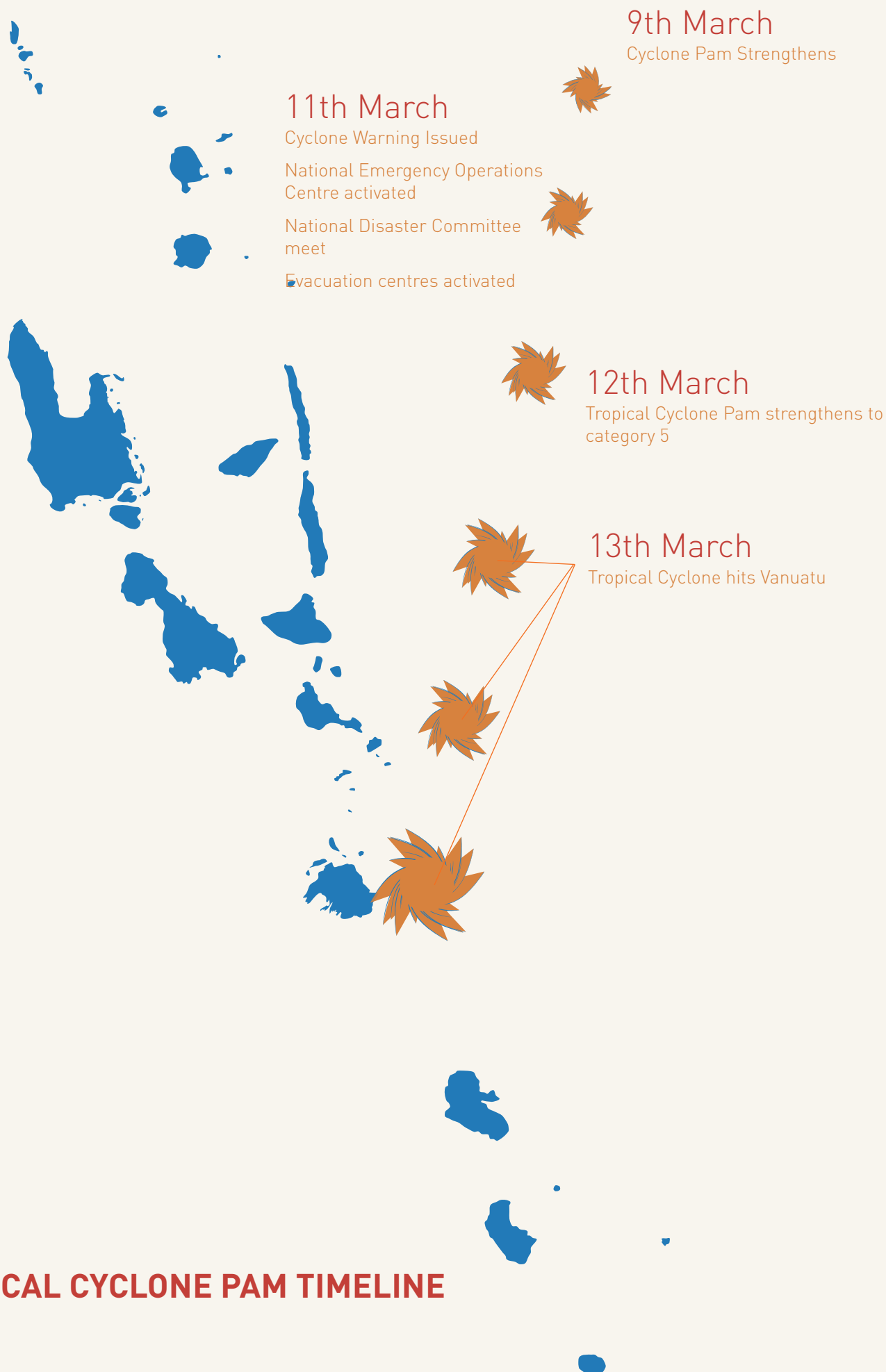
Source: <http://earth.nullschool.net>

Tropical Cyclone Pam

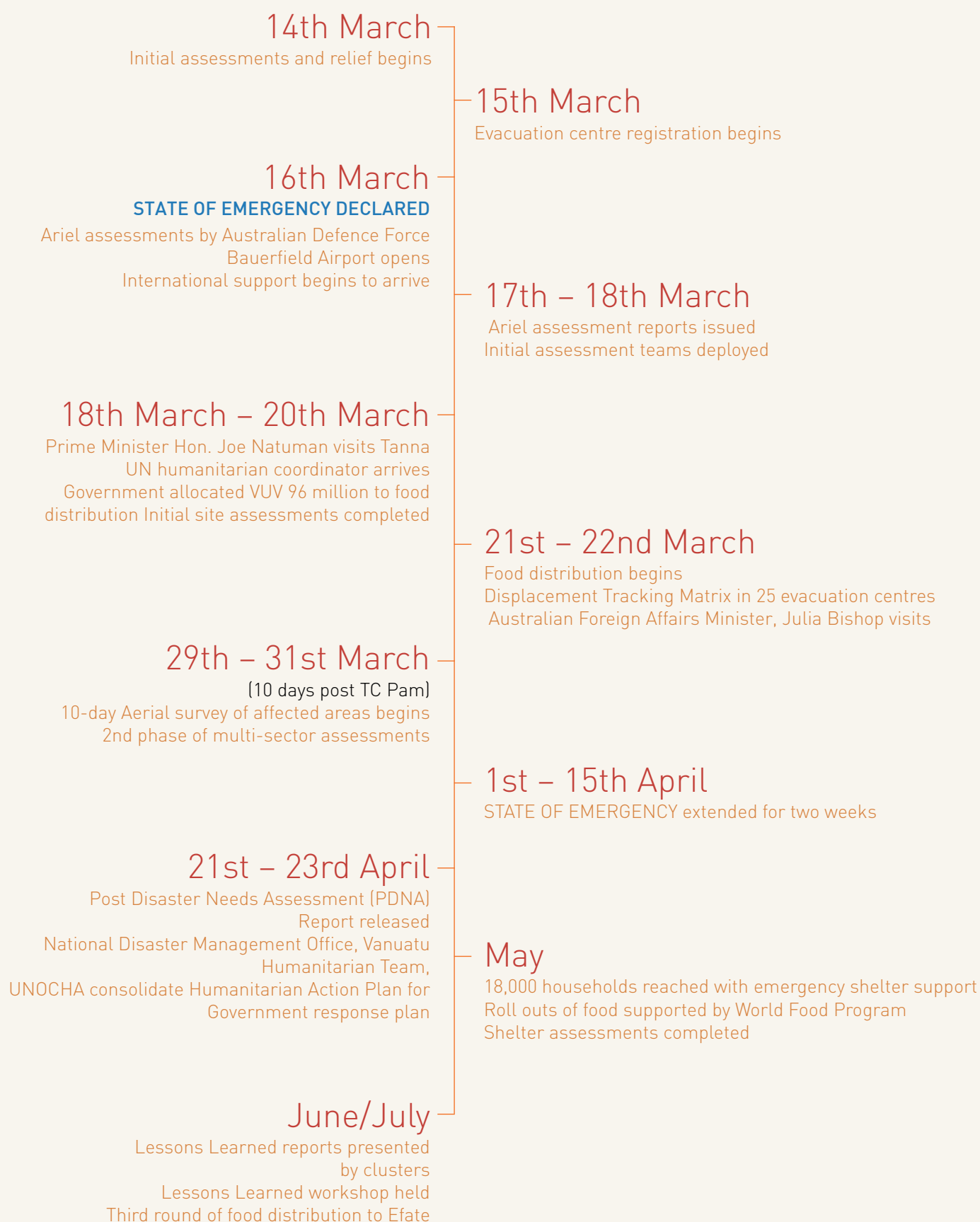
According to the World Risk Report developed by the United Nations Institute for Environment and Human Security, Vanuatu is one of the most disaster-prone countries in the world (UN, 2014). The reality of this hit home on March 13-14 last year when the most intense cyclone in Vanuatu's recorded history smashed into the country.

Winds of 250 km/h with gusts peaking at around 320 km/h flattened homes, schools and villages causing 11 deaths with more injuries recorded and an estimated 65,000 people displaced from their homes. An estimated 188,000 people were affected as a result of Cyclone Pam with reports of approximately 17,000 buildings being damaged or destroyed along with severe damage to crops on a large scale compromising the livelihoods of at least 80% of the country's rural population.

The focus of this workshop was to review the actions taken by the Disaster Response Agencies to review key aspects of coordination, including preparation and response to the largest cyclone to hit land in Vanuatu in its recorded history.



TROPICAL CYCLONE PAM TIMELINE





Vanuatu Government staff, representatives of the IFRC and Vanuatu Red Cross and international stakeholders identify strengths and challenges of the TC Pam response

Workshop Objectives

The Lessons Learned Workshop was a national debriefing event to identify key learnings from the response to Tropical Cyclone Pam. This workshop brought together government representatives, humanitarian organisations, members of the public, the private sector, non-government organisations (NGOs), academic institutions, community leaders and other stakeholders to achieve the following objectives.

- Recognise achievements and discuss key challenges facing disaster response coordination in Vanuatu.
- Generate recommendations to improve current systems and response mechanisms.
- Strengthen existing partnerships and develop new partnerships.
- Shape the next chapter in humanitarian action to better meet humanitarian needs.

The experiences and learnings of these stakeholders during the Cyclone Pam disaster response were identified throughout the two-day workshop, and led to the formulation of key actions to help strengthen the country's resilience to disasters in the future.

Recommendations for improvements to the current national and sub-national level coordination system were also ascertained by participants with further actions identified by the respective government agencies and other responding actors.

The purpose of this process was to implement better coordination and improved consistency among key humanitarian and government agencies. This has been recognised as essential to improving the standards of humanitarian response along with strengthening the confidence and credibility of the government's disaster response, the affected communities, and the national and international humanitarian actors.

Program

The lessons learnt from Cyclone Pam were explored in a two-day workshop designed to achieve the workshop objectives and identify emerging issues through group discussions.

CYCLONE PAM - LESSONS LEARNT WORKSHOP PROGRAM	
THEME	SUB-THEME
DAY ONE	
Coordination I	<ul style="list-style-type: none"> • Early Warning Systems and Communications • Provincial Level Response and Coordination • Evacuation Centres
Coordination II	<ul style="list-style-type: none"> • National Level Coordination • National Emergency Operations Centre (NEOC) • Cluster System • Vanuatu Humanitarian Team • Regional Coordination – Donors • Regional Coordination – Regional Mechanisms • Regional Coordination – International Mechanisms
DAY TWO	
Cross-Cutting Issues:	<ul style="list-style-type: none"> • Gender and Protection <ul style="list-style-type: none"> ◦ Community Level Responses ◦ Provincial Level ◦ National Level
	<ul style="list-style-type: none"> • Information Management and Assessments <ul style="list-style-type: none"> ◦ Data Preparedness and Tools ◦ NDMOs Information Management Working Group (IMWG) ◦ IM Customised Products and Services ◦ Assessments
	<ul style="list-style-type: none"> • Logistics and Coordination
	<ul style="list-style-type: none"> • International Assistance
	<ul style="list-style-type: none"> • Civil Military Deployment
	<ul style="list-style-type: none"> • Preparedness and Pre-Positioning
Inter-Cluster Panel Discussion	
Plenary Session and Workshop Closure	

Workshop participants were divided into groups, according to the various sub-themes listed in the Program, in order to facilitate in-depth table discussions. Each of these thematic discussion sessions was concluded by an open plenary with reports presented by each group on identified issues and suggested options for improvement and ways forward. An Inter-Cluster Panel Discussion, an 'Open Mic' question and answer session, final remarks and evaluation concluded the workshop.



Source: Vanuatu NDMO

Outcomes

Coordination

Early Warning and Communication Systems

Exploring multiple channels for communications and increasing coverage beyond city walls were key areas that all members of the group reflected on. Participants reiterated that high frequency (HF) radios should be installed for all levels – Provincial Disaster Council (PDC), Community Disaster Council (CDC) and Area Councils. With respect to multiple channels, one cannot limit communication to radios or mobile phones; in many areas, communities do not have access to either. Clearly, beneficiary self-help mechanisms that are their own traditional coping mechanisms should be incorporated.

Advocacy is required to increase the coverage of mobile phone networks and also to keep many lines of communications open for various mechanisms; in case one channel is blocked, there are other means to relay information.

There is a need to reassess legislative frameworks/agreements before an emergency to facilitate key responses, such as free SMS during disaster response; support to the telecom sector for surveillance during disaster; and authority to the telecom regulator to give quick approvals for access to disaster response information.

Achievements and What Worked Well

1. At a national level, the National Emergency Operations Centre provided an important focal point for communication responses to the provinces, both as a meeting place for all agencies involved and as a centre where technical support was provided for communication mechanisms. Following Cyclone Pam, the role of the National Emergency Operations Centre (NEOC) as a central communications agency was tested at a national level for the first time.
2. Nationally, the role of the Government Information and Communications Office (OGCIO), in close cooperation with the NEOC, was pivotal in providing immediate, effective and innovative communication to provinces, as well as facilitating partnerships with local telecommunications providers, utilising SMS, satellite phones and the traditional mobile and landline systems.

3. At a provincial level, the training previously provided to the PDCs and CDCs supplied an established web of communication lines, even when technical communication methods broke down.
4. At a community level, the importance of informal, traditional communication methods cannot be underplayed, although, some customary beliefs, such as the ability of kastom to deflect a cyclone need to be addressed. National and Provincial authorities were able to communicate with communities through chiefs, church, women, school leaders and health officials. The wide coverage by mobile phones, once the relay tower system was re-established, provided extensive communications for rural areas. Unexpected and innovative communications support with isolated rural communities was delivered by the maritime and international yachting communities through HF radio.
5. Although the lessons learned point the way for stronger, more integrated communication, the effectiveness of the combined communications in place saw an unexpectedly low mortality rate as people were made aware of the approach of Vanuatu's largest cyclone in recorded history and moved to safety. In the same way, the messaging to move back to villages from evacuation centres and safe havens meant a more rapid recovery and rehabilitation response.

What Needs Improvement?

1. Early Warning Systems need to be strengthened, utilising mainstream communication methods, such as radio and telephone, i.e. private sector and public 'voice over internet protocol' (VOIP) and through HF Radio.
2. Few people in rural areas understood what a Category 5 Cyclone was and that preparation of communications in simple language is needed so that people can more readily understand messages and take appropriate action for pre-positioned response.
3. Communication lines need to be clearer, i.e. NDMO, as the recognised national authority through its NEOC to Provincial Authorities to Chiefs to community group leaders, so that messaging is not diluted or confused by unauthorised agencies/persons.
4. HF Radio systems would need regular maintenance and training but a partnership with the maritime and yachting communities to provide this training could be explored.
5. The proactive and innovative role of Telecom Providers is recognised but this partnership could be supported and strengthened. A stronger legislative and policy framework is needed to allow the Regulatory Authority to issue approvals for access to disaster response information. The use and lower/subsidised cost of SMS messaging in a disaster needs to be explored.
6. Multi-layer communication responses must be strengthened so that as one system closes, such as loss of mobile phones through relay tower destruction, other systems can be utilised.
7. The National Disaster Management Office needs restructuring with positions specialising in information communication technology (ICT) systems and information management.
8. The legislative and policy framework for NDMO needs review so that the law and standard operation procedures governing responsibility and processes for communication are clearer and more effective.

Agreed Priority Recommendations

1. Improving and increasing coverage of all modes of communication - radio, mobile coverage and activation of traditional warning mechanisms. The Lessons Learned Workshop agreed that no one system would provide the integration needed for effective coordination and communication. As one system fails, others need to be activated, such as HF radio when telephone communications fail due to destroyed towers. Use of satellite phones proved effective but their availability and training in their use needs to be addressed. The usefulness of traditional coordination systems - simply walking to another village - was emphasised, but the chain of approved communications must be strong so that the right messaging and coordination takes place.
2. Capacity development of key actors, such as community disaster councils and area managers who are operating HF radios. The use of HF radios was supported but it was recognised that not only do these equipment need to be made available, but training must also be provided for operation and maintenance.
3. Exploring back-up options when the first installed means of communication fails. Cyclone Pam demonstrated that the reliance on one or two communication and coordination systems is unwise. Multi-layered and integrated systems providing effective backup is essential. Communications Redundancy Systems, as well

as alternative power supplies for radio, telephone and mobile phone systems involving generators and solar charging, need to be investigated.

4. Simplifying the language of messages that communities can understand. Terms such as 'Category 5 cyclone' are not easily understood by rural communities. Furthermore, the potential impact should also be communicated in messaging that facilitates prompt action among communities. People living in remote communities need clear, simple explanations in Bislama, to explain what the impact/effect of a Category 5 Cyclone might be. The PDCs and CDCs need to be able to understand so that they can respond to simple, effective and properly authorised messaging and contribute to a coordinated response, which should be tested with simulation exercises.

Provincial Level Response

This section is based on feedback from individual table discussions and larger group-of-tables discussions, followed by a plenary session. The 'Achievements and What Worked Well' and 'What Needs Improvement' sections were derived from templates and flip charts that were made available to table groups to record their responses. Table groups were also asked to make recommendations; however, the content of the 'Recommendations' section included here was produced as a result of the group-of-tables and plenary discussions to identify the agreed priority recommendations made by the various table discussions, rather than an exhaustive list.

Achievements and What Worked Well

1. Provincial level responses saw: i) a government presence and identified roles for response; ii) a functional structure and inter-provincial support; and iii) coordination support to provinces that was provided by other provinces. These were deemed to be examples of good practice. Language barriers were overcome by engaging, and utilising multi-lingual NDMO and provincial staff. Early activation of the PDC in Tafea Province was cited as also beneficial – they activated two days before the cyclone made landfall.
2. There was an obvious difference between working with those communities that had CDCs established and those communities that did not, in terms of: i) better communication flow; ii) quicker response; iii) more effective assessments that required less external support; and iv) less conflict. The group concluded that having CDCs is essential for more effective disaster preparedness and response.
3. Communities applied traditional knowledge as a means of preparing for and recovering from the impacts of TC Pam. Useful examples cited included 'cyclone houses' and food preservation techniques (manioc, coconut jam).

What Needs Improvement?

1. Provincial structures need to be strengthened where they are weak. In particular: i) lines of communication between national-provincial-community levels; ii) understanding of assessment forms and processes; iii) connectivity of PDCs to affected islands; iv) contingency planning around logistics and distribution; and v) clarity around roles and responsibilities for Area Secretaries and between the national and provincial levels.
2. The process of establishing and building capacity of CDCs needs to be rolled out to all communities and strengthened in those communities where CDCs already exist. Community understanding of disaster-related messaging needs improvement; people struggled to understand colour-coded alerts and technical language (e.g. 'Category 5 Cyclone'). Visual aids are also needed. Delivery of relief items should be more in line with the content of the CDC completed assessment forms.
3. Some forms of traditional knowledge applied following TC Pam were not beneficial; rather they increased the risk for communities; e.g. 'cyclone chasing'. Support for traditional approaches and systems, including the roles of chiefs, needs improvement.
4. Communication capacity, particularly to remote areas (HF/VHF Radios, SMS messaging).
5. Other stakeholders (e.g. private individuals, churches, unregistered NGO's, politicians, etc.) bypassed the formalised structures and delivered uncoordinated relief to individual households and communities.

Agreed Priority Recommendations

1. Continue to strengthen provincial level capacity for risk management. Information management at the provincial level should be supported through: i) establishing and maintaining a database/inventory of 'cluster relevant' assets available in the province (i.e. health resources, prepositioned items for shelter, etc.); ii) availability of census data for the respective province; iii) standardisation of assessment processes and forms, and training on the use of processes/forms and the ability to analyse the data that is collected; and iv) standardised lines of communication between province – national level and province – clusters. Capacity building for PDC's should include: i) gender and protection training; ii) support for their coordination role, in particular, how to manage incoming support (clusters, NGO's, etc.); and iii) how to be responsive to the needs of communities as identified in assessments. In addition, partners must be made aware that providing bilingual human resources (Bislama + English/French) to support provincial level activities is strongly recommended.
2. CDCs are very useful – these groups should continue to be set up and provided with ongoing, consistent support. Vanuatu communities are resilient in many ways; community-based DRM interventions must recognise this fact and build upon it. The processes involved in establishing and supporting CDCs should be: i) standardising across organisations involved in this work and include a clear definition of roles; ii) involving 'whole of community awareness' rather than focussing only on CDC members; and iii) providing the CDCs with a 'peace time' function to encourage them to continue meeting and working together. It was suggested that this should be around climate change adaptation to keep the focus on risk reduction. Those communities that already have CDCs should be provided with ongoing support in the form of refresher courses rather than 'one-off' training. CDC training should encourage the practice of useful traditional knowledge (TK) and, beyond this training, practical TK for disaster resilience should be documented and shared. Traditional systems, including the role of Chiefs, should be supported and developed.
3. Revise the existing risk management legislation and develop corresponding SOPs to specifically address provincial level systems, security protocols and the role of emergency response agencies. The DRM Plan and Act should include processes that stakeholders can, and will, follow. The roles of all relevant stakeholders should be clearly articulated and PDCs should be empowered through this revised legislation and corresponding SOPs. In particular, there should be clear guidance about: i) what an official declaration of disaster/emergency means for PDCs in terms of any specific authorisations/ functions that are enabled through this declaration; and ii) what the roles of Area Secretaries and Area Councils are.
4. Inclusive communication between national-provincial-community levels needs to be improved. There needs to be greater efforts to deliver meaningful and timely DRM messages to communities, particularly those living in very remote areas. Two critical issues must be considered: i) what means are appropriate for delivering these messages (what technology should be used, who will communities listen to/take guidance from); and ii) the content/relevance of the messages that are sent and the ability of communities to understand them. Communities need to know which sources of information are reliable and, therefore, should be followed.



Evacuation Centres - Coordination and Management

Immediately prior to Cyclone Pam, an Evacuation Centre Working Group was established through the National Disaster Management Office as no effective CCCM capacity existed. In the formation and operations of the Evacuation Centre Working Group (ECWG), pivotal roles were played not just by GoV Central Agencies, such as the Ministry of Health and Ministry of Education, but also by non-government organisations and civil society organisations that utilised their already well-established network of community relationships. This facilitated the establishment of 43 Evacuation Centres, accommodating 4,981 people in and around Port Vila alone.

Churches and schools were widely used and, although deaths and injuries were largely related to the lack of appropriate safe evacuation centres on a national level, conversely, the low mortality rate was also an outcome of suitable centres being identified, operationalized, registrations and assessments undertaken and provided with food, water and emergency supplies.

Achievements and What Worked Well

1. The ECWG was established where no such group previously existed. This group later transitioned into the Internally Displaced Persons Working Group within the Shelter Cluster with effective integration of responses, as experienced locally-based players took the lead.
2. The GoV's NDMO took the lead in coordination and operations with the ECWG, implementing responses. This allowed the coordination of relief assistance provided by partner agencies.
3. Information flows were strong and centrally coordinated through NDMO.
4. Volunteer assistance and private sector support were utilised.
5. Initial minimum standards were developed and implemented for the establishment of evacuation centres.
6. A Displacement Tracking Matrix (DTM) was rolled out and assessment surveys undertaken to establish needs for emergency supplies and shelter.
7. An Evacuation Centre Exit Strategy was developed and implemented, resulting in a rapid return to their communities of most Evacuation Centre residents.
8. Communities with previous Disaster Risk Management training and simulations were most resilient and experienced the least damage and on-going negative consequences – a demonstration of the effectiveness of Community-Based Disaster Risk Management (CBDRM) planning and implementation.

What Needs Improvement?

1. NDMO does not currently have dedicated CCCM capacity within its structure, concentrating on policy, procedures resourcing, awareness and training for Rapid Response CCCM.
2. Evacuation Centre Management Guidelines and standard operating procedures, from establishment to operations to closure, have not been finalised.
3. Lack of coordination between the Ministry of Education (MoE) and the ECWG led to early unannounced closure of some centres as the MoE moved rapidly to re-open schools for a return to normalcy. Better communication and coordination is needed.
4. Tension between camp residents and host communities developed because the centre operations were not understood by the local residents who saw relief supplies, food water and tarpaulins delivered to camp residents, when they felt they were in need and received little or nothing.
5. Mapping and data availability was a major gap with few pre-determined evacuation centres with proper demographic mapping/data to act as the basis for emergency relief response. Some evacuation centres initially received no supplies because they were not registered or recorded.
6. Security of evacuation centres needs to be improved as the residents are highly vulnerable and gender protection, protection of children and people Living with Disabilities (PLWD) becomes more pronounced in times of a disaster/emergency.
7. Whilst some training had been undertaken in rural areas on 'Camp Management and Disaster Risk Reduction/Disaster Risk Management (DRR/DRM)', urban training had not taken place. This needs to be addressed.

Agreed Priority Recommendations

1. Normative dimension: Formulate an operational and institutional framework for CCCM (Guidelines/SOPs, standards for evacuation centres, Implementation Protocols, etc.) The Cyclone Pam experience saw widespread recognition of the need for a legislative policy and procedural framework for evacuation centres. These would include SOPs for: i) pre-disaster response; ii) operations during the emergency; iii) post-disaster plans; and iv) standards for evacuation centres. Clear responsibility guidelines, with implementation protocols, need to be drafted. The lack of resources: human, physical, data and financial, needs to be addressed under the aegis of the NDMO. Information to guide planning is available but not always readily accessible. The restructure of the NDMO that is currently underway should include a permanent position for CCCM and Rapid Response.
2. Human dimension: Capacity building in CCCM at local, provincial and national levels to government and civil society/camp management agencies – evacuation SIMEXs (Simulation Exercises, such as Mass Evacuations in Natural Disasters (MEND)), trainings, Training of Trainers (ToTs), manuals/SOPs, etc. Capacity building for CCCM at local, provincial and national levels requires review with a strong focus on Distribution Methodology. With this intervention, the tensions between host communities and those in ECs should be alleviated. Protection issues need investigation and addressing, especially using the established relationships of sector partners and agencies operating in the Shelter Cluster, such as the NGO/Civil Society Organisations (CSOs). Better mapping areas and knowledge of population at CDC and PDC level by accessing and applying census data will allow for more efficient response and support mechanisms. Evacuation Centre SIMEXs, along with ToTs should be undertaken by PDCs and CDCs. Standardization of non-food items (NFIs) kits could help to limit conflict and feelings of unfairness amongst recipient communities. The potential role of Rural Training Centres to deliver training sustainably was raised and should be further explored; helping people within their own communities should be a priority.
3. Physical/material dimension: mapping, planning, monitoring and upgrading of evacuation infrastructure and assets (assessments, legal/ownership rights, building, etc.) It was agreed that better mapping of population and approved/possible evacuation centres is a priority. Designated and approved structures in villages/communities would allow for pre-positioning of supplies and stronger information management/tracking. The lack of guidance or planning of EC locations negatively affected preparedness with poor assessment of the safety of EC structures (traditional, western and hybrid) and their ownership (public vs private) needing to be undertaken. With identification, upgrading and mapping of suitable centres, prepositioning of supplies and targeted training could be taken on. Reliance on public buildings may not always be the best option as schools and health facilities need to revert to their core activities as soon as possible for a return to normalcy. Funds could be sourced to bring identified centres up to a national standard. The provision of transport by NDMO was effective but could be formalised.
4. Integration of CCCM features into Community-based Disaster Risk Management (CBDRM) activities (CBDRM/ bottom-up planning that will align with provincial and national level (top-down) planning). Planning for ECs is a priority recognized by those involved and by those attending the Cyclone Pam Lessons Learned Workshop. With the creation of a permanent post in the NDMO's newly proposed restructure with TORs specifically designed to meet the recommendations of this Report, these issues can be addressed in a sustainable way. Planning at a national, provincial and community level with data collection and mapping of centre sites is needed. Identified ECs need repair funding to meet standards as yet to be adopted. Alternative or additional centres need to be located. Centre management and operation procedures must be clearly developed with opening, operations and exit strategies clearly defined. Local communities need training and awareness to understand the role of the ECs and the part they, as the host community, will play to avoid tensions that may arise in regards to relief supply distribution, use of scant community food and water resources and closure processes. The integration of EC issues through the clusters is important but, in particular, in Water Sanitation Hygiene (WASH) and Gender and Protection Clusters, needing security considerations.



Source: Vanuatu NDMO

National Level Coordination

The session on National Coordination saw discussion on themes of – national coordination, the operations of the National Emergency Operations Centre, an overview of clusters operations, the roles of the Vanuatu Humanitarian Team – before moving on to regional coordination through donors, regional mechanisms and international agencies.

Achievements and What Worked Well

1. The presence of highly qualified and experienced regional and international experts provided an opportunity for skills acquisition for the NDMO team and Ni-Vanuatu Cluster members.
2. The complex national response mechanism was seen as both a strength and a potential area of concern given that so many agencies are involved in national coordination, decision making and response – Prime Minister's Office, Council of Ministers (COM), Development Committee of Officials (DCO), donors, National Disaster Committee, Vanuatu Humanitarian Team (VHT), Government Ministries, particularly Foreign Affairs, Municipal Councils, Provincial Disaster Committees, Community Disaster Committees, National Clusters, as well as regional and international agencies. These all work through the NDMO, which is understaffed and under resourced.
3. The Cluster System provided, at national level, an effective and powerful planning response and relief mechanism. An appraisal of the cluster system is provided later in this report.
4. The Vanuatu Humanitarian Team provided support through strongly established networks of local partners in a timely, effective response and often in an innovative manner. A fuller assessment of the VHT follows.
5. The NEOC provided a venue for centralised decision making but also for decentralisation of activities back out to the provinces and communities, as well as clusters and the Vanuatu Humanitarian Team.
6. The basic response structure already established with clusters, PDCs and CDCs was further strengthened through the support of the Vanuatu Humanitarian Team and their already strongly developed provincial network.
7. Standard operating procedures had been drafted, but never fully operationalised. Cyclone Pam saw these tested to some good effect but gaps were identified that need addressing.
8. This disaster provided an opportunity to test the NEOC and its operating procedures at a national level. Although there have been many gaps or opportunities identified, as a result, the NEOC proved to be effective as a national coordination agency.
9. Logistics capacity had recently been introduced into NDMO and the NEOC and worked well given it was new, but it must be strengthened.
10. An already developed legislative and policy framework contributed to operations but gaps were also identified in both.

What Needs Improvement?

1. The standard operating procedures had been drafted but never put into practice for a disaster of such national scale. These need revision and harmonization with new National Disaster Management (NDM) legislation to be drafted later in 2015.
2. Coordination of international assistance. The existing structures were not in place when international assistance was needed. This resulted in confusion and continued changes to procedures as SOPs were overruled. There had not been enough simulation exercises between government agencies. Schools were not given enough lead-time nor were some remote islands. Linkages were weak between Central Government Agencies with strong provincial outreach.
3. The Cluster System was both a strength and a weakness. It needs to be reviewed and gaps need to be identified – coordination, data flows, duplication, assessment form standardization, fiduciary governance (reporting of funds use and audits to central GoV agencies, Ministry of Finance and Economic Management (MFEM) and Department of Strategic Policy Planning and Aid Coordination (DSPPAC)) must be addressed. Weakness in communication between cluster leads should be reviewed.
4. The current legislative framework is not supportive of effective and integrated response. This contributes to weak policies and SOPs.

5. Data flow and information management coordination capacity is insufficient to deal with the multiple roles that the NEOC is expected to fulfil during disaster response. The NDMO needs permanent, trained staff in its structure to deal with this issue.
6. Logistics proved extremely taxing given the geographical nature of Vanuatu as an archipelago of 83 islands – poor infrastructure, maritime services and telecommunication problems made coordinating logistics very difficult. A Logistics Officer position in NDMO does not exist to ensure processes and relationships are in place.
7. There is no proper framework for the operation of ECs, no CCCM capacity within NDMO and a lack of personnel for logistics and communication.
8. The NEOC building is unsafe with no cyclone shutters. GoV and donor funds are required to improve the security of operations of the building.

Agreed Priority Recommendations

1. Resource the NDMO to be more effective – human, financial, equipment and infrastructure. Restructure the NDMO to provide human resources in key areas identified by the Lessons Learned Workshop, as well as providing a sufficient operations budget for coordination, training and awareness. Commitment from the government is required in order to recruit PDO, CCCM, a communication officer and other support staff at NEOC to each cluster.
2. Strengthen the link to and utilize the Joint Police Operations Centre (JPOC), which has the capacity to provide useful resources before and during the time of response. VMF, VPF and JPOC officers need to be utilised and work across all clusters.
3. Regular NEOC meetings and simulations. Hold regular simulations and briefings of senior NEOC staff to ensure a 'common operating picture' is shared and is understood among the key stakeholders. Pursue ongoing training for NEOC personnel.
4. Capacity building at national, provincial and community levels: Increase disaster management-related funding for disaster management and capacity building throughout Vanuatu at all levels of the disaster management system. More simulation exercises were recommended at all levels – national, provincial and community, but also in urban areas.
5. Strengthen linkages with the central government agencies, working out what support functions they can provide, training and exercising staff for those roles. Identify central government agency officers able to be trained and seconded to NDMO in times of emergency and disasters to improve national coordination and use of national technical, human and infrastructure resources. This would create a national, sustainable 'surge capacity.'
6. Review/rewrite SOPs that clearly set out policies and procedures of different elements within NDMO and EOCs and other government agencies to suit different scenarios. Review the SOPs in light of the Lessons Learned Report but also accommodate the new legislation. This review of SOPs should make it possible to provide earlier warnings; before cyclones cross into national territory.
7. Review the National Disaster Management Act: the NDM Act will be revised in late 2015 with advertisements for Technical Assistance already placed. It is anticipated that the Lessons Learned Report will significantly inform the drafting of the legislation that is expected to be in draft for extensive sectoral consultation by late 2015, ready to be submitted to Parliament in 2016. There needs to be greater awareness of the new Act and national arrangements so that all government agencies are better prepared and understand their roles in disaster response and relief.



CLUSTER SYSTEM

National Cluster System

The National Cluster System is a mechanism that builds partnership, collaboration and inter-operability between all sectors. The cluster system in Vanuatu is built on the existing institutions, considering the sustainability for the clusters.

Clusters consisted of related agencies:

- Logistics;
- Shelter;
- Food Security and Agriculture;
- Education;
- Health and Nutrition;
- Gender and Protection (G and P); and
- Water, Sanitation and Hygiene (WASH).

Achievements and What Worked Well

1. The Vanuatu Humanitarian Team and the Pacific Humanitarian Team worked collaboratively with the Global UN Cluster System to assist and support the National Cluster System.
2. Given the limited resources for the national clusters to fully operate, the agreement was made between the UN global cluster members to collaboratively support the local cluster lead agency.

What Needs Improvement?

Issues related to relocation or internally displaced people, and other overlapping concerns are incorporated into the existing clusters. Currently, the linked issues of internally displaced people and informal settlements are integrated into the Protection and Shelter Cluster's coordination systems.

Agreed Priority Recommendations

1. A high level decision making group that includes government and non-government members should meet in order to determine how the cluster system should be developed, including how it should function in the future.
2. The cluster system and inter-cluster coordination should be as purposeful and efficient as possible without adding additional workload through lengthy meetings.
3. Cluster meeting schedules should be well coordinated to avoid timing conflicts.
4. Clear terms of reference and standard operating procedures need to be developed for the clusters' roles and operations.
5. Clusters and inter-cluster coordination should be a strategic and decision-making forum rather than a reporting forum.
6. Data collection, collation and sharing between clusters needs to be improved. This was a serious issue with either duplication or lack of access to databases held by different clusters.
7. The Shelter and Evacuation Working Groups should develop stronger relationships to progress common issues.

Vanuatu Humanitarian Team

The Vanuatu Humanitarian Team was a supporting arm for the national coordination mechanism to assist the NDMO to coordinate and collaborate with the Pacific Humanitarian Team. The Pacific Humanitarian Team, in turn, took up a coordination role with the NDMO to facilitate international and regional interventions.

Achievements and What Worked Well

1. After initial uncertainty, roles became defined and the agencies in the VHT worked cooperatively. This proved to be a good learning environment for NDMO staff and sector partners.
2. VHT contributed significantly to the '3 W's' (who, what, where), using their already established provincial networks and relationships.

What Needs Improvement?

1. Roles and responsibilities for the VHT need to be more clearly defined with operating procedures for accreditation, auditing and financial reporting in place.
2. Duplication of effort leading to inefficient responses, i.e. with assessment forms needs to be resolved.
3. The Vanuatu Government strongly represented that financial resourcing to VHT's NGOs and CSOs needs to be through central government agencies, such as the Ministry of Finance and Economic Management with appropriate GoV financial reporting and audit reports on fund sources, fund flows and recipients/beneficiaries.

Agreed Priority Recommendations

- The VHT should undergo review to evaluate its role as a supporting mechanism for the NDMO and to analyse its relationship with other bodies, such as cluster leads, OCHA/UNDAC. This will ensure provision of timely, well-coordinated and appropriate support to the NDMO when it is requested.
- The VHT coordinators should discuss with PHT their respective roles, responsibilities and operational relationships in preparedness and response operations in support of the Government of Vanuatu post TC Pam.
- The VHT coordinators and PHT should provide a brief on the outcomes of these discussions with the Government of Vanuatu and the NDMO.
- Accreditation processes for voluntary workers will be put in place with Vanuatu procedures for entry and governance processes respected.
- Reporting by VHT to the Government of Vanuatu on auditing and reporting of fund sources, fund flows, expenditure and recipients/beneficiaries should be done to enable the GoV at central and provincial level to better coordinate and manage response.

Regional Coordination – Donors

There were initial challenges with the collaboration between donors, regional and international actors during the TC Pam response. Lack of knowledge of the existing national coordination system was an issue. Donor mandates and Government of Vanuatu processes were potentially an issue. The protocols for deployment of donor assets and military assistance were not clearly understood by all GoV agencies. However, this was resolved and assistance was responsive. The humanitarian organizations, as independent bodies proved to initially be difficult to coordinate through the National Coordination Agency (NDMO). However, inter-governmental humanitarian partners, UN agencies and bilateral support from foreign governments worked collaboratively with the NDMO.

Achievements and What Went Well

1. Existing strong relationships and processes through well-established donor partners in Vanuatu saw rapid response to requests.
2. Long established systems, i.e. FRANZ, meant that Government of Vanuatu requests to FRANZ were quickly responded to.
3. National needs were stated by GoV and donors responded to this.
4. The Foreign Affairs Department in Vanuatu played a key role as a linking agency.
5. Coordination of information flows between donors and GoV agencies, as well as VHT worked quite well but could be strengthened.

What Needs Improvement?

1. Despite several hindrances to the overall coordination system, most of the regional, donor and international actors fed well into the incident management system. The main functional areas, such as planning and intelligence, logistics and information management were well supported by the international experts.
2. The principle of flexibility was introduced to accept the behaviour of humanitarian actors who were not cooperating with the National Disaster Management Office. Government invited and briefed them on their main plans and objectives and offered support. In doing so, all the humanitarian actors, both government and civil society organisations formed a more collaborative and working relationship. The GoV out-sourced some humanitarian activities to civil-society organizations to implement on behalf of the government.
3. The Government of Vanuatu needs to liaise with donors to fully understand the processes and protocols of deployment of military assets, an issue for the GoV and Logistics Cluster to better understand. Military assets have very strict guidelines on usage, and these need to be communicated to the Government of Vanuatu from the outset.
4. Any incoming foreign assistance (Civil or Military) needs to follow and conform to the host country's diplomatic channels – the Fiji Response Team provided an excellent example of this.
5. Initial planning prior to the disaster onset with JPOC, VMF, VPF and the Maritime Wing would strengthen the effectiveness of response.
6. The role of the NDMO as the 'central linking agency' between military and humanitarian teams must be recognised so that coordination, location and prioritisation of military assets is strengthened.
7. A stronger GoV framework to track funding, donations and resources of agencies was strongly advanced by key GoV actors, as were auditing and reporting mechanisms back to the Ministry of Finance and to the Prime Minister's Office.

Agreed Priority Recommendations

1. Government of Vanuatu Sovereignty: Donors need to complement the requests of the Government of Vanuatu in ensuring appropriate and timely relief is deployed.
2. There should be a disciplined approach to provision of relief and personnel, respecting the needs of the government.
3. Humanitarian preparedness should be well integrated into the cluster system and corresponding government and non-government agencies. External support for enabling this could be explored.
4. Coordination with non-traditional donors needs to be improved.
5. Auditing and reporting mechanisms back to the Ministry of Finance and to the Prime Minister's Office must be complied with.

Regional Coordination – Regional Mechanisms

Already established relations and procedures saw regional organisations, such as the Melanesian Spearhead Group able to play an immediate role. Deployment of the Fiji Response Team was a good example.

Achievements and What Went Well

1. Regional partners, governments and agencies responded promptly to requests for assistance.
2. The Fiji Response Team provided an example of how regional cooperation mechanisms can be utilised.
3. Red R deployment successfully supported GoV and Vanuatu civil agencies.
4. Regional actors understood the operational constraints of working across many isolated islands and the need to respect kastom and culturally based traditional response mechanisms.
5. Previous assistance provided a network of relationships able to be utilised.

What Needs Improvement?

1. Duplication of efforts could be avoided through stronger coordination via SOPs and MOUs, particularly when so many actors – GoV, VHT, in country donors, regional and international agencies – are involved.
2. The pivotal role of NDMO needs to be more clearly defined and respected.
3. Simulation exercises would improve efficacy of responses.
4. Regional programs, i.e. DCP could be utilised for emergency and disaster simulation.
5. There is a need for a mechanism for managing unsolicited goods flowing from non-traditional donors, service clubs, CSOs, NGOs and private citizens living/operational in regional partner nations – the Pacific diaspora is both a positive and negative factor.
6. All offers of international assistance by states and intergovernmental organisations are to be directed to the Ministry of Foreign Affairs through the appropriate embassy or diplomatic mission via Diplomatic Note or Note Verbale.
7. Many NGOs have a regional network and these could be used more proactively for planning, pre-disaster preparation and response.

Agreed Priority Recommendations

1. FRANZ and the MSG played a significant role in supporting government-led interventions. These mechanisms need to be strengthened in the context of Pacific Island countries supporting each other.
2. The role of Vanuatu's Ministry of Foreign Affairs in the requests and approval of inbound teams is essential and should be consistently considered as a matter of protocol.
3. There is a need to strengthen the protocol linkages, as well as International Disaster Response Law to ensure sovereignty and national ownership is maintained and respected.

International Mechanisms

International response was good. However, with Vanuatu facing its first truly national emergency, there was some misunderstanding of how international response mechanisms are triggered and utilised. The UN system of humanitarian response with its inter-cluster coordination system provided an in situ working-training experience for understanding the global UN system.

The Cyclone Pam response became a capacity building experience for the NDMO and GoV agencies responding to international players, in terms of identification of priorities, direction, facilitation, coordination and reporting needs. The declaration of the State of Emergency facilitated rapid deployment of international assistance. Open access to key GoV actors, i.e. Director General's and Prime Minister's Office personnel, enabled immediate response to requests from international teams. Needs for information and assistance were met promptly with the provision of modern, central office accommodation, equipment and ICT support.

It was recognised in Vanuatu that the country's needs must include prioritisation of national capacity to identify gaps in NDMO and other key GoV agencies to reduce future reliance on the international community.

Achievements and What Went Well

1. The deployment of UNDAC and other surge teams was received well.
2. International agencies responded to urgent requests by GoV for specialised, technical personnel, i.e. MapAction deployment.
3. The Flash Appeal raised funds critically needed for immediate and post disaster rehabilitation and raised Vanuatu's global profile. This was quickly in place and supported by international personnel and technicians.
4. The international response provided critical support for GoV initiatives, such as the Humanitarian Action Plan (HAP), progressing in parallel with the Post Disaster Needs Assessment (PDNA).
5. The Global Cluster system was replicated and provides a solid base for coordinated response, utilising local agencies and pre-existing networks.

6. International response and assistance was strong but it would have been more effective if it were prepositioned instead of arriving after the disaster.
7. The GoV was able to stipulate standards for what arrived or who and where, especially once the PDNA took place to reflect the needs of the government.
8. Avenues already existed for information, communication and assistance flows from international response teams to national teams to provincial agencies to community groups, providing vital assistance to international agencies unfamiliar with Vanuatu. These could be further strengthened and their value emphasised to internationally deployed teams.
9. The international surge of highly qualified and experienced personnel provided a valuable learning environment for NDMO officers and Vanuatu-based agency staff.
10. Uninvited, uncertified and non-aligned individuals used the more porous border of the emergency and international response effort to enter Vanuatu illegally and to operate in-country on unapproved activities.
11. GoV central agencies, i.e. customs, immigration, aviation sector and maritime authorities responded flexibly to the arrival of international teams.

What Needs Improvement?

1. UNDAC and other surge teams were deployed into an environment with a very fluid structure that caused confusion.
2. It initially proved difficult for the GoV and NDMO to control and coordinate international assistance. There was a need to understand the linkages between PHT to VHT to GoV and then to the United Nations Humanitarian Coordinator/Resident Coordinator (HC/RC).
3. GoV agencies and sectoral actors did not fully understand the operational constraints of the UN financial system.
4. There was a GoV expectation that 100 per cent of Flash funds would be raised and provided; there is need for better understanding of the time frames for Flash and HAP processes to better align UN and GoV needs.
5. GoV was not aware of the humanitarian funding allocation and prioritisation process – who decides what percentage of Flash funds are allocated to GoV, NGOs or in-country donor agencies.
6. The Cluster system worked very well but competing demands between FLASH, PDNA, ERF and undertaking relief responses pushed the many newly formed Vanuatu Clusters to the brink – resourcing, coordinating and funding of simulation and capacity building is essential with clearer SOPs for operations coordination and harmonisation to avoid duplication.
7. A review of the staging and planning of early recovery should be progressed to inform and guide future emergency responses.
8. Stronger security support for relief activities is required.
9. Knowledge of where assistance was needed was not always clear or available. NDMO needs to improve its information management and data collection and flows to provide a statistical base for international response.
10. There needs to be discussions and subsequent recommendations to clarify the GoV's reporting requirements.
11. International teams and equipment being deployed need to respect GoV processes with appropriate and timely prior negotiation regarding arrivals to meet immigration and customs needs.
12. Registration of international workers by international agencies would remove confusion as to accreditation of arriving officers.
13. Ni-Vanuatu officers need to take a stronger leadership role in activities.
14. Coordination of international assistance from national level to provincial disaster committees and community disaster committees needs improvement with funding for capacity building and simulations.
15. The overall impact of international surge personnel was perceived to be positive. However, short term deployments, frequent rotations and frequent hand-overs between surge waves in key positions were very disruptive to coordination and put additional strain on NDMO and the Cluster system.

Agreed Priority Recommendations

1. Strengthen the national (and sub-national) structures in disaster management and ensure international teams are aware of the local context and coordination mechanisms.
2. UN CERF, Flash Appeal and Joint HAP: there is a significant need to enhance awareness and understanding of international mechanisms, such as the UN CERF, Flash Appeal and Joint HAP.
3. UN coordination and funding mechanisms should be adapted to Vanuatu's operational context and support Government-led coordination efforts.
4. Tracking of international funding provided through UN partners, including Flash Appeals and WFP funding, needs to be more transparent with clearly identified mechanisms through which the government can identify strategic direction and priorities for response.
5. The UN is encouraged to engage systematically with the Government of Vanuatu prior to disasters in order to appropriately complement government's capacities in relation to the activation of Flash Appeals and response coordination, and support alignment of Flash Appeal content with government-led disaster response.
6. Establish a certification or accreditation process and registration for international emergency workers and agencies to enable identification of those authorised to engage in emergency response.
7. Regional and international linkages could be formalised through MOUs to provide clear legal policy and operational frameworks.
8. Revision and/or development of Sector humanitarian and disaster response plans needs to be undertaken.
9. Seek agreement for longer deployments (minimum of six months) of surge personnel in key positions for large-scale emergencies. This will likely lead to improved operational stability through reduced staff turnover and strengthened internal coordination of succession planning.
10. All offers of international assistance by states and intergovernmental organisations are to be directed to the Ministry of Foreign Affairs through the appropriate embassy or diplomatic mission via Diplomatic Note or Note Verbale.

Gender and Protection

The cross-cutting issue of Gender and Protection (G and P) was addressed through PowerPoint presentations and the distribution of 'TC Pam: Women in Emergency Response and Recovery Forum', as well as the screening of a powerful, short film, encapsulating the experiences of women, children and PLWD during Cyclone Pam and its aftermath. The Lessons Learnt from Tropical Cyclone Pam for the Tafea Provincial Disaster Committee demonstrated integration of such concerns into reporting and future planning.

In opening discussions, it was pointed out that CDCs and PDCs are almost exclusively male and without representation of PLWD. Mainstreaming Gender and Protection at national level into disaster planning and across all clusters – 'cross fertilisation' – was strongly recommended.

Women, girls, boys, men and PLWD have different needs, capabilities and constraints. Emergencies, such as Cyclone Pam have different effects on each group and often change a household's dynamics and exacerbate existing vulnerabilities.

Jotham Napat, the then Director General of the Ministry of Climate Change and NDMO stressed that ignoring the capacity and potential contribution of women, youth and PLWD to disaster preparedness and management is to ignore a valuable resource.

'Nothing About Us, Without Us' promoted this concept of broad inclusion in disaster preparedness, information gathering, assessment, response and recovery.

Achievements and What Worked Well

At a national level, having a Gender and Protection Cluster provides a forum for targeting emerging issues, exploration of solutions and delivering positive outcomes. Early activation of the Gender and Protection Cluster allowed prompt responses to be activated. Inter-cluster cooperation and receptivity to G and P issues promoted positive outcomes to emerging issues for women, youth and PLWD.

Improvements Needed at Community, Provincial and National Levels

Community Level

1. At the community level, governance needs to be addressed to ensure women and PLWD are represented on area councils and community disaster committees. From national level down to the community, there needs to be clear definition of roles and responsibilities. The lack of knowledge and awareness of the needs of women, youth and PLWD amongst chiefs, area councils, churches and community leaders needs to be addressed to ensure meaningful roles and responses for disadvantaged groups and individuals.
2. Information on preparedness, the approaching cyclone and relief programs was not readily accessible. Girls at boarding schools were not provided with sanitary supplies. The shelter kits were not appropriate for Vanuatu's extended households.
3. Vulnerable groups, including widows, elderly and female-headed households could not afford to buy needed materials at times, for example to prepare wood to cover windows.

Provincial Level

1. Provincial Disaster Committees do not have representatives from women, youth and PLWD to adequately reflect their needs and concerns in preparedness response and rehabilitation. Disaster response training and awareness programs did not include G and P representatives. This made them even more vulnerable to the impact of Cyclone Pam. Food and relief supplies were often delivered to men or groups led by men, and these were not always distributed equitably.
2. The assessment forms did not address the issue of 'Households.' Women, youth and children use the kitchen area for rest, play and food preparation. This needs to be recognised. Shelter assessments counted houses that people sleep in, i.e. one house per household. However, in the Vanuatu context, the kitchens (generally shared amongst two to three families) in rural areas are in a separate building. Kitchens are seen as the most important building for women and the centre of their lives as they spend much of their time there, preparing and cooking food, caring for children, weaving mats and baskets, and socialising.

National Level

1. SOPs were not available for food distribution for people with special dietary needs. Identification of 'Women Champions' would assist to progress gender and protection issues. G and P needs to be integrated across all clusters but also across national policy, planning and budgeting – mainstreaming G and P issues.
2. Disaggregated data is important for national planning. Unless we know who is affected – women, girls, boys or men, PLWD – and who among them is the most at risk, the services we provide may be off-target. Data on the population affected by the crisis should always be broken down by age and sex and other relevant factors, such as disability.

Agreed Priority Recommendations

Community Level

1. Work with community leaders to ensure that men, women, boys, girls, PLWD and other vulnerable groups have equal access to any Disaster Management training opportunities.
2. Ensure information shared is done so in simple ways so that everyone, including PLWD, can access and understand.
3. Enable and encourage households to develop household Disaster Management plans to ensure that all family members have clear roles and responsibilities.

Provincial Level

1. Develop Inclusive Provincial Disaster Risk Management plans in consultation with representatives of all groups (women, men, boys, girls, PLWD), and ensure that the plans include monitoring indicators for G and P issues.

2. Nothing About Us, Without Us: full participation and inclusion of representatives of all groups in decision making on projects discussed at Provincial level for communities.
3. Representation on PDCs: ensure representation of women, men and PLWD on Provincial Disaster Committees.

National Level

1. Encourage consultations on sensitive issues and/or when appropriate at all levels, to be disaggregated (men, women, youth) to ensure that all important topics are properly addressed.
2. Inclusive Consultation: ensure that 'hidden' people are consulted (e.g. PLWD).
3. Identify female 'champions' at national and cluster levels and actively seek their input into policies and planning by including gender issues in all clusters and ensure gender balance of clusters.
4. National planners need to have a better understanding of community coping strategies to ensure that traditional ways to mobilise women's capacities can be enhanced.
5. Clarify definition of a 'household' to ensure we do not exclude women, children and other vulnerable groups.
6. Include reference to 'kitchen houses' in assessments. 'Households' and 'sleeping houses' are currently captured but not 'kitchen houses', where women spend most of their time with their children.

Information Management and Assessment

The key recommendation from the Information Management and Assessment session was integration; recognising that both information management and the various sectoral assessment forms need to be more effectively harmonised and applied.

The IM Lessons Learned session highlighted three key issues and sought consensus from all the participants on the way forward. The key issues were:

- Strengthen the Information Management Working Group (IMWG) so that required local capacity and resources are available for IM preparedness and response;
- Update and maintain key datasets and make sure that all necessary inter-agency protocols have been followed to access this information; and
- Ensure that IM products and services are customised to local context and all users are familiar with the process and the information inflow at all levels.

The group discussion in the breakout session focused on the above three issues. The overall summary is as follows.

Achievements and What Went Well

1. The establishment of the IMWG and brief training by NDMO before the cyclone.
2. The introduction of the Humanitarian Response Information Website to share reports, maps, contact lists and meeting schedules.
3. Collaboration between agencies and contributing to the Who, What, Where (3W) process.
4. Pre-compiled statistics, data and maps from the National Statistics and Lands Departments. Education and Health Ministries also made information accessible.

What Needs Improvement?

1. Commitment of key government agencies and humanitarian partners to appoint IM focal points to be included, trained and available for the IMWG. Maintain an IM roster with names and specialties of IM practitioners.
2. Provincial capacity in IM.
3. Skilled staff members from National Statistics Office and Land Department need to be more involved in the IMWG.

4. There is a lack of information sharing practised among data custodians.
5. Mapping exercises are required to develop a baseline of all existing data, capacities and processes.
6. There is a lack of clear guidelines, SOPs and TORs and clearly defined information flows.
7. Greater awareness of IM products and services among users at all levels is required.
8. Provision of visual representation of locations and well-defined p-codes (3W operational presence).
9. Introduction and use of new technologies to enable more efficient processes, e.g. Smart devices.
10. Lack of NDMO IM staff and funding compounds all of the other IM issues listed here that need improvement.

Agreed Priority Recommendations

1. Establish Memorandums of Understanding across agencies, including the private sector, with clear mandates to share required information while assuring protection of intellectual property rights.
2. Establish, coordinate and maintain an IM System for disaster response in NDMO that would include the core/essential datasets needed for disaster emergency response needs and be built from data available from various sources (NSO, Health Sector, Communications Sector, Police, Area Secretaries, etc.)
3. Establish IM units for data preparedness and response within agencies and clusters, actively seeking support from the National Statistical Office for technical resources to assist with data preparedness.
4. Each cluster and relevant ministry must nominate an IM focal point for the IMWG.
5. Establish a full-time, permanent IM position within NDMO and seek support from relevant external partners for capacity building for this position, in particular, and the IMWG, in general. This support should include increasing in-country capacity to develop more visual products with the aim of improving coordination and decision-making.
6. Seek support for equipment and software required to support the IMWG and NDMO IM Officer.
7. Explore appropriate technologies to enable access to datasets for all users (including provincial offices) as soon as possible for decision-making.
8. Sitreps and the value they add to efficient and timely response should be carefully considered. Clusters should identify trained people and ensure disaster-readiness to contribute information towards Sitreps. Current procedures for the maintenance of Sitreps and contact lists must be reviewed to ensure they are kept up-to-date and consistently utilised.

Assessment Tools

Discussions of the groups on Assessment Tools focussed on the following questions: i) how to improve the assessment process; ii) how to improve coordination of assessments to avoid 'assessment fatigue' and duplication; iii) how to manage assessment analysis for consolidated reporting whilst ensuring resources are made available during response time to allow assessments to be undertaken by the provincial authorities in a timely manner.

Agreements with the provincial authorities were discussed to ensure that standardized assessment forms from the NDMO are used to complete assessments and to ensure that PDC and CDC members are trained sufficiently to use the forms and collate the information.

Coordination of assessments to avoid assessment fatigue and duplication was recognised as a critical issue. Assessment forms developed in-country should be the only ones used, to ensure agencies coming in are not making further assessments without government representation and that informal assessments (e.g. the general public completing forms and letters) are merged with the provincial assessment reports.

It was suggested that the difficult process of report consolidation should be addressed through standardisation of training of PDCs and CDCs to compile assessment reports in an approved format and through building capacity at national and provincial levels to analyse data.

Achievements and What Went Well

1. Action was quickly taken to conduct rapid assessments.
2. Several government staff participated in the assessment process; this raised awareness within government of the impact and the need for strengthened preparedness.
3. Assessment teams reached sites in a timely manner, assisted by local residents and staff.
4. Some forms were standardized across all NGOs and government.
5. The CDCs that had participated in training on the use of assessment tools were able to provide data when incoming assessment teams reached their locations.
6. Some reporting and data analysis was done at provincial levels.

What Needs Improvement?

1. Communication links with the provinces in the immediate aftermath of TC Pam radio had to be used as other forms of communication were not functioning.
2. In some provinces, the PDCs were not well established and CDCs had not been trained.
3. Channels to send information via provinces are not suitable for all islands.
4. It was challenging to carry out assessments over large areas and each Area Council contains many villages.
5. Limited financial support was available for conducting assessments - no money for transport or for recharging mobile phones.
6. There was little control/oversight in terms of personnel carrying out assessments.
7. Data compilation was arduous – this meant that analysis, and recommendations based on this, were slow to emerge:
 - different templates were used for assessment forms;
 - excessive time lag between conducting assessments and receiving data/reports from the provinces; and
 - informal feedback was often missing from analysis and, therefore, did not aid distribution.
8. Rapid assessment forms had not been field tested for different scenarios.
9. No clear process for information flow back from national level to provinces after initial data was provided by provinces.
10. Misunderstanding around prioritization of provision of most critical information, e.g. education (damage to schools).

Agreed Priority Recommendations

1. Assessment Instrument Training: Trained personnel must be available during response to ensure initial assessments are undertaken by local women and men in a timely manner. Therefore, PDC and CDC members must participate in appropriate training on the use of forms, as well as transmission of data to central data collection points.
2. Investment should be made to review the processes required for completion of assessments realistic to the Vanuatu context. The review must include consideration of the: timing; forms; appropriate people; processes; suitable communications systems; funding for assessment logistics at the provincial level; and suitable technology solutions. The review should contribute to preparation of detailed SOPs at national, provincial and community levels and apply guidance from the VHT, UNOCHA, cluster leads and other selected partners.
3. The application of advanced media technology to serve humanitarian preparedness should be encouraged through cluster systems and coordinated by NDMO.
4. Standardize assessment forms for provinces. Develop agreements with the provincial authorities to ensure that standardized assessment forms from the NDMO are used to complete assessments. Only assessment forms developed in-country are to be used to ensure that other agencies are not conducting assessments without government knowledge and approval.

5. Ensure that informal assessments (general public completing forms and letters) from remote locations that arrive at the NDMO are fed back into the appropriate provincial assessment reports.
6. Data analysis capacity should be reviewed and capacity built at national and provincial levels to analyse data.

Logistics

The discussion from the session on Logistics highlighted the essential issue of logistics, investigating areas of:

- a. Coordination – NDMO
- b. International assistance
- c. Civil military deployment
- d. Donors needs
- e. Unsolicited donations
- f. Preparedness and pre-positioning

Achievements and What Went Well

1. The NDMO's role as a central agency was enhanced by the presence of a logistics advisor who was able to assist with processes and capacity building on the roles of logistics.
2. Use of in-country yacht capacity for shipping.
3. VMF was involved in distribution in some areas – though this role could be enhanced.
4. Logistics and WASH Clusters worked well together.
5. The role of civil military coordination in NDMO is a critical link between humanitarian partners and the military.
6. A flexible approach by Customs, VAT Office, Immigration, as well as the maritime and aviation sector officials allowed rapid arrival, clearance, and delivery of supplies and personnel.
7. In relation to international assistance; national needs were stated early and donors responded to this.
8. Donor presence in-country played an important role, liaising with military agencies (e.g. FRANZ) to establish logistical needs, issues and solutions.

What Needs Improvement?

The NDMO's role as a central agency needs to be more clearly defined in regards to logistics. Logistics should not only include transportation, but also the coordination of assets.

1. It was suggested that elements of logistics should be independent of NDMO and that public/private partnerships be explored through GoV processes (e.g. Central Tender Board) for movement of relief supplies into Vanuatu and dispersal to communities and evacuation centres.
2. Timing issues need to be investigated and monitored. Shipping and flight schedules/availability must be kept up-to-date.
3. No security measures or policies are in place for the safety of personnel.
4. Logistics in Vanuatu could be improved through:
 - clearer roles and types of clusters;
 - understanding that clusters do not purchase assets; they coordinate/inform NDMO; and
 - clearer structures and processes.
5. Identify key people in a Logistics Contact Database and keep this up-to-date pre/post disaster.
6. There is a lack of skills and knowledge in agencies to deal with disaster situations, e.g. business continuity plans/disaster recovery plans.

7. Logistics has a key role to assist telecommunication companies to assess damage and move equipment to severely damaged infrastructure to restore communications (key information flow). This was overlooked in TC Pam.
8. Elements of logistics could be decentralised to greater effect — setting up operation centres in key locations (e.g. Port Vila, Santo) with required personnel available (e.g. identified drivers, boat captains, etc.) to serve small islands challenged by remoteness should be explored.
9. Coordination of international assistance, from National agencies to PDCs, needs improvement – this will require funding to be made available to provinces. It was difficult to control/coordinate and track international assistance following TC Pam.
10. Coordination and information sharing with other government agencies (e.g. VMF, VPF) to assist with logistics must be improved.
11. The GoV needs a clear mandate on how and when it wants to engage military assets in disaster response. Military assets have strict guidelines on the use of their assets; systems need to be reviewed to ensure that these can be made available earlier.
12. Any incoming foreign assistance (civil and military) needs to follow and conform to host country's diplomatic context.
13. Unsolicited donations created a number of problems:
 - inappropriate items;
 - expired food and drugs;
 - items that were not helpful in Vanuatu's context;
 - quality not in-line with standards, i.e. tarps and tents;
 - it takes people time to evaluate and sort these items;
 - some items required additional support (e.g. parts); and
 - it puts a strain on shipping capacity.
14. Lack of pre-positioned stocks in PDCs delayed response.

Recommendations

1. Strengthen clearance of goods at port authority/customs. Put relevant processes/policies in place to expedite, and to check that goods coming in are requested and needed.
2. Establish and share a list of useful items endorsed by GoV needed for response. All offers of international assistance handled outside the established coordination structure, and that are not in line with the agreed priorities and standards set by the Vanuatu Government are deemed "unsolicited donations". It is important to raise awareness with donors and communities abroad of donation needs, and the additional burden on already stretched systems to deal with clearance, handling and storage of unsolicited items. Unsolicited donations are strongly discouraged by the Vanuatu Government; however, if unsolicited items are sent, the GoV requests that this is after a certain timeframe (e.g. one or two months) to avoid blocking the system for managing requested items.
3. Identify appropriate organisations/personnel to deal with unsolicited items and support them to work with biosecurity, customs and quarantine officials.
4. Review legislation for disasters to regulate international assistance.
5. Share experiences of good practice related to prepositioning and handling of unsolicited goods.
6. The interface of international assistance with provinces needs to be better integrated. A system needs to be established whereby internationals coming in to a community to conduct assessment or work, come through the provincial system, i.e. introduced to relevant authorities, chiefs, etc. There is a role for strong national level coordination; however, this should not undermine the capacity and role of provinces and communities.
7. Develop capacity at provincial level to manage any response specifically involving CivMil operations, and logistics, more generally.

8. Key agencies with strong logistical capacity, i.e. VPF, VMF, Red Cross should support the Logistics Cluster at national and provincial levels.
9. Strengthen mechanisms for coordination and information sharing between CivMil and government agencies.
10. Strict guidelines on the use of military assets need to be communicated to government to then relay to NGOs and provincial agencies.
11. Vanuatu Government should have a clear policy/mandate on how to engage with CivMil operations. Any CivMil deployments need to conform to diplomatic channels and protocols.
12. CivMil coordination needs to be recognised as an integral part of the Logistics Cluster with developed capacities related to this function.
13. Guided by NDMO, establish guidelines with provincial authorities on establishing, replenishing, releasing and reporting on prepositioned stock, once provincial management capacity is reached. PDCs should have the authority and capacity to distribute these items efficiently and equitably.
14. Supply CDCs with prepositioned tool kits.
15. Establish through better feedback from communities what needs to be prepositioned – ‘standard kits’ from abroad may not always fit the Vanuatu context.
16. Establish SOPs related to distribution of non-food items at national and provincial levels.
17. Prepositioned stock should match up with PDC disaster plans.
18. NDMO/EOC should prioritise, coordinate and move heavy duty equipment to clear roads to priority areas to move supplies and personnel in the first days following the impact of a disaster.
19. Accurate data sets (including disaggregated data sets) should be available at provincial level to aid effective and equitable planning, coordination and distribution.
20. MOUs and commercial contracts with private suppliers and service providers should be tendered, negotiated and signed to ensure stock and services for government response to disaster/emergencies as needed (food, fuel, water containers, tarps, toolkits, shipping, communications, aviation services, logistics).



Source: Vanuatu NDMO

Inter-Cluster Panel Discussion

On the second day, an inter-cluster panel discussion (Shelter, WASH, Education, Early Recovery, Agriculture and Livelihoods, Health and Nutrition Clusters) was convened to discuss lessons learned from these respective clusters.

This was followed by a lively inter-active 'open microphone' session, during which questions were fielded by panel representatives, prominent Government of Vanuatu officials and from the floor.

Presentation highlights, comments and questions are summarised as bullet points.

The afternoon was completed with closing remarks by NDMO Director Shadrack Welegtabit to complete the two-day TC Pam Lessons Learned Workshop.

Shelter Cluster

Established only a few weeks before the Cyclone struck, the Shelter Cluster met for the first time only days before.

Initial planning was for 13,000 households but 24,000 households were reached in the Cyclone Pam response.

Lessons Learned

- Strengthen Shelter Cluster by integrating with NDMO and with other clusters
- Good level of cooperation with partners, such as, WASH, Gender and Protection and Agriculture Clusters, Red Cross, Malvatumauri and CCCM
- Delay in response and importation for shelter kits
- Quick decision of GoV to have the Public Works Department (PWD) lead on Shelter Cluster
- Group set up, led by stakeholders, to agree on challenges moving forward
 - o How does humanitarian shelter contribute to long-term housing issues?
 - o Need for CCCM to be strengthened and not to be confused with 'shelter'
- If resilience is to be supported, the traditional coping models for shelter and preparedness must be accommodated, i.e. traditional building materials so that we not only 'Build Back Better' but 'Build Back Safer'

Water and Sanitation Cluster (WASH)

Lesson Learned

We need to be better prepared to reduce the response time gap because WASH needs are basic life needs.

Summary

- 68 per cent of household rainwater harvesting systems were damaged
 - o 250 direct flow, 22 hand pumps and 272 community gravity-fed water systems damaged
 - o 30 per cent recorded 'not washing hands' in affected areas
 - o 21,000 people were reconnected to water
- Activated in Shefa and Tafea provinces only
- Response coordinated by Geology and Water Resources
- >1000 people receive WASH water supplies
- Sanitation situation had returned to pre-Pam level
- Need to be well prepared to reduce length of response time to immediately after cyclone passes

How can clusters work together?

WASH representatives were in Health and Education meetings to share information. Health and Education also have representatives in the WASH group. It takes time to receive information from other clusters. During assessment periods, only selected sites were assessed.

Health Cluster

The purpose of the Ministry of Health is to save lives. Just before Cyclone Pam hit, the Ministry activated an Emergency Centre in the Ministry.

Lessons Learned

- Acknowledgement of existing guidelines as the SOP in NDMO
- Ministry will revisit its Strategic Plan and take in the Lessons Learned to create a Disaster Management Plan with exercises and drills
- Database has been established
- An established referral system is in place already but partners need to be better linked to the Ministry system
- National Disaster Management Act needs to be revised to look at coordination and mandated roles for the clusters
- Team's mobilisation tested absorptive capacity of the Ministry – coordinating and resourcing were issues

Summary - Areas responded to:

- Nutrition
- Reproductive health
- Disease surveillance
- Logistics issues with medicine
- Evacuation of patients to Vila Central Hospital
- Infrastructure rebuilding
- WASH issues
- Vector control
- Foreign medical teams
- Immunisation
- Information – 'info-mation' messages

Responses

- Five organisations responded to the Ministry
- Multi-cluster surveys were conducted
- Rapid assessments were done in 71 health facilities
- Coordination of visiting teams 24/7
 - o 25 local teams mobilised
 - o 20 foreign medical teams came in to assist – USA, Israel
 - o 75 medical evacuations
 - o Established 24 early warning systems to detect likely outbreak of diseases (increased from seven)

Issues

- Communication issues
- Information collection and dissemination
- Lack of coordination among 11 response groups

Ministry of Education and Training Education Cluster

The objective of the Ministry of Education and Training (MoET) Education Cluster is to ensure schools are open with resumption of learning programs.

Below is a brief summary of 2014 Vanuatu Education Management Information System (VEMIS) data of Primary and Secondary Schools for Shefa, Tafea, Penama (Pentecost and Ambae) and Malampa, Paama and Ambrym.

Province	No. of schools operating before Pam	No. of class rooms	2014 student enrolment	No. of schools affected during Pam
Tafea	92	436	11,007	81 (85%)
Shefa	108	539	16,100	71 (65%)
Penama (Ambae and Pentecost)		105	1,608	17 classrooms totally destroyed or with major and minor damage.
Malampa Paama and Ambrym)	22	53	1,653	23 classrooms totally destroyed or with major and minor damage

The table below shows a brief summary of Kindergarten or Early Childhood Care and Education data before and after the cyclone.

Province	Number of kindergartens before Pam	Student enrolment	Number of kindergartens attached to primary school	Number of kindergartens affected by Pam
Tafea	120	2617	17	108
Shefa	109	3819	16	86
Penama (Pentecost/ Ambae)				14
Malampa (Paama/ Ambrym)				10

The MoET Cluster's main objective for Tropical Cyclone Pam Response Operations was to ensure all primary and secondary schools, kindergartens and tertiary institutions in the affected areas are re-opened with resumption of learning programs straight after Tropical Cyclone Pam had struck.

This main objective led the MoET with Education Cluster partners to work collaboratively together to:

- bring classrooms back into use, thereby allowing children to attend school;
- close/decommission evacuation centres in schools, to allow resumption of classes;

- provide teaching and learning materials and equipment through Vanuatu Education Support Program (VESP) to allow teachers to teach in learning spaces (tents, school kits, teacher's kits);
- provide funds to assist the community to set up temporary learning spaces for kindergartens to start up; and
- provide food rations to boarding schools to allow them to operate their programs after the cyclone.

It is globally believed that education is very important in times of emergency as it can protect children and youths from many issues to which they are most vulnerable when left without appropriate supervision. Therefore, the overall outcome of the response was to ensure that all children were provided with temporary learning spaces and learning materials, and were back to school as soon as possible.

Achievements of the MoET and Education Cluster

- **Resumption of Programs**
 - o Schools with minor damage re-opened and resumed lessons on 30 March 2015 and others with major damage and fully destroyed followed after
 - o All schools were back to full operation by Term 2
- **Early response and recovery was possible with the help from partners**
 - o Australia's Department of Foreign Affairs and Trade (DFAT) gave their support of VUV 191,000,000 in grants to schools
 - o Save the Children Australia, UNICEF and other partners supported MoET and schools with tents, learning and teaching kits, recreational kits, supporting psychosocial activities, etc.
 - o Local communities supported the repair and rebuilding of classrooms in the affected schools, e.g. Mele community rebuilding classrooms
- **Setting up of the Education Reconstruction Committee**
 - o Prioritise, coordinate, facilitate and approve all reconstruction in schools making sure all buildings are built according to a standard and are disaster resistant

Lessons Learned

Logistics

MoET logistics worked very well with the NDMO Logistics and managed to send out educational relief supplies, using their sea transport arrangements and vehicles allocated to NDMO to transport some relief supplies from donors to the MoET office

Coordination

- Overall coordination was well managed with partners who report to the MoET, becoming part of the Education Cluster. It was clear who was doing what, where and when
- MoET officers were part of manning NEOC during, and 2 weeks after TC Pam impact

Information Management

- Information was shared well between Education Cluster members and partners
- 'What, Where and When' data was provided to NDMO
- VEMIS data was available for the Education Cluster to use for emergency response

Assessments

- MoET Directors and senior management took a leading role in carrying out assessments in schools on Efate in the first week straight after Tropical Cyclone Pam
- There was collaborative work from all MoET officers. Although they were also affected, national duty was a priority to go out to the fields to do their assessments

What Needs Improvement

Coordination

After TC Pam, there were some individuals who responded directly to schools without informing the Ministry of Education and Training or the Education Cluster, resulting in duplication of response.

Logistics

Logistics information on transport arrangements, especially shipping arrangements, was not well shared. The shipping registration forms used for shipment need to be reviewed to suit the MoET context with the local shipping industry and also the local hardware companies.

Information Management

VEMIS data will be updated with current enrolment for school response.

Assessment

Conduct of damage assessments must be suitable to meet the needs of individual sectors. For example, the Tropical Cyclone Pam Education Assessment was only done in some schools. This was due to time and transport constraints imposed by poor assessment coordination. Many damaged schools have been left out of the MoET sectoral reports. The HAP and other important documents were submitted without this information due to time constraints to capture the information from these damaged schools.

EARLY RECOVERY, AGRICULTURE AND LIVELIHOODS CLUSTER

In early November 2014, the Cluster met to develop specific roles for cluster members, which included preparation of assessment templates, training on how to conduct assessments, preparation of key information messages (SMS) on 9 March 2015 for 120,000 people and community meetings. This meant the cluster was able to operate from day one.

Lessons Learned

- The Ministry of Agriculture role/mandate is not for distribution in times of emergency but for helping farmers produce crops.
- Bringing in food from islands and overseas is logistically difficult and there is a shelf life issue.
- Paper-based data collection was difficult to collect then analyse, use and disseminate.
- The Ministry of Agriculture and Fisheries (MAF) is in the process of establishing a Disaster Resilience Unit so we are better prepared and coordinated in the future. This unit will also investigate more resilient planting materials/types, traditional food storage and food security/resilience mechanisms.

Summary

- Expert assessment determined there would be enough food for three to four weeks.
- First distribution of food went out two and half weeks (1 April) after disaster struck Efate, Efate Offshore Islands and Tafea.

- Other unaffected islands, such as Santo and Malekula assisted with food relief and cuttings to restart gardens.
- Distribution of day-old chicks to Pele was carried out with enough 'starter pellets' for six weeks.
- 28 MT of fish were sold in the market in Port Vila at subsidised prices.
- 3174 MT of food was sent to Shefa, Tafea, Malampa and Penama.
- 38 MT of tools went out to 38,000 people.
- The seed planting program was provided with seeds, distribution, radio coverage/awareness and SMS.
- SMS was used to pass on information to affected communities.
- An internal assessment was conducted two months after the cyclone with active collaboration of cluster partners.
- The 'Genetically Modified' group tried to hijack the relief program.

Queries on why traditional, healthy island food was not used more

Responses: The focus was on providing rice, tinned fish and noodles as these are easily transported and have a long shelf life. Logistic difficulties caused delays in shipping to other islands, where local foods arrived unfit for human consumption. 'Man Vanuatu' has relied heavily on rice for years. During a talkback show that was aired immediately after the cyclone, it was expressed that local food should be used instead of food from outside. It was noted that in unaffected islands, local food is available that could be used if 'standard rations' are developed. The research station in Santo has developed suitable resilient planting types and these should be distributed. Traditional Resilience needs to be utilised and encouraged. The then Director General Jotham Napat agreed this is an issue for the GoV and it should be captured in the Lessons Learned Report. MAF noted that it intended to set up a Disaster Resilience Unit.

Query on the perception of 'dumping' food and equipment past its use-by date

Response: We need to establish border/boundary responsibilities to check donations or purchase quality items.

Query on what the role of clusters should be between emergencies and disasters

Response: WASH Cluster representative stated that clusters need clear Terms of Reference and to collaborate, not just in disasters, but in intervening periods, i.e. WASH should work with Health and Education Clusters for improved collaborative procedures.

Query regarding better cash funds dispersal systems

Response: There is a need to budget for an Emergency Contingency Fund as Ministries have no specific budgets for events like Pam. The Ministry of Health has one.

Query regarding the condition of evacuation centres and schools

Response: Many of our public buildings are from pre-independence/colonial times. If used as evacuation centres, they do not necessarily meet building codes/standards. This is an issue to be explored by the GoV – identification of suitable evacuation centres and 'Building Back Better and Safer'.

Query regarding the lack of a Communications Cluster: reliance is on normal ICT technology but, when towers are wiped out, then satellite phones are needed. Assessments take two weeks to come in because of a lack of communication, e.g. a person in Mataso died unnecessarily as this island is just offshore from mainland Efate; a helicopter could have been organised to evacuate this person had there been reliable communication.

Response: Communications and reporting roles should be included in each cluster's SOP. It is a complex issue – communications system, information and data sharing and reporting/recording. It was recognised that there were gaps, especially for those living in remote, rural areas. A restructure of the NDMO will put officers in place whose

sole responsibility will be Information Coordination and Management. Extensive assistance and relief supplies were mobilised. There is a need to inform the people, as well as Parliament with consolidated data via:

- social media;
- web;
- local newspapers; and
- local radio and television.

Query regarding the role and utilisation of VMF and VPF. They did not seem to be utilised as well as they could have been in response to Cyclone Pam

Response: The understanding is that VMF and VPF work on national security matters with NDMO when there is an emergency. Military assistance/security is a cross-cutting issue for all of the clusters. Also, the Commissioner of Police is part of the National Disaster Committee (NDC) and has the responsibility to make plans to address the cyclone situation and operations. This role is recognised in the current NDM Act. The role played by members of the forces in Cyclone Pam really helped with distribution and is a role to be strengthened in the future.

Query regarding the timeline for implementing proposals arising from the Lessons Learned Workshop with so many recommendations

Response from Jotham Napat, the then Director General of the Ministry of Climate Change Adaptation, Meteorology and Geo-Hazards, Energy, Environment and NDMO:

‘I am very excited by this Lessons Learned Workshop. We will need participants’ assistance to prioritise areas we have identified for the short, medium and long-term.

We recognise an El Nino already starting to affect Vanuatu and we need to start planning now. One concept is to move the NDMO and NEOC to the Prime Minister’s Office where a higher level of support and linkages would be possible. We will be relying on our donor partners to help strengthen the systems and gaps we have. The whole exercise of lessons learned from Tropical Cyclone Pam has given us a lot of insights as to the way forward. We need financial and technical support from international partners. We need to identify roles/responsibilities for each component of disaster response. But I will reiterate that natural disasters are not just NDMO’s business. Natural disasters are everyone’s business.’

Benjamin Shing, Director, DSPPAC, Prime Minister’s Office added:

‘We have so many proposals and need to analyse them and move forward — policy, structure, and operation, including legislation. Cyclone Pam has taught us some hard lessons. Our responses must be pragmatic.’

Query regarding what was not appropriate in the Cyclone Pam response (This query was from a donor representative who had been fielding this question from fellow international and regional donors).

Response from Benjamin Shing, Director, DSPPAC, Prime Minister’s Office:

The issue is not one of good will and good intent – it was that people came in and forgot we are an effective sovereign government with systems in place and that response partners need to complement those systems. Coordination is the critical issue in all areas, including:

- philanthropic;
- private sector;
- faith-based;
- regional;
- bilateral;
- international; and
- our traditional donor partners.

A multi-layered Communications Redundancy System is needed so that if one system fails, another takes over. Ni Vanuatu organisations and individuals need to participate in leading roles in the NEOC as this appeared at times to be overrun by international organisations.'

Query regarding the response from the Vanuatu private sector and how immediate and powerful it was. How can the role of the private sector be more formally incorporated?

Response from Sebastian Rhodes Stampa, Deputy Head of Office at United Nations OCHA:

'The strong involvement of the private sector demonstrated that it is not just Government of Vanuatu, churches, NGOs and communities – the private sector could be better involved. We need to open up a channel of dialogue in preparedness plans. This is not just a Vanuatu issue but a global one, when you look at large conglomerates who could be involved and are looking for ways to assist.'

Closing Remarks

Benjamin Shing, Director, DSPPAC, Prime Minister's Office thanked all participants and Cyclone Pam response partners: 'This Lessons Learned Workshop will guide the second and third phase. We need to hold hands and work together'.

Mr. Jotham Napat, the then Director General Ministry of Climate Change Adaptation (MCCA) at the workshop acknowledged all partners and thanked them all for their support: 'Thank you especially to the NEOC for their support. During these days, we have identified some things that work and others that don't. Thank you to all of you working in NDMO, NEOC and the clusters – you have been faithful stewards. Thank you to civil servants along with those still in the field, distributing food. You all deserve applause and recognition for the effort made in responding to the impact of Vanuatu in a first time CAT 5 Cyclone. I declare this two-day Lessons Learned Workshop officially closed'.

Conclusion

Shadrack Welegtabit - Director of National Disaster Management Office

Tropical Cyclone Pam was the strongest cyclone Vanuatu has faced in recorded history. The category 5 cyclone tested facilities, responses and systems — from international to community level. Some things worked; others did not. I would like to remind you of what J.F. Kennedy once said about facing a crisis:

'When written in Chinese, the word "crisis" is composed of two characters – one represents danger and the other represents opportunity.'

This Lessons Learned Workshop will help us to identify opportunities to strengthen our responses, not merely for cyclones, but other catastrophic events. I hardly need to remind you that Vanuatu is ranked as the country with the highest exposure in the world to multiple hazards. Almost 81 per cent of the country's landmass and 76 per cent of its population are vulnerable to multiple hazards, including:

- Volcanic eruptions;
- Cyclones;
- Earthquakes;
- Tsunamis;
- Storm surges (both cyclonic and non-cyclonic);
- Coastal and river flooding, including flash flooding of small streams, and major flooding from larger rivers;
- Landslides and debris flow;

- Droughts, both short and long-term;
- Climate Change; and
- Sea Level Rises.

The Lessons Learned from Cyclone Pam should allow us to take a multi-hazard approach to future planning and response mechanisms that are pragmatic but culturally appropriate. We are historically a resilient people. Excavations in Vanuatu have proved continuous human habitation in Vanuatu for over 3,000 years. In that time, our people have learned to prepare and respond to disasters. It would be a grave mistake if we do not recognise and build on the traditional knowledge of our people for response, restoration and rehabilitation. A resilience-based approach should be utilised so that community capacity, based on traditional coping mechanisms, are strengthened; not eroded. We want to not just 'Build Back Better' but to 'Build Back Safer.'

There were many 'firsts' in our response:

- the first use of the NEOC for a national scale emergency;
- the Shelter Cluster had just been established;
- the Logistics Cluster was only newly set up;
- the Information Management Working Group had been recently formed;
- SOPs were put into 'real time' practice;
- the Private Sector was heavily involved in humanitarian and recovery responses;
- VHT was involved in a national response, not in a localised incident;
- international agency teams mobilised on a large scale; and
- it was the first time the UNDAC team mobilised in Vanuatu.

Opportunities presented themselves to utilise the skills of senior officers from other line ministries and to build surge capacity for future emergencies.

With well-established fiduciary governance processes in the Ministry of Finance and in the Prime Minister's Office planning and monitoring units, developed and supported for two decades by our development partners, response and rehabilitation processes need to be firmly controlled by the Vanuatu Government. Reporting and auditing processes to the government should track aid flows. This in-country capacity needs to be respected while also recognising that the NDMO and NEOC need continued support, restructure and an improved operational budget.

However, it must be remembered that natural disasters are not only the National Disaster Management Office's business. Natural disasters are everyone's business.

In conclusion, I would like to extend the sincere thanks of the people of Vanuatu for the assistance, commitment and caring demonstrated in the Cyclone Pam Response effort — donor partners, non-government organisations, chiefs and communities, civil society organisations, faith-based organisations, Ministries and Agencies of the Government of Vanuatu, governments around the region and abroad, FRANZ partners, private individuals, business houses and our volunteers for their selfless support.

We have a saying in Vanuatu – 'nasi tuan.' It loosely translates as 'yumi helpim yumi' or 'you help me to help everyone.' The Lessons Learned Workshop on the crisis presented by Cyclone Pam, with its identification of organisational gaps, challenges and opportunities demonstrated that spirit.



Source: Vanuatu NDMO

Annex 1

Participation list

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Rita	Rashmi	rita@un.org	9991209	OCHA	IMO	Vegetarian
Emma	Coll	emmajcoll@gmail.com	5374109	MALFFB - Food Security and Agriculture Cluster	Technical Advisor	
Simon	Flores	simon.flores@dfat.gov.au	554 1670	Australian High Commission	Deputy High Commissioner, Counsellor Development Cooperation	
Shem	Nelson	shemn@vanuatu.gov.vu	7764522, 5440237, 24543	Finance & Treasury Department	Senior Payments Officer	None
Thi Van	Hoang	thivan.hoang@inclair@wfp.org	547-7786	World Food Programme	Reports Officer	Vegetarian
Remah	Arthur	Arthurremah.Va@jica.go.jp	+(678) 7716745	JICA Vanuatu Office	Program Officer	
Alberto	Preato	apreato@iom.int	+678 54 89 205	IOM International Organization for Migration	Shelter and Settlement PM	
Stephen	Abel	segal.bra@gmail.com	+ 678 7755234	Vanuatu Broadcasting and Television Corporation	Senior Technician	
Zoe	Ayong	zayong@vanuatu.gov.vu	5475065	National Disaster Management Office	Research & Planning	None
Michael	Wolfe	michael_wolfe@wwi.org	+678 555 2704	World Vision	Country Director	none
Jack	Loughman	jloughman@vanuatu.gov.vu	+678 7774342	Finance & Treasury Department	Exchequer Services Manager	
Douglas	Ngwele	dngwele@gmail.com	5402382/ 7752797	Vanuatu Christian Council (VCC)	VCC DRR Coordinator	none
Peter	Korisa	pkorisa@vanuatu.gov.vu	678- 7748994	NDMO	Operation Manager	none
George	Gigauri	ggigauri@iom.int	+675 732 00 136	IOM	Chief of Mission, IOM PNG	
Charlie	Damon	Charlie.Damon@careint.org	7102623	CARE International	Program Manager	Vegetarian

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Kensley	Micah	sanmainfo@gmail.com	7771307	NDMO	Sanma PDO	Allergic to spicy food
Kylie	Mullins	kmullins@devservices.net	772 7356	Act for Peace / Vanuatu Christian Council	Disaster Program Support Adviser	
Job	Dalili	djemetepcidrr@gmail.com	27300	Vanuatu Christian Council / Act For Peace	Field Program Officer	None
Tony K	Luke	tkaltong@vanuatu.gov.vu	5456062	Department of Finance and Treasury	Expenditure Analyst	
Jay	Hinge	jhinge@vanuatu.gov.vu	5449693	Department of Lands	Senior Lands Officer	
Anthony	Blake	anthonyb@spsc.int	6798025453	Secretariat of the Pacific Community	PIEMA Officer	NIL
Anthea	Moore	amoore@unicef.org	61404084479	UNICEF	Planning Specialist	None
Jacqueline	Deroin de Gaillande	ceo@redcrossvanuatu.com	+678 27258 +678 7743029	Vanuatu Red Cross Society	Chief executive Officer	N/A
Samah	Helou	samah.helou@wfp.org	547 7797	United Nations World Food Programme	Programme Officer	
Abelson	Abel	abelson.abel@gmail.com	5426499	NDMO	PDO	-----
Sune	Gudnitz	gudnitz@un.org	+679 9991664	OCHA Regional Office for the Pacific	Head of Office	
Sebastian	Rhodes Stampa	rhodesstamp@un.org	+66 [0] 89204 2721	OCHA Regional Office for Asia and the Pacific	Deputy Head of Office	
Marie-Pierre	Giron	marie-pierre.giron@diplomatie.gouv.fr	28700	French embassy in Vanuatu	first counsellor	
Finau	Limulua	finau.limulua@ifrc.org	+679 9993132	IFRC	Regional Humanitarian Diplomacy & Disaster Law Delegate	
Lamberti	Julien	dprr-vanuatu.frc@croix-rouge.fr	+678 77 96 358	FFrench Red Cross	Emergency coordinator	
Paul	Worwor	pworwor_leo@outlook.com	7759530	MALFFB Risk Resilience Unit	Monitoring & evaluation Unit	
Suzanne	Paisley	suzannep@spsc.int	+679 7581051	SPC	DRM Officer	

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Tim	Nelson	tim.nelson@savethechildren.org.vu	5563680	Save the Children	Deputy Team Leader - Operations	
Michael	Mozina	mozinamichael@hotmail.com		OCHA		
Lamberti	Julien	dpr-r-vanuatu.frc@croix-rouge.fr		Red Cross Vanuatu		
Kethy	Napwat	knapwatt@vanuatu.gov.vu				
Fisher	Dinh Young	fdinh@vanuatu.gov.vu				
Sakarae	Daniel	sanma@vanuatu.gov.vu	7731228 / 5536713 / 5663924	Sanma Province	Secretary General	
Kensly	Micah	sanmainfo@gmail.com	7771307	Sanma Province	Provincial Disaster Officer	
Palen	Ata	pata@vanuatu.gov.vu	7746405 / 5355802	Malampa Province	Planner	
Reginald	Tarilaka	rtarilaka@vanuatu.gov.vu	5928191 / 7779002	Penama Province	Compliance Officer	
Reynold	Surmat	rsurmat@vanuatu.gov.vu				
Daniel	Samson	tateadisafterofficer@gmail.com				
Emmy	Daniel					
Antoine	Kamoi					
Timothy	lauma					
Franso	Nawa					
Allan	Nikki					
Namuliga	Fatapa					
Mathew	Nowai					
Robson	Billy					
Christopher	Daniel	chris.d.mtriki@gmail.com	7745536 / 5407585	Shefa Province	Area Secretary	
John	Tapang					
Lume	Jonas					
Mark	le Roux	Mleroux@adra.org.vu				

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Joseph	Neil	jniel.civavi@vanuatu.com.vu				
Mathieu	Leonard	mathieu.leonard@ifrc.org		International Federation of Red Cross and Red Crescent Societies	IFRC Operations Manager	
Xavier	Genot	im.vanuatu@sheltercluster.org				
Stevie	Namali	snamali@vanuatu.gov.vu		Lands Dept	Nat. Customs Liaison Officer	
Senimau T	Maoltarvakavat			Chairman of Malvatumauri	Chairman	
Sam	Bell	info@kysvanuatu.com		Kaleva Yaching Services	Managing Director	
Harry	tari	htari@vanuatu.gov.vu		VMF	Sergeant	
Christopher	Bartlett	christopher.bartlett@giz.de		SPC-GIZ	Technical Advisor	
Hilson	Toaliu			Unicef		
Brian	Winji	brian.winji@tvn.net.vu	23000	Telecom Vanuatu Limited	Manager Access Networks	
MICHEL KALNAWI	KALWORAI	sg@shefa.vu	5463952	SHEFA PROVINCIAL GOVERNMENT COUNCIL	SECRETARY GENERAL	LOCAL FOOD
Francisco	Santos-Jara Padron	francisco.santos-padron@undp.org	567223	UNDP -	Early Recovery Advisor	Vegetarian (Fish accepted)
Ryan	Smith	im.vanuatu@sheltercluster.org	5471465	Shelter Cluster	IM	
Andrew	Peacock	apeacock@camphere.com.au	5380609	IFRC	Shelter Cluster Technical Coordinator TC Pam	Vegetarian
Roy	Obed	robed@vanuatu.gov.vu	7758684 (M), 4648 (Void)	Education	Director Education Services	Boiled Preferable
Doroday Kenneth	Watson	ddkenneth@vanuatu.gov.vu	25099/7792928	Department of Women's Affairs	Director	Milk
Gregory	Takats	gregory.takats@savethechildren.org.au	5469691	Save the Children Australia	A Country Director	
Margaret	Macfarlane	mamacfarlane@amcvanuatu.com	7742917	Ministry of Climate Change adaptation	Corporate Services & HR Advisor	None
William	Fellows	wfellows@unicef.org	5477806	WASH Cluster	Cluster Coordinator	None
Graham	Nalpini	gnalpini@airports.vu	55 444 15	Airports Vanuatu Limited	A/General Manager Operation	Nil

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Elizabeth	Graham	elizabeth.grhm@gmail.com	7743053/ 23615	Vanuatu Broadcasting & Television Corporation, VBTC	Acting Team Leader- Radio Vanuatu	
Fred Roy	Seule	fseule@vanuatu.gov.vu	5407061	Police	Plans Police joint Operation center	
Harold	Tarosa	htarosa@vanuatu.gov.vu	7752384	Customs	Acting MAnager Customs Revenue	none
John	Tonner	portvila@sss.vu	+678 22205	South Sea Shipping (Vanuatu) Ltd	Managing Director	
Scott	Hook	scotth@forumsec.org	+679 3220212	Pacific Islands Forum Secretariat	Economic Infrastructure Adviser	None
Andy	Calo	acalo@vanuatu.gov.vu	7748023	Vanuatu National Statistics Office	Senior Statistician	NA
Erickson	Sammy	esammy@vanuatu.gov.vu	7791593	Department of Water Resources	Acting Director	None
Patrick	Haines	Patrick.Haines@ausaid.gov.au		DFAT	Snr. Prog. Manager	
David	Gibson	dgibson@meteo.gov.vu		VMGD	Acting Director	
Virana	Lini	vlini@vanuatu.gov.vu				
Jaimee	Skilton	jskilton@redr.org.au		RedR	Snr Program Officer	
Mark	Choonoo	mchoonoo@unicef.org		Unicef	Emergency Coordinator	
Juliette	Hakwa	jkhakwa@vanuatu.gov.vu		DSPPAC	Snr. Policy Auditor	
Arnold	Vira	Sergeant		VMF		
Terry	Tulang	sergent		VMF		
Joel	Thompson	sergent		VMF		
Bernard	Jasper-Fajjer			ECHO Bangkok	Rapid Response Coordinator Asia Pacific	
Daniel	Vorbach	danielv@oxfam.org.au		Oxfam	Associate Country Director	
Kenji	Sekine	sekine.kenji@jica.go.jp		JICA	Project Formulation Advisor	
Pete	Turnbull			Private Consultant	Consultant	

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Taito	Nakalevu	taiton@spc.int			Project Manager	
Sukuss	Dauda Koroma	daudak@oxfam.org.au		Oxfam	EFSVL Coordinator	
Live and Learn						
Benjamin	Shing	bshing@vanuatu.gov.vu		DSPAC	Director	
Esrone	Vano	evano@vanuatu.gov.vu		Women's Department	Economic Officer	
Viran	Tovu	vtovu@vanuatu.gov.vu				
Fred	Samuel	fsamuel@vanuatu.gov.vu		OGCIO	Chief Information Officer	
Jessica	Thomas	teeckah@gmail.com		FSAC	Admin Support	
Nancy	Tatangis	mtatangis13@gmail.com		FSAC	Admin Support	
Richard	Meto	van.humanitarian.team@gmail.com		VHT/OXFAM		
Terry	Mael	Tmael@vanuatu.gov.vu		Energy Dept		
Serah	Ngeh	HealthClusterVanuatu@wpro.who.int		WHO	IM Officer	
Roslyn	Arthur	rarthur@unicef.org	7745987	UN	UN Coordinator Officer	
Divya	Sama	div.sama@gmail.com	5478841	NDMO	Communication with Communities	
Viviane	Obed	viviane.obeds@gmail.com	7118586 / 22951	CARE International	Program Officer	
Viranatangwata	Arnold	varnold@vanuatu.gov.vu	678 - 7750071 / 5903423	VMF	VMF OPS PAM Coordinator	
Fred	Vurobaravu	gm@vbtv.vu	7799922	VBTC	General Manager	
Mikaela	Nyman	mikaela.nyman@mfat.govt.nz	22933	MFAT	Development Counsellor	
Siobhan	Talty	siobhan.talty@care.int.org	7116803	CARE International	Emergency Response Officer	
Shadrack	Welegtabit	swelegtabit@vanuatu.gov.vu	7779126	NDMO	Director	
Mike	Waiwai	mwaiwai@vanuatu.gov.vu	7784330 / 5683850	Ministry of Climate Change Adaptation	Manager Human Resources	

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Marc	Morel	morel.anoine@undp.org	7748995	UNDP	Recovery Coordinator	
Carolyn	Cummins	ccummins@redr.org.au		RedR Australia	Programme Officer	
Dorinda	Mabon	dbule12@gmail.com	5405044	VBTC	Presenter/Producer	
Mishaël	Garaelulu	garaelulu@gmail.com	5966845	NDMO/IRCCNH Project	Preject Coordinator	
Geoff	Robinson	grobinson@actforpeace.org.au	5551080	Act for Peace	Disaster Risk Resilience Manager	
Allen Jipa	Matas Kelekel	jmatas@vanuatu.gov.vu	7103028	VMF	Sergeant	
Victoria	James	vjames@rbv.gov.vu	7106770	Reserve Bank of Vanuatu	Macroeconomics Analyst	
Liku	Jimmy	ljimmy@vanuatu.gov.vu	7110630	MOET	Principal Policy and Planning Officer	
Robert	Mulligan	robertjmulligan@gmail.com	7753338	Platinum Holdings Limited	Architech Director	
Jerry	Esrom	jerryesromkaun@gmail.com	7774275	JATECH	Engineer Director	
Nini	Tamasui	nini_tamasui@wvi.org	5552614 / 7799963	World Vision	Tanna Base Manager	
Hotoravu	Alenge	principalopsud@ndmo.gov.sg	677 27937	NDMO, Solomon Islands	Principal Operations officer	
Loti	Yates	deirectorndc@solomon.com.sg	677 27937	NDMO, Solomon Islands	Director	
Behrooz	Balaei	b.balaei@auckland.ac.nz	64 21 201 5063	University of Auckland	PhD Student	
Tracey	Robinson	trobinson@actforpeace.org	5553517	Act for Peace	Disaster Response Coordinator	
Jed	Abad	jed.abad@dfat.gov.au	7778805	DFAT	Attache - DFAT	
Mark	Mismash	memismash@gmail.com	7758563	Unitech NZ	Architech Lecturer	
James	Hughes	jhughes@vanuatu.gov.vu	7786464	DSPPAC	Economic Analyst	
Louise	Nasak	louisenasak@trr.vu	27621 / 5551257	Telecommunications & Radio Communications Regulator	Technical and Internet Governance Manager	
David	Sezikeye	claudesezi@hotmail.com	5605864	UNICEF	Child Protection Specialist	
Wendy	Himford	himford@vanuatu.com.vu	7751777	MoL	1st PA	
Mark	Harradine	mharradine@vanuatu.gov.vu	7106056	PMO	Policy Implementation Advisor	
Gideon	John	jgideon@vanuatu.gov.vu	22309	MOET	Acting Director of Finance	

First Name	Last Name	Email Address	Phone Contact	Name of Organisation or Community Group	Job Title or Community Role	Special Dietary Requirements (in any)
Florence	Leong			Auckland University/Unitech		
Jessica	Hulme			Auckland University/Unitech		
Jared	Noynaerg			Auckland University/Unitech		
Regan	Potangaroa	potangaroa.regan54@gmail.com		Auckland University/Unitech		
Shawn	Charles			Auckland University/Unitech		

Disclaimer

This report includes the views and recommendations of the consultant and does not necessarily reflect the views of SPC, or indicate a commitment to a particular policy or action. While reasonable efforts have been made to ensure the accuracy and reliability of the material in this report, SPC cannot guarantee that the information contained in the report is free from errors or omissions. SPC does not accept any liability, contractual or otherwise, for the contents of this report or for any consequences arising from its use.

Annex 2

Timeline

Date (2015)	Activity
	<ul style="list-style-type: none"> Cyclone Pam formed and strengthened
9 March	<ul style="list-style-type: none"> First early warning issued NEOC activated Government and Clusters preparedness begins
11 March	<ul style="list-style-type: none"> NEOC fully operational First National Disaster Committee Meeting PEOCs activated Evacuation centres activated First situation report issued
12 March	<ul style="list-style-type: none"> TC Pam Cat 4 enters Vanuatu area
13–14 March	<ul style="list-style-type: none"> TC Pam strikes Vanuatu (refer to Tracking Map)
14 March	<ul style="list-style-type: none"> Initial assessments and relief distributions begin
15 March	<ul style="list-style-type: none"> Evacuation Centre registrations begin
16 March	<ul style="list-style-type: none"> Aerial assessments by ADF Bauerfield Airport opens UNDAC team and requested surge support from various agencies begin to arrive
16 March	<ul style="list-style-type: none"> State of Emergency declared
17 March	<ul style="list-style-type: none"> Initial ADF aerial assessment reports issued Initial assessment teams deployed to get further information from affected areas
18 March	<ul style="list-style-type: none"> Prime Minister Hon Joe Natuman visits Tanna UN Humanitarian Coordinator arrives
19 March	<ul style="list-style-type: none"> Government allocates 96 million vatu to food distribution
20 March	<ul style="list-style-type: none"> Initial affected site assessments are completed
21 March	<ul style="list-style-type: none"> Government-led food distribution begins IOM roll out Displacement Tracking Matrix in 25 evacuation centres
22 March	<ul style="list-style-type: none"> Australian Foreign Affairs Minister, Julia Bishop visits
23 March	<ul style="list-style-type: none"> Six international emergency health kits arrive Daily who, what where (3W) tracking begins
24 March	<ul style="list-style-type: none"> PM launches US 29.9 million Flash Appeal
25 March	<ul style="list-style-type: none"> PM visits Malampa and Penama Provinces
28 March	<ul style="list-style-type: none"> Six pm curfew lifted
29 March	<ul style="list-style-type: none"> A 10-day UAV aerial survey of affected areas begins
31 March	<ul style="list-style-type: none"> Government-led second phase multi-sector harmonised assessments in Shefa and Tafea
1–15 April	<ul style="list-style-type: none"> State of Emergency extended for a further two weeks
7–8 April	<ul style="list-style-type: none"> Second multi-sector harmonised assessments in Penama and Malampa
8 April	<ul style="list-style-type: none"> Assessment Report for Shefa and Tafea
16 April	<ul style="list-style-type: none"> Comprehensive assessment report
17–20 April	<ul style="list-style-type: none"> Cluster Leads
21 April	<ul style="list-style-type: none"> Post Disaster Needs Assessment (PDNA) report released
20–23 April	<ul style="list-style-type: none"> NDMO/VHT and OCHA consolidate HAP for Government Response Plan
4 May	<ul style="list-style-type: none"> 18,000 households reached with emergency shelter support
May	<ul style="list-style-type: none"> Successive roll outs of food supported by World Food Program
15 May	<ul style="list-style-type: none"> Shelter assessment completed to inform shelter strategy
15–19 June	<ul style="list-style-type: none"> Clusters prepare and present Lessons Learned reports
24–25 June	<ul style="list-style-type: none"> Lessons Learned Workshop
6 July	<ul style="list-style-type: none"> Third Round of food distribution on Efate



Source: Vanuatu NDMO

Annex 3

Cluster Reports

1. Gender & Protection Cluster Lessons Learned Report
2. Lessons Learned from TC Pam: Health and Nutrition Cluster
3. Emergency Response to Cyclone Pam, National WASH - Lessons Learned, Workshop
4. Vanuatu Education Cluster, Tropical Cyclone Pam Response Lessons Learned
5. Vanuatu Shelter Cluster, Tropical Cyclone Pam, Response Lessons Learned, June 2015
6. Cyclone Pam Vanuatu Logistics Cluster Response

Disclaimer

This report includes the views and recommendations of the consultant and does not necessarily reflect the views of SPC, or indicate a commitment to a particular policy or action. While reasonable efforts have been made to ensure the accuracy and reliability of the material in this report, SPC cannot guarantee that the information contained in the report is free from errors or omissions. SPC does not accept any liability, contractual or otherwise, for the contents of this report or for any consequences arising from its use.

