

INSTITUTE FOR SUSTAINABLE FUTURES &
WORLD HEALTH ORGANIZATION COLLABORATING CENTRE FOR NURSING MIDWIFERY
AND HEALTH DEVELOPMENT

UNDERSTANDING THE PACIFIC'S ADAPTIVE CAPACITY TO EMERGENCIES IN THE CONTEXT OF CLIMATE CHANGE COUNTRY REPORT: VANUATU



ABOUT THE AUTHORS

The Institute for Sustainable Futures (ISF) was established by the University of Technology, Sydney in 1996 to work with industry, government and the community to develop sustainable futures through research and consultancy. Our mission is to create change toward sustainable futures that protect and enhance the environment, human well-being and social equity. We seek to adopt an inter-disciplinary approach to our work and engage our partner organisations in a collaborative process that emphasises strategic decision-making.

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Understanding the Pacific's adaptive capacity to emergencies in the context of climate change

Country Report: Vanuatu

Prepared for: National Climate Change Adaptation Research Facility (NCCARF)

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Understanding the Pacific's adaptive capacity to emergencies in the context of climate change

Research outputs in this series:

FULL RESEARCH REPORT:

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COUNTRY REPORTS:

- Country Report – Vanuatu
- Country Report – Samoa
- Country Report – Fiji
- Country Report – Cook Islands

POLICY BRIEFS:

- Understanding the Pacific's adaptive capacity to emergencies in the context of climate change: Policy Brief for Australian Stakeholders.
- Understanding the Pacific's adaptive capacity to emergencies in the context of climate change: Policy Brief for Pacific Regional Stakeholders.
- Understanding the Pacific's adaptive capacity to emergencies in the context of climate change: Policy Brief for Pacific Island Country stakeholders.

BACKGROUND REVIEWS:

- Background Review: Disaster Response System of Four Pacific Island Countries.
- Projected climate change impacts in the Pacific: A summary.
- Review of Australia's Overseas Disaster and Emergency Response Sector.

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EXECUTIVE SUMMARY

INTRODUCTION

Climate change is likely to affect the pattern of some disasters in the Pacific, and therefore the organisations and systems involved in disaster response. This research, conducted by researchers at the University of Technology, Sydney, focused on how the immediate humanitarian needs following disasters are met by various stakeholders, both in the affected country and those offering support from outside. The research sought to understand the adaptive capacity of both Pacific island countries (PICs) and Australia's disaster response to a potential increase in disasters driven by climate change. This report provides results for Vanuatu – one of four case study countries selected for deeper analysis. See institute websites for the full research report which includes details of all case study countries.

The research was guided by the following research questions:

1. What constitutes the 'disaster response system' (DRS) for the immediate humanitarian needs post-disaster (health care, water and sanitation, psychosocial needs and food and nutrition) in each of the 4 case study PICs (including the Australian component to this response)?
2. How do various inter-organisational determinants serve to strengthen or reduce adaptive capacity of the 'disaster response system'? This question considers Australia's response obligations, national, regional and international stakeholders and the mechanisms that coordinate their actions, and other regional examples.
3. Which objective and subjective determinants are most significant in influencing the adaptive capacity of the organisations within the 'disaster response system'? What are the characteristics of an organisation with high levels of adaptive capacity?

RESEARCH METHODS AND APPROACH

A qualitative methodology, with a strong focus on participatory stakeholder engagement, was used for this research. The concept of 'adaptive capacity' was used to assess the resilience of individual organisations and the robustness of the broader system of response. Specific determinants of adaptive capacity were used to assess the 'disaster response system' (DRS), comprised of actors and agents from government and non-government sectors, governance structures and the formal and informal networks that support them. Background literature reviews, stakeholder workshops and key informant interviews with Australian, New Zealand and Pacific based stakeholders within the disaster, climate change, health and development sectors were used to assess the complexities of the DRS in selected Pacific island countries. Emphasis was placed on four immediate humanitarian post-disaster needs: health care; water and sanitation, psychosocial, food and nutrition.

VANUATU DISASTER RESPONSE SYSTEM

Key organisations and supporting policies / plans active in supporting disaster response, as identified by in-country stakeholders in Vanuatu include the following:

Key Organisations

- National Disaster Committee
- National Disaster Management Office
- Ministry of Internal Affairs
- Vanuatu Meteorology and Geohazards Department & Climate Change Unit
- Vanuatu Humanitarian Team (VHT)
- National Advisory Board on Climate Change and Disaster Risk Reduction (NAB)
- Ministry of Foreign Affairs
- Ministry of Finance and Economic Management
- Ministry of Infrastructure and Public Utilities
- Vanuatu Red Cross Society
- Vanuatu Christian Council
- Donors such as AusAID and NZAID
- Other NGOs such as ADRA, Oxfam, World Vision, CARE

HUMANITARIAN NEEDS

A summary of organisations and response mechanisms in Vanuatu relating to the four post-disaster humanitarian needs covered in this research is provided below.

Health Care	Water, Sanitation & Hygiene (WASH)
<ul style="list-style-type: none"> • Addressing health care needs of a population spread across many islands was a challenge, requiring the focus of both government (through MoH) and NGO partners. • The MoH led the Health and Nutrition cluster as part of the Vanuatu Humanitarian Team (VHT), supported by WHO and UNICEF. • The ability of MoH to meet its obligations in delivering and coordinating the Health and Nutrition Cluster in times of disaster was reported to be severely limited. • Health and medical supplies were severely lacking even in normal times, leading to high levels of vulnerability in disaster situations where supplies were needed on a larger scale. • Red Cross, with the support of AusAID and other donors, had prepositioned supplies around Vanuatu for disaster response, including health and medical supplies. • The locations of health facilities were also raised as an issue, particularly in relation to changing levels of risk associated with climate change. • Awareness of cultural issues were necessary to ensure outcomes were delivered in alignment with community values and practices. 	<ul style="list-style-type: none"> • WASH was described as a major concern and focus of the MoH and was also the core program of several NGOs. • Despite its prioritisation, WASH continued to be a challenge in Vanuatu. • Other areas where WASH was supported in times of disaster response was through the distribution of fresh water and containers, water quality testing kits, water purification units, WASH information, repairs to infrastructure and water tanks, by organisations such as Red Cross, WHO and UNICEF.
Food & Nutrition	Water, Sanitation & Hygiene (WASH)
<ul style="list-style-type: none"> • Food and nutrition needs after disasters were not prioritised by organisations within the current DRS in Vanuatu. • Respondents indicated that the Food Security and Agriculture cluster of the VHT appeared to be very weak. 	<ul style="list-style-type: none"> • Despite this established need, post-disaster psychosocial needs remained a significant gap in Vanuatu. • There was an assumption that the Church would provide for post-disaster psychosocial needs, however, provision of post-disaster

- | | |
|---|---|
| <ul style="list-style-type: none">• It is believed that the strong social support mechanisms that feature in Vanuatu culture (and throughout much of the Pacific), coupled with the subsistence livelihoods of much of the population, led to the ability to source adequate food within communities after a disaster occurs.• Government may supplement this, however it was not considered a priority among any of the NGOs or development partners interviewed. | <p>psychosocial support requires specific skills and approaches not always available from Church leaders, who may themselves be in need of support.</p> <ul style="list-style-type: none">• Some capacity for provision of psychosocial support existed within the MoH, however, the extent to which the MoH could meet these needs would be limited. |
|---|---|

KEY DETERMINANTS OF ADAPTIVE CAPACITY

The key determinants of adaptive capacity for Vanuatu that were found to be most significant were Communications, relationships, information and knowledge; Leadership, management and governance; Capacity (human resource, financial and technical); Risk perceptions; Strategic vision and outcome expectancy.

Communications, relationships, information and knowledge

This research found that in Vanuatu, the strength of relationships, the degree of inclusivity in dialogue on disasters and how organisations communicate led to effective collaborations that supported the adaptive capacity of the DRS. Past events illustrated that the speed and effectiveness of response was reliant on being connected to the right people. These connections (or relationships) were heavily based on trust between individuals.

“There was minor damage to an aid post and minor WASH issues [resulting from Tropical Cyclone Jasmine]. Partners like NGOs attended to these.”

The VHT was reportedly an example of a successful mechanism which brought together members of the DRS from government, UN, donor, NGO, faith-based and civil society sectors for a collective and collaborative disaster response. The VHT efforts were focused on working together, with coordinated disaster assessments, the

specific focus at the time of the in-country research, and an important factor which underpinned the decision of whether or not overseas assistance was requested.

Another successful approach to disaster response was the Vanuatu Church Partnership which included government, donors (such as AusAID) and the Vanuatu Christian Council (VCC), the latter who formed an extensive network across the country through its partnership of five mainstream churches. Such initiatives supported adaptive capacity through recognising key relationships between organisations, and drew on these to enhance DRR efforts at the local level. The adaptive capacity of Vanuatu’s DRS could be further supported by making better use of local capacity in times of disaster through more inclusive disaster assessments. By drawing on local knowledge and understanding, the time needed for outsiders to assess damage would be reduced, allowing for more accurate and timely information gathering.

Leadership, management and governance

“Disaster response will always depend on how the NDMO directs. Previously coordination was poor but it has got much better.”

Leadership, when combined with a focus on future needs, provides for an adaptive and robust organisation. Vanuatu was fortunate to have the NDMO, which according to respondents, embodied these traits, and was the key coordinating organisation in the DRS. This research found that the NDMO and the VHT were leading by example through reflecting on past response, looking to future needs and maintaining strong partnerships across government and non-government sectors. Support was needed to provide similarly strong leaders in other government sectors and at provincial levels to ensure connections are made across the DRS nationally, and maintained between local communities and higher levels of governance.

Leadership within the MoH was constrained by limited internal coordination, resource capacity and lack of clarity of roles and responsibilities. Without these mechanisms and support structures, it was reported that MoH and some other government ministries, relied on the leadership and capacity of NGOs rather than taking initiative themselves. Vanuatu-based NGOs should therefore understand their roles in this provision of support, and aim to include leadership strengthening and capacity building across all scales of their programs as a priority. By doing so, this will enhance the adaptive capacity of the wider DRS.

Capacity (human resource, financial and technical)

Capacity to deal with disaster response in Vanuatu had its strengths (e.g. skills and personnel in key organisations such as the NDMO, VMGD and NGOs) and weaknesses (e.g. highly stretched health sector and uncoordinated nature of training and capacity building). The adaptive capacity of the DRS was in part dependent on the ability of the NDMO to access funds and technical support from donors and NGOs, which has translated into effective management, leadership, and coordination of the DRS. This study found that the ability of key individuals to use existing knowledge and drawing upon existing technical skills to inform disaster response operations was also evidence of an adaptive DRS. There was evidence of efforts to build technical capacity through training, however the uncoordinated approach to disaster management training was reported to be a barrier. There was therefore room for the DRS to better coordinate internally, and also coordinate the support offered externally to ensure skills are strategically strengthened. Leadership and communication between key organisations will be required to ensure this is effective.

“The people are workshopped-out... and there needs to be a more streamlined way of organisations working together to avoid duplication of workshops and trainings.”

Risk perceptions

“Since there are so many studies showing the potential effects of climate changes on disasters, storm surges, sea level rise, etc., we need to help the government get up to speed.”

This subjective determinant examining perceptions relates to an organisation’s understanding of the risks of climate change and the likely impacts on their disaster response processes. Risk perceptions in terms of climate change influences adaptive capacity as it determines if or how individuals prioritise the incorporation of uncertainty and changes in risk over time. Climate change and its potential impacts on disasters were generally understood by Vanuatu interviewees, evidenced by the changes to governance structures and the number of DRR and CCA activities underway.

Risk perceptions surrounding climate change and disasters in Vanuatu were in part dependent on the priorities and obligations of each organisation. The research found a general acceptance that climate change is occurring with potential and uncertain effects on disasters. However, while most agreed on the need to prioritise DRR, attempts of following through with actual activities and extending efforts to mainstream climate change considerations were varied. Doing so would exemplify the flexibility needed to move the DRS towards a system that addresses current and future needs.

Strategic vision and outcome expectancy

The strategic vision of organisations, or the DRS as a whole, and their ability to enact them in practice were found to be somewhat dependent on capacity. This research found that strategic visions relating to climate change usually required some technical capacity, experience and knowledge, without which climate change mainstreaming was difficult.

“We [MoH] are playing a part in DRR. The location of facilities is something we consider and try to put new developments away from the sea on higher ground. Strategic planning and thinking is happening.”

The shared perceptions of risk across Vanuatu’s DRS (as previously described), coupled with, or perhaps as a result of, the existence and leadership of the VHT, have led to an overall shared strategic vision for coping with the impacts of climate change and disasters in Vanuatu. The establishment of the National Advisory Board (NAB) which integrates climate change and disaster risk management, provides an example of a DRS that has a future focus and a vision of how it would like to progress. The strategic vision of many individuals within the DRS provides the capability to move towards a system with enhanced adaptive capacity. While the health sector’s perceptions of risk were aligned with those of the rest of the DRS, as noted throughout this chapter, its limited capacity currently constrains their ability to fully participate in implementation of the strategic vision. Capacity building is therefore required, appreciating elements of culture, geography and lessons from the past in the development of future initiatives.

CONCLUSION

Vanuatu’s NDMO provided a level of leadership that was supported by relatively high capacity and support from other organisations within the DRS both in Vanuatu and development partners outside the country. The credibility and legitimacy of the DRS was largely dependent upon the NDMO, and also the VHT, with its multi-sectoral membership that functioned effectively as a result of pre-existing relationships and an internal governance arrangement (through its clusters) that was well understood. Moves to have the VHT led by government ministries was found to be constrained by shortages in human resources, skills and financial backing, particularly in the health sector. A recommendation to address this was to develop a longer term strategy to build resource capacity through a range of approaches including policy, legislation and plans, all of which should be developed in close consultation with relevant stakeholders and led by individuals or organisations that are already part of the DRS.

VANUATU COUNTRY REPORT

1. SETTING THE CONTEXT

Climate change is likely to affect the pattern of some disasters in the Pacific, and therefore the organisations and systems involved in disaster response. This research, conducted by researchers at the University of Technology, Sydney, focused on how the immediate humanitarian needs following disasters are met by various stakeholders, both in the affected country and those offering support from outside. The research sought to understand the adaptive capacity of both PICs and Australia's disaster response to a potential increase in disasters driven by climate change.

The primary objectives of the research were:

- To provide recommendations to policy makers and practitioners in the Pacific and Australian disaster and emergency response sectors on current adaptive capacity of PICs to climate related disasters (e.g. tropical cyclones, floods, droughts, storm surge), and identify the resources, policies and systems needed in the coming years to enhance this capacity;
- To inform improved planning and more effective response through analysis of the Australian emergency services and related organisations' capacity, role and obligations to assist PICs in times of disaster.

The research was conducted in 2012 and had a strong focus on participatory stakeholder engagement through extensive interviews, workshops and guidance from a Project Reference Group. Four case study countries (Fiji, Cook Islands, Vanuatu and Samoa) were chosen for deeper investigation of the range of issues present in the Pacific. The purpose of this report is to provide country specific results of the research for Vanuatu.

The Pacific region is vulnerable to a range of natural hazards including tropical cyclones and storms, droughts, earthquakes, tsunamis, floods, volcanoes and wave surges. The capacity of PICs to cope with these hazards is often challenged, due to their inherent vulnerability stemming from the isolation, small size, insularity, environmental factors and limited disaster mitigation capacity (Meheux et al., 2007). As such, natural disasters occur relatively frequently in the Pacific, with significant economic and social impacts.¹

Pacific Forum Leaders have committed to reducing disaster risks through various declarations and frameworks, including the Pacific Disaster Risk Reduction and Disaster Management (DRR and DM) Framework for Action (SOPAC, 2009). The Pacific DRR and DM Framework sets out six themes and includes guiding principles and expected outcomes by 2015, and contributes to global progress in achieving goals of the Hyogo Framework for Action 2005-2015 – which is the principle international guiding framework for disaster risk management (UNISDR, 2005).

In times of disaster, it is the responsibility of the national government to respond to the needs of the population. In the Pacific, effective response is made more complex than in other regions due to reasons such as (Kennedy and Muller, 2008):

- Potential remoteness of the affected area
- Relatively small number of people affected (high cost per person due to relatively low population density and multiple remote locations)

¹ Hay and Mimura, 2010; data from EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be – Université Catholique de Louvain – Brussels – Belgium

- Ability of natural hazards to overwhelm local and national capacity to respond
- Logistical constraints, affecting timeliness and assessment challenges
- Coordination challenges of regional organisations

Effective institutions and guiding policies are necessary to provide a coordinated and effective response to disasters. Specific indicators important at the national government level that are identified as important in effective disaster response include (UNOCHA and UNISDR, 2008):

- A disaster risk reduction and disaster risk management implementation plan based on assessment of hazards and risks
- A national platform to promote coordination and sharing of information, and to harmonise capacity
- Adequate resource allocation across all levels
- National plans including community capacity and inclusion of specific vulnerable groups
- Disaggregated population data.

This report takes some of these elements into consideration in an attempt to provide a broader understanding of Vanuatu’s national capacity to respond to disasters. This report seeks to describe specific elements of the Vanuatu DRS and the institutional capacity to respond to disasters under a changing climate.

2. RESEARCH METHODS

A qualitative methodology, with a strong focus on participatory stakeholder engagement was used for this research. The research was guided by a Conceptual Framework (see Figure 1) which was developed to provide the scope for this study.

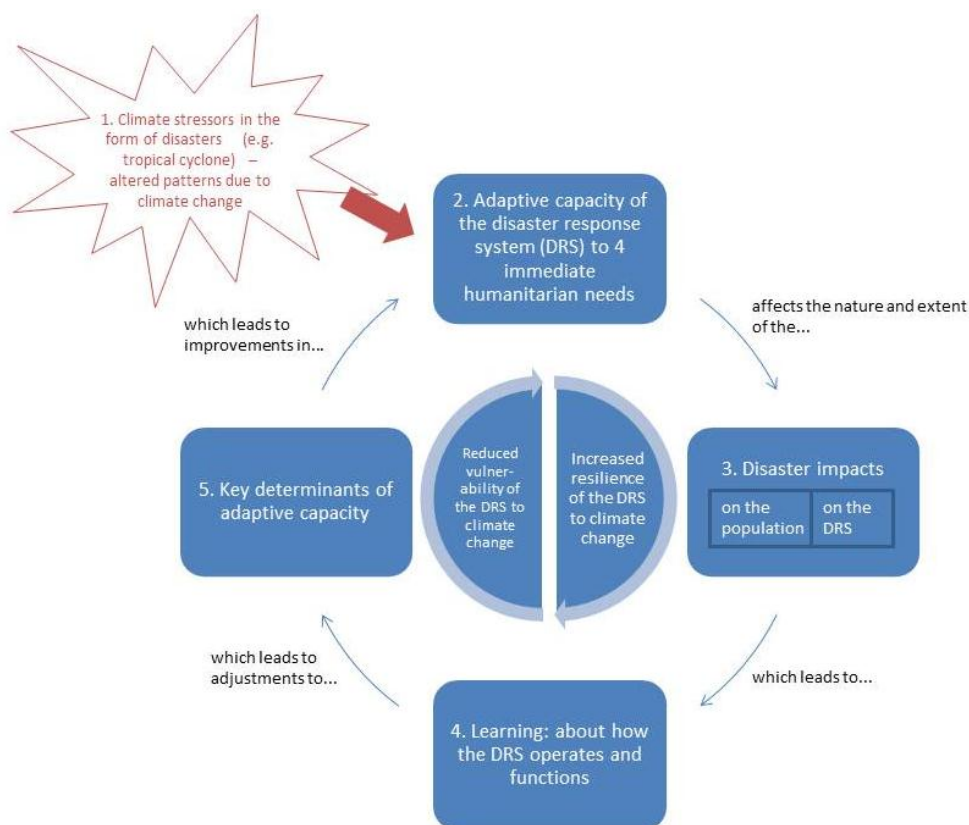


Figure 1: Conceptual Framework

The Conceptual Framework describes a cycle of adaptive learning within which the adaptive capacity of the DRS is affected by a range of key determinants (Ekstom et al., 2012). The DRS is defined, in the scope of this research, to be the organisations and mechanisms responsible for responding to the four immediate humanitarian needs. The DRS is thus comprised of actors and agents from government and non-government sectors, governance structures and the formal and informal networks that support them. The concept of adaptive capacity² was used to assess the resilience of individual organisations and the robustness of the broader system of response.

Specific determinants of adaptive capacity were used to assess the 'disaster response system' (DRS). Key determinants were defined as being inter-organisational, intra-organisational and objective and subjective. A list of the key determinants of adaptive capacity used in the research is provided below.

- Architecture
- Agency
- Adaptiveness
- Access to assets
- Leadership, management and governance structures
- Technical capacity, tools, methods and approaches
- Health workforce education, training and continuing competence
- Human resource for health governance and management systems
- Risk Perceptions
- Self-efficacy beliefs
- Silo mentality
- Communications and relationships
- Strategic vision and outcome expectancy
- Information and knowledge
- Elements of social practice

Background literature review, stakeholder workshops and key informant interviews with Australian, New Zealand and PIC stakeholders within the disaster, climate change, health and development sectors were used to assess the complexities of the DRS in selected PICs. Emphasis was placed on four immediate humanitarian needs: health care; water and sanitation, psychosocial, food and nutrition.

A total of 20 interviews were completed in Vanuatu with donors, government and non-government organisations (NGOs). Interviews were drawn together with desktop review results during the data analysis phase. Key informant interviews' transcripts were subjected to an inductive thematic analysis for general patterns and emerging issues. Interview transcripts were analysed using qualitative software, and coded for specific themes based on the conceptual framework. Key determinants of adaptive capacity of the disaster response system were identified based on triangulation of data from multiple sources. Results were analysed thematically and recommendations made accordingly.

² Adaptive Capacity - The ability of a system to adjust to climate change (including climate variability and extremes), to moderate potential damages, to take advantage of opportunities, or to cope with the consequences. (IPCC TAR, 2001)

3. COUNTRY BACKGROUND

Vanuatu has a population of 262,691 (Vanuatu National Statistics Office, 2013), and its' geographic location in the Pacific renders it vulnerable to earthquakes, volcanic eruptions, tsunami and tropical cyclones. It is therefore ranked alongside the Solomon Islands as one of the most disaster prone countries (GFDRR, 2008). Vanuatu is ranked 125th out of 187 countries in the UNDP HDI, placing the country in the medium human development category, below Samoa and Fiji (UNDP 2011). Vanuatu's status as a Least Developed Country (LDC) is currently being reviewed, however the Government is concerned that graduation from LDC status will lead to reverses in development progress. Vanuatu's economy is based on subsistence and small-scale agriculture, with 80% of the population living rural, subsistence lifestyles (Government of Vanuatu, 2007).

3.1 Climate change impacts on disasters in Vanuatu

Scientific projections for Vanuatu estimate that temperatures are likely to increase by up to 1°C by 2030 (high emission scenario) while sea level is predicted to rise by between 3-17cm (high emission scenario) by 2030 (Australian Bureau of Meteorology and CSIRO, 2011). Rainfall is likely to increase in the wet season and decrease in the dry season, while extreme rainfall days are likely to occur more frequently.

Tropical cyclones in Vanuatu's region are predicted to occur less frequently, but the proportion of severe storms are expected to increase (Australian Bureau of Meteorology and CSIRO, 2011). This means that while there may be fewer intense tropical cyclones (and recognising these projections carry significant uncertainty) there may also be an increased frequency of response required to severe storms which cause damage through flooding, high winds and storm surge. This would activate the disaster response system on a more frequent basis than is currently the case (see Gero et al., 2012).

3.2 Key disaster response organisations in Vanuatu

Vanuatu's disaster response arrangements were observed to be in a state of transformation at the time of this research. The establishment of the VHT represents progress towards better coordination between the government and non-government sectors, both in terms of DRR and preparedness, and for disaster response. Recognition of the need for better coordinated disaster assessments was a high priority at the time of in-country research, and these efforts contribute to supporting the ongoing adaptive capacity of Vanuatu's DRS.

The Ministry of Internal Affairs has primary responsibility for disaster management in Vanuatu, and the Director General of the Ministry of Internal Affairs is appointed as the **Chair** of the National Disaster Committee.

The National Disaster Committee (NDC) coordinates disaster management.

The National Disaster Management Office (NDMO), within the Ministry of Internal Affairs, is supported by the NDC in implementing the National Disaster Act and associated plans (IFRC, 2011). It is the responsibility of the NDC to request international assistance, should a disaster become outside the capacity of national response efforts. The NDMOs responsibilities include coordination of preparedness, risk reduction, response, relief and recovery efforts of all humanitarian agents involved.

The Vanuatu Meteorology and Geohazards Department (VMGD) and the **Climate Change Unit** are also involved in disaster response and there are proposed changes to the National Disaster Act 2000 to amalgamate these agencies into a single organisation (IFRC, 2011). A first step in aligning policy on disaster risk management and national planning is housing the NDMO together with the VMGD (SOPAC, 2011). VMGD is noted to have increased budget over recent years, highlighting the government's prioritising of the role of this organisation (Worwor, 2009).

National Advisory Board on Climate Change and Disaster Risk Reduction (NAB) is an emerging agent responsible for coordinating policy advice and program implementation of related activities.

Additional government ministries with responsibilities in disaster response include (IFRC, 2011):

- Ministry of Foreign Affairs – responsible for liaising with donor organisations and countries
- Ministry of Finance and Economic Management – responsible for emergency funding
- Ministry of Health – distribution of medical supplies and administration of disaster medical services
- Ministry of Education, Youth and Sport – Liaise with schools and conduct Initial Damage Assessment; coordination of relief aids
- Ministry of Trade and Business Development – Provision of advice to business sector
- Ministry of Agriculture, Quarantine, Forestry and Fisheries – Damage assessments and coordination with NDMO
- Ministry of Infrastructure and Public Utilities – Responsible for issues cyclone warnings and supply of resources where possible; logistical support; damage assessment and emergency repairs.

Vanuatu also has **Provincial Disaster Committees**, with **Provincial Disaster Officers** (Worwor, 2009), however in practice, these governance structures lack capacity and support from the national level. **Area Councils** are more localised governance structures and these too were found to lack support to fulfil any real obligations. The Department of Rural Water Supply (within the Ministry of Lands and Natural Resources) is responsible for national rural water supply and is also important in delivering WASH services in post-disaster settings (SOPAC, 2006).

Vanuatu **Red Cross Society** has responsibilities spread across health, medical, and community welfare in times of disaster response (Government of Vanuatu, 2008).

A 2008 Government of Vanuatu report also notes the **Church** as a response organisation, responsible for providing counselling and support after a disaster (Government of Vanuatu, 2008). The **Vanuatu Christian Council** has since been successful in receiving AusAID funds for community programs, indicating their agency and authority at the national scale.

Vanuatu Humanitarian Team (VHT) is a national version of the PHT and provides a coordinated approach from the NGO and donor community in efforts to respond to disasters aligning with the cluster approach.

Numerous civil society organisations, NGOs and international relief organisations operate ongoing DRR, CCA and related programs in Vanuatu, and many of these organisations are involved in disaster response. Many have Memorandums of Understanding (MoUs) with the Government of Vanuatu, some of which are facilitated through the Diplomatic Privileges and Immunities Act of 1982 (IFRC, 2011). At the national level, Vanuatu Association of NGOs (**VANGO**) has had a MoU with the government since 2004.

Donors such as **AusAID** and **New Zealand Aid Programme** are also active in times of disaster response and coordinate with national institutional arrangements as necessary.

The institutional structure of these organisations is illustrated below.

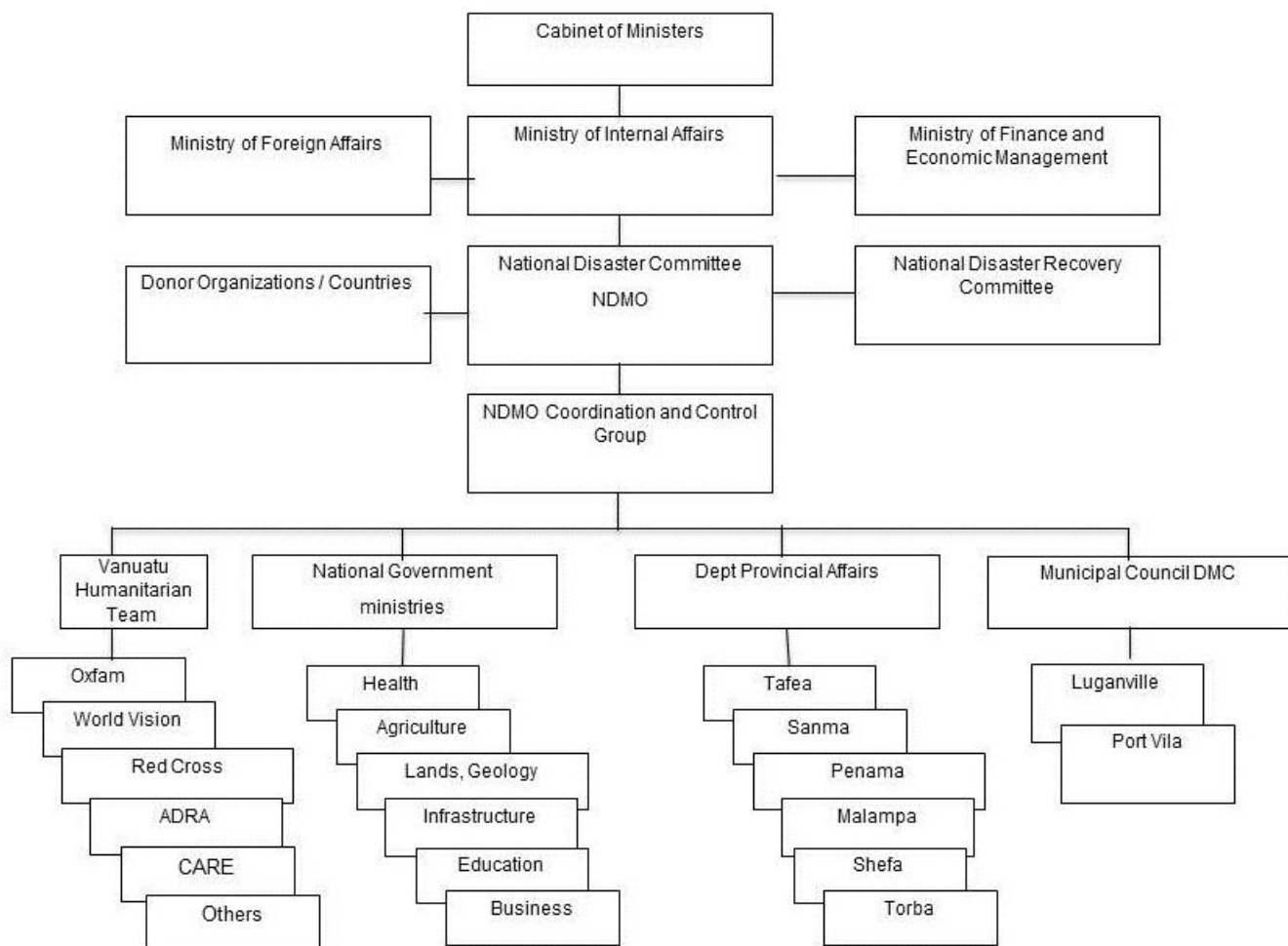


Figure 2: Vanuatu's disaster coordination system.

(Modified from IFRC, 2011).

Box 1 provides an example of past disaster response, and describes some of the roles of organisations included above.

Box 1: Example of past response in Vanuatu.

Tropical Cyclone (TC) Jasmine, struck Vanuatu’s southern islands in February 2012. Damage to agricultural crops, water resources and communications and infrastructure were sustained in Tanna. The response to TC Jasmine was one of the first times the VHT’s cluster approach was engaged, with each cluster working together to operationalise coordinated response efforts.

TC Jasmine was deemed not a big enough event to require support from Australia, and one NGO interviewee noted that “*TC Jasmine was like a dress rehearsal. It allowed people to practice how to respond*”. Another NGO interviewee noted that “*We did a Rapid Assessment and found enough players were already responding*”. The FRANZ Agreement was activated, however, with French support in New Caledonia providing aerial surveillance based on FRANZ since they were best placed to respond (as reported by a FRANZ partner Vanuatu interviewee).

The NDMO noted that the:

“NDMO responded after being advised by the MetGeo Office. The EOC [Emergency Operation Centre] was then activated... Monitoring took place until the cyclone had passed. A surveillance fly-over was done to assess if any damage was done, then an Initial Assessment on the ground was done to collect data. This was followed by rapid assessment”.

However, the general response from several government based interviewees was that TC Jasmine was not declared a disaster and hence the government did not treat it as such in their response.

Some interviewees from the MoH, when asked about their response to TC Jasmine, noted:

“It was not a disaster. Churches responded – ADRA and churches. We don’t know of any report from the event. Not much damage occurred that warrants the MoH to respond... There was minor damage to an aid post and minor WASH issues. Partners like NGOs attended to these.”

The latter part of the above quote highlights the uncertain responsibilities of government versus non-government organisation in immediate disaster response. While it is likely that NGOs on-the-ground responded quickly based on their ability to do so, it also raises the issue that doing so can lead to levels of reliance on NGOs, and if support is withdrawn, communities may be left vulnerable.

4. HUMANITARIAN NEEDS

A summary of the main DRS actors responsibilities relating to the four themes of the research in Vanuatu is provided below.

Table 0.1: The DRS of Vanuatu in relation to the 4 post-disaster humanitarian needs.

Immediate Humanitarian Needs:	Responsible National Actors and Stakeholders
Health Care	<ul style="list-style-type: none"> • Ministry of Health • Police • Fire • Red Cross • Local NGOs
Food and Nutrition	<ul style="list-style-type: none"> • Ministry of Health • Ministry of Agriculture • Community • NGOs

Water and Sanitation	<ul style="list-style-type: none">• Red Cross• NGOs (e.g. Oxfam, ADRA, CARE, World Vision)• Rural Water Supply• Provincial Disaster Committees
Psychosocial needs	<ul style="list-style-type: none">• Churches• Community Leaders

4.1 Health care

Addressing health care needs in Vanuatu, with a population spread across many islands, is a challenge and is the focus of both government (through MoH) and NGO partners in Vanuatu. The MoH leads the Health and Nutrition cluster as part of the Vanuatu Humanitarian Team (VHT), and is supported by WHO and UNICEF. The NDMO noted that:

“Ministry of Health is involved as a line ministry and included in [disaster] assessments, and Ministry of Health leads the Health and Nutrition cluster which looks at health infrastructure, outbreaks, health centres and medical needs”.

MoH’s focus in providing health care includes in disease surveillance by monitoring health facilities, such as evacuation centres, for disease outbreaks, as noted by a MoH interviewee.

The ability of MoH to meet its obligations in delivering and coordinating the Health and Nutrition Cluster in times of disaster was reported to be severely limited. An NGO interviewee noted:

“There has also been less buy-in from [Ministry of] Health and this may be related to the fact that they are having major human resources capacity issues.”

As reported in Chapter 5, the MoH’s limited ability to respond has led to a lack of visibility in times of disaster, as noted by an interviewee from the faith-based community: *“I don’t know how MoH are involved in health response. I haven’t seen a MoH Team”*. The lack of an adequate number of trained staff has led to a high reliance on external support. In terms of maternal health for example,

“[m]others have to walk very long distances to deliver. Midwives are needed in these areas. There are severe shortages of health personnel.”

This statement from a government interviewee is reflective of the perspective of the health sector as a whole, in that human resource shortages are chronic, particularly at the local level as noted by a NGO interviewee:

“District Hospitals are short staffed. They have enough to keep going now (just) but once something happens they could not keep up”.

Health and medical supplies are also severely lacking even in normal times, leading to high levels of vulnerability in disaster situations where supplies are needed on a large scale, as noted by a NGO interviewee:

“After Tropical Cyclone Jasmine, assessments revealed low levels of health care supplies in health centres. The issues were reported to the MoH but not sure if anything was addressed.”

Red Cross, with the support of AusAID and other donors, has prepositioned supplies around Vanuatu for disaster response, including health and medical supplies.

The locations of health facilities were also raised as an issue, particularly in relation to changing levels of risk associated with climate change. An NGO interviewee noted that:

“[Health] facilities located in high risk prone areas need to be relocated. However relocation is not that simple as there are land issues. The Village chief would need to give permission for the land to be used and this can be a very long and drawn out discussion process involving the community over a long time”.

Cultural issues always need to be taken into account to ensure outcomes are delivered that are aligned with community values and practices.

4.2 Water, sanitation and hygiene (WASH)

WASH was described as a major concern and focus of the MoH and is also the core program of several NGOs including ADRA, Oxfam, CARE and World Vision. Despite this high priority, WASH continues to be a challenge in Vanuatu, with an NGO interviewee noting that *“[i]n communities – a lot of people do not have water and sanitation”*. In times of disaster, meeting these basic needs is an even greater challenge.

In terms of the cluster system, it was noted by a NGO interviewee that:

“Some clusters work better than others; for example the WASH cluster is very strong... WASH is the strongest capacity here”.

This may be because of the high focus of NGOs who are able to work together in attempts to providing WASH needs. An NGO interviewee also noted that gender in WASH was considered, revealing the WASH Cluster’s inclusive approach to disaster response.

Other areas where WASH is supported in times of disaster response is through the distribution of fresh water and containers, water quality testing kits, water purification units, WASH information, repairs to infrastructure and water tanks, by organisations such as Red Cross, WHO and UNICEF.

AusAID also supports the WASH sector, and it was noted that:

“Any prepositioned supplies that are used are replenished by AusAID. AusAID also supports initial assessments and in the tropical cyclone [Jasmine], provided funds for aerial assessment of Tafea the main affected Island.”

Prepositioned supplies for WASH needs are also provided by ADRA.

4.3 Food and nutrition

Food and nutrition needs after disasters are not prioritised by organisations within the current DRS in Vanuatu, and respondents indicated that the Food Security and Agriculture cluster appeared to be very weak. When interviewers raised the issue, interviewees mostly responded by outlining broader issues of long term food security challenges rather than any insight on how immediate needs post-disaster are dealt with.

According to the VHT cluster system, nutrition is addressed with the health cluster, with food security a standalone cluster. When asked about food and nutrition after a disaster, an NGO interviewee said “[t]he Government did much of the food distribution during [Tropical Cyclone] Vania.” It is also thought that the strong social support mechanisms that feature in Vanuatu culture (and throughout much of the Pacific), coupled with the subsistence livelihoods of much of the population, leads to the ability to source adequate food within communities after a disaster occurs. As noted above, government may supplement this, however it was not considered a priority among any of the NGOs or development partners interviewed.

4.4 Psychosocial needs

“If there are increased disasters of a greater magnitude, the community will have more psychosocial needs because the loss will shock them.”

This quote from an NGO interviewee highlights the implications of increased disaster magnitude and frequency on mental health issues. Despite this established need, addressing post-disaster psychosocial needs remains a significant gap within Vanuatu’s DRS, and a challenge going forward given the potential increase in disasters resulting from climate change. This was raised by a faith-based interviewee:

“We have food and water, but the people we often forget. It is sometimes neglected – there are limited activities around psychosocial needs”.

The MoH noted that:

“[r]egarding psychosocial needs - UNICEF have an assessment. [But it is] not really a focus. We need to work more on this. There’s no real need lately as no major event has occurred.”

An NGO interviewee agreed the focus on psychosocial support was limited: “*Psychosocial needs focus is quite small*” while Red Cross noted that regarding psychosocial needs after a disaster: “*Volunteers may do this by default*”.

A faith-based interviewee raised that the “*Church would do something*”. This quote may provide some insight into the issue, given the strong presence of Christianity in Vanuatu, and the reliance on the Church for spiritual health. In times of disaster, it is proposed that there is an assumption that the Church would provide psychosocial needs. However, provision of post-disaster psychosocial support requires specific skills and approaches not always available from Church leaders, who may themselves be in need of support. The MoH noted that some capacity exists at the local level: “*Psychosocial needs - we have nurses on the ground with counselling skills*”. It was clear, however, that the capacity to

meet local needs was limited, and the extent to which the MoH could meet these need would be limited.

While NGOs provide tangible and physical support after a disaster, psychosocial needs and the support required are intangible, and can go unnoticed. Without a specific directive to focus on the mental health of communities after a disaster, it is likely that this gap in humanitarian response will continue unless the MoH or VHT take steps to address it.

5. KEY DETERMINANTS OF ADAPTIVE CAPACITY IN VANUATU

A key research question concerned the identification of the most influential determinants on adaptive capacity of the PIC's, in this case Vanuatu's, DRS. The themes discussed below were identified through a rigorous systematic coding process (described in Chapter 2) of all interview data and observations from Vanuatu.

The five key determinants of adaptive capacity found to dominate in Vanuatu, in order of level of influence, were: 1) Communications, relationships, information and knowledge; 2) Leadership, management and governance; 3) Capacity; 4) Risk perceptions and 5) Strategic vision and outcome expectancy.

Vanuatu's DRS is led by a NDMO with relatively high capacity and supported by NGOs, donors and civil society organisations who respect the authority of the government's leading role. The participatory nature of the VHT, and the moves to better coordinate DRR and CCA through the National Advisory Board (NAB), provides for a DRS that has a future focus and a vision of how it would like to progress towards a system which puts into practice better coordination and activities that reduce vulnerability prior to disasters occurring. The strategic vision of many individuals within the DRS highlighted their shared perceptions of risk and their ability to implement steps to move towards a system with enhanced adaptive capacity. While the health sector's perceptions of risk were aligned with those of the rest of the DRS, the health sector's limited capacity (particularly government) currently constrains their ability to fully participate in implementation of the strategic vision.

5.1 Communications, relationships, information and knowledge

In the context of this research, communications and relationships relate to accountability (McManus et al., 2007). Trust is developed within governance systems, and between their stakeholders and constituents when they are found to be credible, stable, inclusive and accountable. The development of effective communications pathways based on mutually respectful relationships is critical. Closely related to this concept is information and knowledge; the dissemination and retention of which forms part of the adaptive capacity of an organisation (McManus et al., 2008). The capacity to apply current knowledge to a situation in a creative manner and to assign roles, as well as the ability of subgroups within an organisation to assume responsibilities of absent members are considered adaptive features of an organisation.

This research found that in Vanuatu, the strength of relationships, the degree of inclusivity in dialogue on disasters and how organisations communicate led to effective

collaborations that highlighted adaptive capacity of the DRS. Changes have been made to the physical location of the Vanuatu NDMO, which:

“[u]sed to be housed elsewhere but moved for closer relationship and communications with Meteo [Vanuatu Meteorology and Geo-Hazards Department]” (VMGD).

Furthermore, the VHT headquarters are based at the NDMO. This arrangement acknowledges the benefits face-to-face communications bring to relationship building and trust.

The VHT brings together members of the DRS from government, UN, donor, NGO, faith-based and civil society sectors for a collective and collaborative disaster response. A development partner interviewee in Vanuatu noted that after Tropical Cyclone Jasmine in 2012 – “VHT helped the NDMO to coordinate assistance and disaster response and donor responsibilities.” VHT efforts are focused on working together, with coordinated disaster assessments the specific focus at the time of the in-country research. As noted earlier, disaster assessments underpin the decision as to whether or not overseas assistance is requested. Historically, these assessments have been the main source of delays, with poor coordination between organisations leading to multiple assessments and resulting in confusion. The VHT’s efforts to address this hurdle have led to more effective disaster response, as noted by a development partner interviewee regarding the VHT’s role in responding to Tropical Cyclone Jasmine:

“It was noted that assessments were more thorough, information was more credible. There were mechanisms that could be used as cross-checks and this showed less discrepancies compared with previous tropical cyclone responses.”

Past events illustrated that that the speed and effectiveness of response was also reliant on being connected to the right people. These connections (or relationships) are heavily based on trust between individuals, as noted by an NGO interviewee:

“People are everything. Attitude and behaviour go a long way. People develop good coping skills and foster relationships that are very important even during coordination times” and also a health sector interviewee: “Overseas help is coordinated if they know who to talk to.”

As noted in earlier chapters, adaptive capacity in disaster response in PICs is therefore heavily built on personal relationships. This is in part due to the small bureaucracies in the Pacific, where organisations or government ministries are often made up of few staff.

Elements surrounding physical communications in Vanuatu remain a critical hurdle given the isolation and remoteness of some of Vanuatu’s outer islands. A Vanuatu NGO respondent noted:

“Communication is a huge challenge. I would put a satellite phone on every island as a priority”. Others from government believe communications are less of an issue – “We have a good communications through the telecommunication system. We use VHF radios - we are aware of some VHF holders in some islands, and Red Cross is planning to put some more in communities”.

This difference in opinion regarding telecommunications may reflect varying expectations of what the baseline should be, also perhaps varying understandings of the situation in remote areas and also access to resources. Another interviewee from the health sector noted: *“Many communities lack access to communication and depend mainly on radios. Few people have their own radios”*.

Limited communications prior to and during a disaster place a heavier emphasis on remote and isolated communities having the information and knowledge to prepare for and deal with disasters without immediate outside support. DRR, CCA and preparedness efforts are effective ways of building community resilience (Gero et al., 2011) and are the focus of many Vanuatu Government, donor, NGO and faith-based ongoing programs. The Vanuatu Christian Council (VCC) forms an extensive network across the country through its partnership of five mainstream churches (Howell and Hall, 2010). The VCC has a strong partnership program with the Act for Peace, which is the international aid agency of the National Council of Churches in Australia (NCCA). The Pacific Community focused Integrated Disaster Risk Reduction, (PCIDRR) and the Pacific Community Climate Change Risk Reduction, (PCCCR), are Australian aid funded project through the Act for Peace. The VCC is recognised as being an important element of the DRS and maintains a close relationship with the NDMO, as noted by a VCC interviewee: *“We had been working with 78 communities and we act as a link between the NDMO, the provincial government and the community. We are still working on this to strengthen the working relationship between these institutions.”*

Donors such as AusAID recognise the VCC as an important link to communities for DRR and preparedness activities through initiatives such as the Vanuatu Church Partnership program, which is supported by AusAID and brings together the VCC and the Government of Vanuatu. Such initiatives support adaptive capacity through recognising key relationships between organisations, and drawing on these to enhance DRR efforts at the local level.

As a result of the dispersed nature of Vanuatu’s island geography, local communities are in some ways far removed from the national DRS. However, efforts of the NDMO and VCC partnerships and numerous NGO programs are supporting DRR and disaster preparedness, leading to stronger disaster response and governance mechanisms. Adaptive capacity of Vanuatu’s DRS could therefore be further supported by making better use of local capacity in times of disaster through more inclusive disaster assessments. By drawing on local knowledge and understanding, the time needed for outsiders to assess damage would be reduced, allowing for more accurate and timely information gathering.

5.2 Leadership, management and governance

The quality of leadership and degree of empowerment of staff within organisations is critical for an adaptive culture (McManus et al, 2008). This was found to be particularly relevant in Vanuatu, with the leadership of the NDMO especially important. A development partner interviewee noted that:

“The NDMO is at the centre of everything” while an NGO interviewee noted “The NDMO has developed strategic plans, policies and SOPs to guide their work.”

The NDMO's leadership is respected by organisations within the Vanuatu DRS. This is in part due to its future focus, and its adaptive nature to better cope with future disasters, as noted by the NDMO:

“Many of our documents are 'live' so once we have assessed a response, lessons learnt are incorporated after each disaster” and also regarding future capacity: “The NDMO is restructuring and part of the process is to identify how to increase capacity.” Other organisations have observed the increased role and leadership of the NDMO: “Disaster response will always depend on how the NDMO directs. Previously coordination was poor but it has got much better” (Nursing school).

While national leadership from the NDMO may be strong, provincial and local governance structures appear to lack the same support. As noted by a Vanuatu development partner interviewee:

“The main challenge is where the passing down of information from the provincial level to communities is quite weak. Where provincial leadership is already weak, the link between province and community is usually weak.”

This highlights the importance of leadership in maintaining the relationships and communications that have been highlighted as crucial elements of adaptive capacity. Gaps in leadership can therefore have significant implications for connecting local communities with provincial governance arrangements.

National leadership across government sectors was also found to vary. The Ministry of Health (MoH) has a focal point for disaster response, and the Environmental Health Officer role also has disaster response as one of its priorities, as noted by a MoH interviewee:

“Once there is a disaster, this person [Emergency Health Focal Point] becomes the lead person. Similarly at the national office – someone from MoH sits on the Emergency Operations Centre.”

Leadership, however, within the MoH was constrained by limited internal coordination and capacity, as noted in Chapter 3. While the MoH has a draft National Health Plan for Disaster Management, it appears to lack strong leadership and a coordinated system where roles and responsibilities are clearly articulated and staff have the resources they need to respond. Without these mechanisms and support structures, it became apparent that some government ministries relied on the leadership and capacity of NGOs rather than taking initiative themselves, as noted by an NGO interviewee:

“During TC Jasmine, the Ministry of Internal Affairs did not want to commit funds for disaster response, and instead left the response solely to the NGOs. Instead, the Government should have said, “we will handle it and if help is needed we will ask assistance from NGOs.”

This sense of reliance on non-government support was echoed from MoH interviewees, who relied heavily on WHO, UNICEF and local NGOs support to fill gaps in the delivery of basic services even outside disaster times. Some MoH interviewees gave the impression

that if NGOs are best placed to respond to a disaster first, then government may not need to respond, for example in relation to TC Jasmine: “*There was minor damage to an aid post and minor WASH issues. Partners like NGOs attended to these.*” This highlights the limited leadership within MoH which is likely to be the result of limitations in capacity (human resources, technical, financial).

While leadership of the national DRS is from the NDMO, the VHT is coordinated by Oxfam Vanuatu, with a view to shift this leadership over to the NDMO in the future. The clusters are led by government ministries, with co-leads coming from the UN and NGO sectors. This governance structure supports national leadership and ownership of disaster response and provides the necessary backstopping that may be needed as a result of limited capacity within some government ministries. What is needed to support adaptive capacity and transition to a fully functioning government led DRS is a clearly articulated process to ensure each sector of government can meet their obligations and responsibilities in times of disaster. This may be policy and legislation that provide details of organisational roles and responsibilities in times of disaster, standard operating procedures to guide response, plans and strategies regarding mainstreaming of climate change considerations that appreciate existing challenges and find ways to build on lessons learned to overcome them.

Leadership, when combined with a focus on future needs, provides for an adaptive and robust organisation (McManus et al., 2008). Vanuatu is therefore fortunate to have the NDMO, who embody these traits, as it is the key coordinating organisation in the DRS. The NDMO is leading by example through reflecting on past response, looking to future needs and maintaining strong partnerships across government and non-government sectors. Support is needed to provide similarly strong leaders in other government sectors and at provincial levels to ensure connections are made across the DRS nationally, and maintained between local communities and higher levels of governance. NGOs in Vanuatu should understand their roles in this provision of support, and are generally well placed to include leadership strengthening across all scales of their programs as a priority. By doing so, the adaptive capacity of the DRS will be enhanced.

5.3 Capacity (human resource, financial and technical)

The extent of an organisation’s access to various assets and how they are utilised to enhance performance is an important determinant of adaptive capacity (Ekstrom et al., 2012). Financial assets include funding available to organisations undertaking disaster management (DRR, preparedness and response), whilst human resources include the skills and knowledge of staff related to disaster management. Defining the technical capacity in a DRS is important for understanding how the system functions, how monitoring / evaluation of response outcomes is undertaken for identifying gaps for future exploration and analysis, and the ability to adapt to unforeseen stresses such as climate change impacts.

Health workforce shortages in Vanuatu means that external doctors and nurses are needed to assist with disaster assessments. The Health sector in Vanuatu had limited capacity to respond to disasters, and was plagued by severe shortage of health personnel, under-staffed and ill equipped health facilities, as noted in Chapter 5. This was the general feeling voiced by nearly all organisations in Vanuatu. According to Oxfam, in Vanuatu this was evident in disaster assessments, which revealed low levels of health

care supplies in health centres. The MoH indicated that the hospitals were most vulnerable and currently they did not have the capacity to deal with mass casualties.

Rural and remote facilities had the largest problems with staffing and resources.

“Local capacity is the biggest challenge. We have basic community people, dispensaries with nurses and stationed officers; but [we are] lacking in Field Officers, to go from place to place but this is a huge task considering populations and distances” (Shefa Health, Vanuatu).

Access to health facilities in remote areas and location of some facilities in high disaster prone areas were additional challenges. This was a complicated process, as relocation is not a simple issue as described above. The MoH indicated that a full time disaster coordinator was needed to improve their response to disasters. The health sector was collaborating with local NGOs such as Oxfam, ADRA and Red Cross, and UN agencies such as WHO and UNICEF to fill the resource gaps.

Climate change was seen as an additional burden to an already stretched health system in Vanuatu, since the patterns of diseases were changing resulting in a demand for different types of skills, drugs and additional health facilities. According to two respondents the:

“Current establishment [is designed to focus] on communicable disease response, for example Tuberculosis and Malaria, [but] there are new diseases emerging with climate change and we do not have the capacity or skills [to deal with them]” (Shefa Health, Vanuatu); and “some staff lack training and continuing professional development” (Meteo, Vanuatu).

The NDMO has been fortunate to be supported financially both through the national government and through external donor support, as recognised by a NGO interviewee: *“I think there are people now putting money behind NDMO and they have some authority.”* The financial support has translated into effective management, leadership, and coordination of the DRS, as described above and noted by another NGO interviewee:

“Over last 5 years the NDMO has become much stronger. Other donors are making more demands of them and putting pressure on them, which has led to better outcomes”.

The latter quote highlights that with increased support comes increased responsibility and obligations, however the NDMO appears to be meeting these obligations and looking forward to meet future needs as well.

Being housed next to the Vanuatu Meteorology and Geo-Hazards Department (VMGD) also supports the capacity of the NDMO, as technical skills can be more readily shared between staff. VMGD noted that national government support had been forthcoming as the Department had prioritised service delivery – something the national government sees as important. VMGD therefore makes strategic decisions to address the government’s priorities and notes:

“Budgeting for more staff needs to be argued, and a case presented as to why they [more staff] are needed”.

VMGD also incorporate an adaptive and innovative approach: “*We are innovating – gone beyond our norms. [We are] more concerned about service delivery.*” By taking this approach, VMGD are able to prove to government that funds are well spent, and correspondingly rewarded with ongoing financial support, rather than relying on ad hoc project funds from donors, as noted by a VMGD interviewee: “*Funding is only stable from government – [donor] projects will eventually end, then it’s back to proposals*”. This highlights the leadership of the VMGD and also the adaptive nature of the organisation in recognising the need to be innovative and flexible as so to maximise financial support from both government and donors.

Adaptive capacity is supported in Vanuatu by the presence of NGOs and Red Cross. NGOs in Vanuatu include local offices of Oxfam, World Vision, CARE, ADRA and Live and Learn (among others). Red Cross is also a strength of the Vanuatu DRS, with a close relationship with the government which is formalised through legislation. These NGOs and Red Cross are supported in various ways through their wider “parent” organisation, in terms of financial capacity, access to training and other levels of support. At the same time, local NGO offices often have delegated authority on which programs are funded and where, as noted by a NGO interviewee: “*We have clear policies and good quality early communication system with delegated authority.*” The capacity of the NGOs in Vanuatu is therefore relatively strong, and supports the adaptive capacity of Vanuatu’s DRS through access to a range of assets.

At the time of the in-country research, numerous workshops, trainings and missions from regional partners on disaster management and climate change were occurring, most with a view to build capacity for disaster response or addressing longer term climate change challenges. For example, UNOCHA were holding a workshop on coordinated disaster assessments, the World Bank was visiting the NDMO and the NGO’s Climate Change Team had several activities and meetings. This highlights the crowded space in which Vanuatu’s DRS (and climate change community) must operate. Training (at the national scale, and in the capital, Port Vila) is considered readily available to DRS organisations, as noted by a NGO interviewee:

“Training is always available for DRR. VHT, NDMO, and other agencies always hold training- so there is no shortage of training... Although there are so many meetings and limited staff capacity.”

Vanuatu’s Nursing School also offers specific training in disaster response:

“The centre for Nursing Education includes emergency and disaster training in their curriculum. Some sessions are delivered by the NDMO.”

Interviewees were in agreement, however, that better coordination of training and workshops is required. An NGO interviewee noted that:

“The people are workshopped-out... and there needs to be a more streamlined way of organisations working together to avoid duplication of workshops and trainings... There is no shortage of training we just need to ensure that these are managed in a coordinated way.”

Therefore, while the technical capacity is being built, the uncoordinated approach to disaster management training somewhat constrains adaptive capacity. This finding is supported by a recent review of Pacific disaster response training by UNOCHA, who notes “[a] more coordinated approach still needs to be achieved to improve the effectiveness of disaster management in the Pacific Island region” (UNOCHA, 2012d:5). With 15 recommendations in total, UNOCHA recommends each PIC develop a training strategy, and that training should include a variety of learning opportunities (UNOCHA, 2012d).

Training at the provincial and local scales was found to lack adequate financial support, as noted by the Nursing School:

“Training is also provided at the provincial level, but there is a severe lack of funds... The Village Health Workers are most vulnerable and their training courses need to be strengthened.”

This view was echoed by NGO interviewees, although there is an increase in the number of NGO programs that are targeting building the capacity of local communities for disaster response, as noted above.

Capacity to deal with disaster response in Vanuatu has its strengths (e.g. skills and personnel in key organisations such as the NDMO, VMGD and NGOS) and weaknesses (e.g. highly stretched health sector and uncoordinated nature of training and capacity building). The adaptive capacity of the DRS is in part dependent on the ability of key individuals knowing how to operate in times of disaster and with potential changes to the nature of disaster with climate change. It is therefore important for the DRS to better coordinate internally, and also the support offered externally to ensure skills are strategically strengthened. Leadership and communication will be required to ensure this can occur.

5.4 Risk perceptions

This subjective determinant examining perceptions relates to an organisation’s understanding of the risks of climate change and the likely impacts on their disaster response processes. “Perceived adaptation efficacy” refers to an organisation’s belief in the effectiveness of adaptation actions. Perceived adaptation costs refers to the organisation’s assumed costs (inclusive of monetary, personal time, effort) of undertaking the actions (Ekstom et al., 2012; Kuruppu et al., 2011). Risk perceptions in terms of climate change influences adaptive capacity as it determines if or how individuals prioritise the incorporation of uncertainty and changes in risk over time. Climate change and its potential impacts on disasters were generally understood by Vanuatu interviewees, evidenced by the changes to governance structures and the number of DRR and CCA activities underway, with some noting:

“As a responder, with the increases in disasters, we will have to keep on top of things” and “Since there are so many studies showing the potential effects of climate changes on disasters, storm surges, sea level rise, etc., we need to help the government get up to speed.”

One MoH interviewee was reluctant to think there would be more disasters – *“Currently we are not trying to think we will face more disasters”* with this view likely related to the MoH’s already constrained capacity to manage the basic needs of the health sector.

The general acceptance that climate change is occurring and its potential (and uncertain) effects on disasters has led organisations to attempt to incorporate “climate change mainstreaming” into various programs and operations. . Availability of donor funding for CCA is also a driving mechanism. As noted by a Vanuatu development partner interviewee: *“Climate change is not always openly discussed but it is starting to be mainstreamed in discussions.”* This issue of mainstreaming climate change, and risk in general, was highlighted by a health sector interviewee:

“We had an exercise a few years ago on mainstreaming risk. A plan was developed as part of the Pacific Plan. Disaster preparedness and risk reduction were discussed – but this is yet to trickle down into sectors.”

The idea that risk and *“DRR is everybody’s business”* (as noted by VMGD) was generally accepted. Taking the steps to minimise risk, including future risks associated with climate change, was found to be lagging somewhat, particularly within government, and even more specifically, at the provincial and local scales as noted by a government interviewee:

“Climate change needs to be embedded in the Provincial Structure. Disaster is an important issue that requires adequate budgetary allocation. A disaster fund should be set up for Area Council and a trust fund for provincial levels to manage disaster risk and response.”

An NGO interviewee believed that with more disasters, the national DRS:

“probably will struggle, especially financially. It may mean more reliance on NGO and other external support. Provincial levels will struggle even more.”

NGOs have been able to act more quickly in incorporating climate change considerations into programming, as noted by an NGO interviewee:

“CCA is a key component and we are now bringing together long term partners of our organisation [on the issue]”.

An insight into why government sectors took longer than their NGO counterparts (often led by expatriates) to move quickly on CCA was offered by a health sector interviewee, who noted *“[i]t’s the Melanesian way - we want to see things first then act later”*. An element of cultural practice, and the need to see something before acting, may therefore explain some of the lag in some government agencies’ response to climate change mainstreaming. However, it is not unique to the Pacific to want to see climate change impacts prior to action, as acting according to the precautionary principle and implementing “no regrets” measures are a challenge across developed and developing countries. Access to assets is also likely a contributing factor.

Another key perception of risk amongst most interviewees was the need to focus on risk reduction and preparedness, rather than with a reactive approach to response only, as noted by a government interviewee:

“We need to look more at disaster response issues as currently we only do assessment after the event.”

A MoH interviewee noted this approach was the norm:

“MoH is currently operating as mitigation or preparedness entities. This is already an advantage as we are already operating in the mood of managing with small resources. We have more energy to respond with this mindset.”

Similarly, Red Cross noted the need to be *“proactive and linking response with DRR and preparedness. It’s about monitoring the situation and linking with preparedness.”* This emphasis on reducing risk and being prepared enhances the adaptive capacity of the DRS as it encourages flexibility in approach and recognition that by its very nature, disaster response is uncertain. This is an issue also raised by Red Cross: *“Organisations that deal with disasters have to be flexible. They need the systems to be in place to deal with this”*. Elements of the DRS architecture (such as plans and policies) therefore need to acknowledge the requirement of flexibility as a key component of how the system operates.

Climate change and disaster risk were not always prioritised amongst organisations interviewed. This was particularly true for the health sector. Some interviewees saw other social issues surrounding urban migration and population growth as more critical development issues needing urgent attention, for example: *“Population in [Port] Vila is a huge issue. This is more crucial than climate change.”* This highlights how the immediacy of current risks and the need for the health sector to meet basic needs are prioritised over those associated with climate change – most of the effects of which are yet to be seen.

Given the fact that climate change impacts in countries such as Vanuatu now have the potential to attract significant funds from donor partners, environmental problems, no matter what the real cause, are often blamed on climate change. Poor development practices are prevalent in parts of Vanuatu, with an NGO interviewee noting:

“Coconut trees are now standing in water – they used not to be. But there is also sand mining and coral mining – is this the result climate change or bad human practices?”

The perceived risk of climate change may therefore be amplified in the hope of receiving funds on the basis of climate change impacts. This constrains the adaptive capacity of the DRS as a healthy environment is needed to support the vast population dependent solely on subsistence livelihoods in Vanuatu.

Risk perceptions surrounding climate change and disasters in Vanuatu are in part dependent on the priorities and obligations of each organisation. While most agree on the need to prioritise DRR, attempts of following through with actual activities and extending efforts to mainstream climate change considerations are varied. Doing so would exemplify the flexibility needed to move the DRS towards a system that addresses current and future needs.

5.5 Strategic vision and outcome expectancy

An organisation's vision for resilience provides a defined purpose or vision statement that underpins its operations (McManus et al., 2007). It has been found that regardless of how well defined the purpose or vision, the operational reality and the communication of this vision can vary from one extreme to another throughout organisations. Regardless of the degree of organisational vision, three critical aspects should be considered from an adaptive capacity perspective (McManus et al., 2007): (i) How well is the vision articulated and communicated through the organisation? (ii) How well do the day-to-day operations represent that organisational vision? (iii) How well does the organisation look towards that vision for direction when engaging in emergency situations? Organisations with a clear sense of purpose and vision are able to articulate and communicate this effectively in their day-to-day operations. These three critical elements of this key determinant were explored for the Vanuatu context.

(i) How well is the vision articulated and communicated through the organisation?

Vision statements from selected organisations in the Vanuatu DRS are provided in Box 5.

Box 1: Vision statements of organisations from Vanuatu's DRS

"Building a secure resilient and better Vanuatu for tomorrow". (Vanuatu Ministry of Internal Affairs)

"The vision of the service is: Skilled and motivated staff, using modern science and technology within a sound, efficiently managed organisation, providing high quality meteorological services that are widely available, effectively applied, beneficial, and highly valued by all sections of the community." (Van Meteorological Service)

"Our vision is to have an integrated and decentralised health system that promotes an effective, efficient and equitable health services for the good health and general well-being of all people in Vanuatu." (MoH)

"Oxfam's vision is a just world without poverty. We envision a world in which people can influence decisions which affect their lives, enjoy their rights, and assume their responsibilities as full citizens of a world in which all human beings are valued and treated equally."

"We seek a world of hope, tolerance and social justice, where poverty has been overcome and people live in dignity and security." (CARE Australia)

"To improve the lives of vulnerable people in Australia and internationally by mobilising the power of humanity." (Australian Red Cross)

Most interviewees were aware of the strategic visions of their organisations (for example those described above), and also the less formalised visions more directly related to disaster response and climate change as described by interviewees. For example a development partner noted:

"Strategic discussions have been held with colleagues from Suva to look at our program and climate change proofing. We need to determine how we will incorporate climate change scope into program design and implementation."

Other government departments were less clear about their organisation's vision specifically regarding addressing climate change, or whether it was a priority, for example:

"I am not aware of any strategic or formal discussions or planning about how to deal with climate change into the future within my organisation only through the NAB [National Advisory Board – see below]." (MoIA)

The NDMO acknowledges its role as a coordinating body for disaster risk management, and noted that:

"Currently [the] new direction is trying to incorporate the CCA into a JNAP [Joint National Action Plan for DRR and CCA]. Implementation has started." However, an interviewee from the donor community notes that "DRR and DRM are quite important and should be brought to the forefront as they are key to every sector. There is a lot of will but this needs to be transformed into political will, however this is hard based on the competing needs."

A potential weakness is therefore the communication of the vision of the NDMO to integrate DRR and CCA into a JNAP to other sectors. Sectors, as noted in the quote, are lacking political will, stemming from the numerous priorities they have to address. The vision therefore needs to be pitched such that benefits in addressing risk reduction can be clearly expressed.

(ii) How well do the day-to-day operations represent that organisational vision?

Despite not being fully aware of their organisation's vision in addressing climate change impacts, most interviewees were able to describe approaches being taken that address resilience building within their organisation. This came in the form of training, for example from the NDMO:

"The [training] process is continuing and we are looking at doing secondment of officers to other PIC NDMOs to learn from their experiences, or get someone from another country to assist our staff here."

This addresses current and future technical and human resource capacity needs and could also support adaptive capacity by boosting national leadership efforts of the NDMO.

Modifying the national governance arrangements for disasters and climate change also enacts elements of strategic vision. The NAB for climate change and disaster risk management is being formalised to better integrate these overlapping issues, as noted by a development partner:

"Vanuatu is currently bridging the divide between climate change and DRM by establishing a National Advisory Board (NAB)".

This push to integrate is flowing to other sectors, as noted by a development partner:

"The NDMO and the Meteorology and Geohazards departments have pushed to have DRR and climate change integrated into government agendas."

This again reflects the vision of the NDMO and VMGD to better coordinate responses to climate change and disaster. The NDMO also notes the need to be flexible in how it operates:

"We understand that climate change is coming slowly but surely, so we need to be flexible. For example, now we are not only willing to respond but also assist with emerging needs."

This flexibility in daily operations highlights adaptive capacity in terms of having a future focus and displaying leadership and adaptiveness in approach.

While this future focus exists within some organisations, other government sectors do not appear to have the same vision, or at least do not have the capacity to enact it. For example, it was noted that:

“Budgets are usually prepared after an assessment has been done, and usually there is no money set aside by line ministries and so money is usually taken from other approved programs.”

This quote highlights a lack of vision in accounting for disaster response in budgets. It is likely that funds are already accounted for in meeting basic needs, for example in the health sector, which lacks capacity across a range of areas as described by a MoH interviewee: *“We are operating in a high service demand. [We are] paying more people than budgeted. A new structure is being approved which is an absorbing structure. That’s the only thing we have going to address future resource needs.”* (MoH)

Despite this acknowledged challenge in the health sector, the MoH interviewees note also that:

“We [MoH] are playing a part in DRR. The location of facilities is something we consider and try to put new developments away from the sea on higher ground. Strategic planning and thinking is happening.”

This highlights that some strategic thinking is considered in day-to-day operations, where possible within the constraints of existing capacity.

NGOs and Red Cross were able to describe activities that supported their strategic vision, for example, Red Cross noted: *“We are trying to be proactive and use seasonal forecasts to trigger preparedness action”*.

(iii) How well does the organisation look towards that vision for direction when engaging in emergency situations?

Vanuatu’s NDMO noted that: *“SOPs are being developed to guide how NDMO operates with other partners.”* This would better enable the strategic vision of enhanced coordination, however as noted earlier, SOPs need to be both robust and flexible to account for the range of scenarios disasters can lead to. Similarly, the VHT has coordination as a focus, with Oxfam noting:

“The VHT is trying to streamline all these issues and get national actors involved in order to get the response system to where it should be.”

This too supports the strategic vision of the VHT, which aims to enhance national leadership in times of disaster response. Coordinated disaster assessments provide the means to achieving a DRS with enhanced adaptive capacity. The current focus on coordinated assessments therefore enacts elements of a strategic vision.

The strategic vision of organisations and their ability to enact them in practice were found to be somewhat dependent on capacity. Strategic visions relating to climate change usually required some technical capacity and experience and knowledge, without which climate change mainstreaming is difficult.

6. CONCLUSION

This research revealed that in Vanuatu, the five key determinants of adaptive capacity, in order of level of influence, were: 1) Communications, relationships, information and knowledge; 2) Leadership, management and governance; 3) Capacity; 4) Risk perceptions and 5) Strategic vision and outcome expectancy. Vanuatu's NDMO provides a level of leadership that is supported by relatively high capacity and support from other organisations within the DRS both in Vanuatu and from outside the country. The credibility and legitimacy of the DRS is therefore heavily tied to the NDMO, and also the VHT, with its multi-sectoral membership that functions effectively as a result of pre-existing relationships and an internal governance arrangement (through its clusters) that is well understood. Moves to have the VHT led by government ministries was found to be constrained by shortages in human resources, skills and financial backing, particularly in the health sector. A recommendation is to develop a longer term strategy to build this capacity through a range of approaches including policy and legislation and policy and plans, all of which should be developed in close consultation with relevant stakeholders and led by individuals or organisations who are already part of the DRS.

The shared perceptions of risk across Vanuatu's DRS, coupled with (or perhaps as a result of) the existence and leadership of the VHT, have led to an overall shared strategic vision for coping with the impacts of climate change and disasters in Vanuatu. The establishment of the NAB, provides an example of a DRS that has a future focus and a vision of how it would like to progress. The strategic vision of many individuals within the DRS provides the capability to move towards a system with enhanced adaptive capacity. While the health sector's perceptions of risk were aligned with those of the rest of the DRS, as noted above and throughout this chapter, its limited capacity currently constrains their ability to fully participate in implementation of the strategic vision. Capacity building is therefore required, appreciating elements of culture, geography and lessons from the past in the development of future initiatives.

Specific recommendations for Vanuatu include the following:

- MoH (with the support of donors and international organisations) to ensure that clear guidelines are in place for in-coming personnel to be registered to facilitate efficient and effective HRH management, immigration and customs processes in each country.
- NDMO to ensure systems are in place to facilitate a structured post-disaster debrief that encourages a feedback of lessons learned from all agencies into national policy and planning processes.
- Communication and coordination between the MoH and other DRS organisations needs to be strengthened with a view to improve effectiveness and efficiency of disaster response.
- NDMOs to work towards improved coordination of capacity building of technical upskilling and training programmes (aligned with UNOCHA's own recommendations). This is to include needs based content and systematic selection of participants.

- MoH to lead (supported by of Australian and regional / international organisations) an urgent comprehensive assessment, including further research, of psychosocial support needs and technical capacity in each of the case study PICs, both in terms of affected populations, health providers and other first respondents to disasters.
- MoH/National Health Services (supported by Australian and regional / international organisations including WHO) to develop a strategic plan addressing emergent findings from assessments of psychosocial support capacity. This will ensure that adequate consideration and provisions are made regarding the specific psychosocial needs of the affected population, health worker support and disaster response personnel.
- MoH should ensure that adequate considerations are given to HRH needs for disaster response under a changing climate, in any new or revised National Health Plans or HRH strategic policies.
- DRS to seek the support of development partners for the assessment of how the health workforce capacity can be improved in terms of numbers, skills and competencies in the context of more frequent intense disasters.



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