19th January, 2014.


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Submissions by Pasifika Nexus


I would firstly to thank Dr Katharine Vadura and the National Centre for Research on Europe and its Partners for enabling the participation of members of our Think Tank from Papua New Guinea, Vanuatu and Fiji. For many of us, the challenges of experiencing natural disasters are something that we have learnt to cope with and manage. I can remember being told that I was three months year old when I had to be carried in a basin where I was warmly wrapped and carried over my father as he led mom and others to safety during a flood in Rakiraki, a part of Fiji. Floods, earthquakes, tsunamis, bush fires are common place in Oceania.

As we grapple with challenges pertaining to various forms of disasters and identify strategies to build resiliency, it is also useful to map what is happening on the ground. No doubt, various agencies would have already identified vulnerable communities and those that are marginalized but in convening the Workshop and Conference as you have done in Christchurch allowed for grassroots dialogue across cross constituencies to highlight areas that may not have been addressed.

Aside from natural floods, villages in Fiji have to grapple with issues of sea level rising on a daily basis. Increase of salinity in the soil makes food production in these areas a challenge. Some families have had to move their homes three times to deal with challenges to their environment[1]. Cyclones also cause massive devastation wherever it strikes causing challenges to shelter, food, water and energy. Viral outbreaks are also common place in post disaster ridden areas. Whilst some natural disasters happen occasionally, others like the impact of rising sea levels are a constant threat. The Government of Fiji has identified 676 communities and only 42 will be selected for relocation within the next five or ten years[2] depending on resources. We would also like to emphasize that there aside from natural disasters, there are other types of disasters that are just as potentially life threatening such as civil war, insurrections as has been common in parts of the Pacific like West Papua, Bougainville, Solomon Islands and potential terrorist attacks or nuclear proliferation, pandemics that can leave communities marginalized and at risk. When developing the matrix, these situations should also be factored in.

Whilst there are many pressing issues concerning disasters in Oceania, we would like to streamline our focus into the areas *of Information Communication Technology (ICT) and Mental Health in Vanuatu and Transportation.*


Yours faithfully,

Salanieta Tamanikaiwaimaro
PASIFIKA NEXUS

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[1] http://www2.ilo.org/global/about-the-ilo/newsroom/features/WCMS_221135/lang--en/index.htm
[2] http://www.fijivillage.com/?mod=story&id=1701143b6ac7382c14bc4260fab506

# SNAPSHOTS FROM OCEANIA

## 18th January, 2014

## Prepared By Pasifika NEXUS

### Giheno, M, Obed, J, Tamanikaiwaimaro, S

### For

### Project on Meeting Challenges, Managing Risks Workshop in Christchurch, New Zealand

### (3rd-5th December, 2013)

### National Centre for Research on Europe

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# Summary

The submissions reflect the various contexts for developing these recommendations and they are based on the collective experiences of Mona Giheno, Dr Jimmy Obed and Salanieta Tamanikaiwaimaro.

## Recommendation 1

Information Communication Technology (ICT) should be a component in developing framework for Disaster Risk Reduction (DRR) through the following means:

a) Increased Research in the area of ICT and DRR and identifying mechanisms to fully harness ICT to better serve vulnerable communities and stakeholders.
b) A scoping study should be commissioned to map out empirical data on the landscape and ICT related areas to DRR prior to weaving national and regional strategies.
c) There should be coordinated efforts to increase awareness of the Tampere Convention and workshops and conferences designed for Network Operators, ICT Regulators.

## Recommendation 2

Mental Health needs to be included in Disaster Risk Management Planning. Rights Based Approach is not complete without the inclusion of Mental Health. This can be done through:

a) Identifying targeted research in the area of mental health and DRR in the Pacific
b) Facilitating research in the area to identify the landscape

## Recommendation 3

There should be research focusing on Transportation and the Impact of stakeholders in Transportation to explore linkages with Disaster Risk Reduction and identifying key economic indicators. This should involve:

a) Mapping the transportation landscape and identifying linkages
b) Designing model simulations on critical infrastructure and identifying threats, challenges etc

## 1.0 Introduction

This submission is a reflection of snapshots of the collective experiences of Mona Giheno, Dr Jimmy Obed and Salanieta Tamanikaiwaimaro. It touches on the areas of ICT, Mental Health and Transportation. This was compiled to justify the recommendations.

## 2.0 Overview of Oceania

There are 27 countries and territories within Oceania. 14 are independent nation states and 13 are territories. The Territories are diverse from UK Overseas Based territory of Pitcairn Island, Australian Territories such as Christmas Island, Norfolk, Cocos, New Zealand Territories such as Cook Islands, Niue and Tokelau, US Territories such as American Samoa, Northern Marianas and the French Territories such as New Caledonia, French Polynesia and Wallis and Futuna. Other countries include Australia, Fiji, Federated States of Micronesia, Guam, Kiribati, Republic of Marshall Islands, Nauru, New Zealand, Papua New Guinea (PNG), Palau, Solomon Islands, Tonga, Tuvalu, Vanuatu, and Samoa. The country or territory with the largest population is Australia with 23.13 million followed by Papua New Guinea at 6.43 million and the least populated is UK territory Pitcairn Island with 50 people. For more information on Oceania, see Appendix A.

## 3.0 ICT in Oceania

Some of the countries in Oceania have the world's least affordable telecommunication services and access and affordability remain a challenge. There are also challenges to Quality of Service (QoS) which is further exacerbated during times of disaster and post disaster situations.

The Tsunami that affected American Samoa resulted in network "jam" as the Networks could not sustain the capacity of calls happening domestically and those externally. This trend of collision is also a common phenomenon whenever disaster strikes a country or territory. Because communication is a critical component of mapping casualties, hazards and rescue missions, it is something that has to be included in network planning and in DRR.

A Table containing basic indicators of ICT in Oceania can be viewed via Appendix A. One of the common challenges in the Pacific when a disaster strike is the availability of telecommunication services as well improving QoS. To address this, some countries have negotiated and drafted the Tampere Convention which is hosted within the International Telecommunications Union (ITU).

## 3.1 Tampere Convention in Oceania

The Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations[3] came into force 8 January 2005, following the ratification by 30 countries. The Convention aims to remove regulatory challenges in landing and mobilizing trans-border use of telecommunication equipment for immediate deployment.

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[3] http://www.itu.int/ITU-D/emergencytelecoms/Tampere_convention.pdf

The Tampere Convention calls on States to facilitate the provision of prompt telecommunication assistance to mitigate the impact of a disaster, and covers both the installation and operation of reliable, flexible telecommunication services[4]. Regulatory barriers that impede the use of telecommunication resources for disasters are waived[5]. These barriers include the licensing requirements to use allocated frequencies, restrictions on the import of telecommunication equipment, as well as limitations on the movement of humanitarian teams[6].

The United States signed the Tampere on 17th November 1998 which would be extension apply to its territories namely Northern Marianas and American Samoa. France acceded on 6 August 2009 which would naturally extend to its territories namely French Polynesia, New Caledonia and Wallis and Futuna. Marshall Islands signed the Tampere Convention on 11 November 1998 and Tonga acceded on 8 May 2003. That would place 21 countries and territories that have not ratified the Tampere Convention.

## 3.2 Cyber Crime and Cyber Security
Another phenomenon is the rise of cyber crime and fraudsters who utilize vulnerable risk situations to mount online scams diverting much needed resources through identity theft, illegal access through hacking, online bank hoists, telecommunications hijacking, spam, phishing, malware, botnets, industrial espionage and electronic fraud. There is currently no research to identify the degree to which this occurs in Oceania.

Red Cross Organisations[7] and other humanitarian organisations who are involved in relief efforts have faced a lot of diverse challenges. International Red Cross has been looking for ways to reserve and protect the generic top level domain name at the second level[8] so as to reduce the amount of scammers who create fake websites to profit from disaster stricken zones. Within ICANN, a Policy Development Process (PDP) was initiated on the protection of IGO and INGO names including Red Cross that concluded by making recommendations to protect such names, however this was not escalated to the Board. A decision is expected to be reached in the ICANN 49 meeting in Singapore this year following the call for Public Comments on the Recommendations[9].

## 3.2.1 Protection of the issuance of top level domain names in Oceania pertaining to Red Cross.
There is currently no research in Oceania on this issue however for Australia holds that for Red Crescent Red Cross names, the Geneva Conventions Act 1957 (Cth) prevents any unauthorized use of specific Red Cross related expressions, which could be extended to apply to domain names at any level[10]. For France (as would be relevant to French Territories), Article 1 of French law dated July 24, 1913, as amended by French law dated July 4, 1939, implementing the provisions of the Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armies in the Field, dated July 6, 1906, provides protections for certain words and marks associated with the RCRC in France[11]. While domain names are not specifically listed in the law, the broad language of the law has been used to prohibit registration of domain names using the restricted names[12]. The improper delegation/registration or use of

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[4] ibid

[5] ibid

[6] ibid

[7] http://www.redcross.org.uk/About-us/Contact-and-help/Fraud-advice

[8] http://gnso.icann.org/en/group-activities/active/ioc-rcrc

[9] http://www.icann.org/en/news/public-comment/igo-ingo-recommendations-27nov13-en.htm

[10] Initial Report on the Protection of IGO and INGO Identifiers in all gTLD PDP processes

[11] ibid

[12] ibid

these names at the top- or second-level could possibly serve as a basis of liability[13].  For the US, Red Cross is also afforded protection[14] under the Lanham Act and is protected pursuant to 18 U.S.C. §§ 706, 706a, and 917. Allowing use of the protected terms at the top- or second- level – while not fully defined in the statutes and not addressing domain name registrations – could be used to impose liability[15].

## 3.3 Critical Information Infrastructure Protection (CIIP)

The vulnerability of critical information infrastructure networks is predominantly an increasing concern when it comes to national security. Information that relies heavily on grids whether these are virtual museums, patient information database, control of major utilities such as energy and water, to traffic lights, banking systems are all but an example of information grids that can be affected in instances of cyber attacks or natural disasters that have an impact on the lives of communities who rely on these grids.

## 3.3 Recommendation

ICT should be a component in developing framework for DRR through the following means:

a) Increased Research in the area of ICT and DRR and identifying mechanisms to fully harness ICT to better serve vulnerable communities and stakeholders.
b) A scoping study should be commissioned to map out empirical data on the landscape and ICT related areas to DRR prior to weaving national and regional strategies.
c) There should be coordinated efforts to increase awareness of the Tampere Convention and workshops and conferences designed for Network Operators, ICT Regulators.

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[13] ibid

[14] ibid

[15] ibid

*"This workshop provided for me the opportunity to sit in the same room with other Pacific Islanders and hear from them what is happening in their respective countries as far as disaster risk management is concerned. Not only that, but also the different profession and walk of life of the participants added richness to the discussions. Participants were able to bring to the table their experiences from their upbringing, culture and island way of life and also their academic knowledge. The forum allowed for collaboration and fusion of culture and current knowledge which I personally think is important when discussing issues related to Pacific Islanders.*

*I acknowledge the organizers of this workshop for the way it was conducted. By this I mean allowing the participants to discuss and elaborate on the issues and come up with what would work best in the Pacific. The discussions would have lost its richness had it been conducted some other way. There was a sense of freedom to express and give out the 'raw' firsthand experience of Pacific Islanders within their context.*

*The way this workshop was conducted gave people a sense of ownership of whatever the outcome of this would be. This is because, as emphasized many times in the workshop, this workshop was conducted from a 'ground-up' approach. All in all, this was a very informative workshop and in my opinion one that was rich with knowledge, resources and experience."*

*Dr Jimmy Obed, Pasifika NEXUS (Vanuatu)*

## 4.0 Mental Health – Setting the Context for Disaster Risk Reduction

Health, as defined by the World Health Organization (WHO) is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health and disaster or trauma from a disaster (whether man-made or natural) is something that is well documented. There are physical injuries and illnesses following a disaster and also mental illness, such as depression, post-traumatic stress disorder (PTSD) etc following disasters. It is documented that unhealthy behaviors arise from those who have been exposed to trauma or disaster, an evidence of poor coping skills.

Whilst many developed countries have long recognized the importance that Mental Health plays in Disaster Management, many developing countries still lag in this area. The District of Columbia has long recognized that exposure to traumatic events, such as natural disaster, mass violence, or terrorism, may have an unanticipated or even long-lasting effect on mental health and well-being[16]. Further, it is normal to feel stressful in tragic situations like a fire or the violent death of a loved one[17]. As such jurisdictions such as the District of Columbia have well established systems that facilitate disaster mental health services.

In a Study[18] that was released in August, 2013 and published in the Journal of the American Medical Association, Psychiatrists say that disaster related psychic trauma should be identified, triaged and treated the same as physical injuries. The Study recommends that in post disaster settings, a systematic framework of case identification, triage, and mental health interventions should be integrated into

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[16] http://dmh.dc.gov/page/disaster-mental-health-services
[17] ibid
[18] http://jama.jamanetwork.com/article.aspx?articleid=1724280

emergency medicine and trauma care responses[19]. There are numerous creative ways to devise systems to ensure that these services can be dispensed adequately and efficiently and in New Jersey following the Super Storm Hurricane Sandy, the Division of Mental Health Services utilized programmes like Sesame Street to bring education and raise awareness in this area[20]. Disaster Mental Health workers have to be certified and the American Red Cross have developed eligibilities and competencies[21].

## 4.1 A Case Study on National Mental Health: Vanuatu

In Oceania, to date, there is little to no research on the linkages of Disasters and Mental Health. The following is a case study of Mental Health Services in Vanuatu. In viewing Vanuatu's situation, this can assist in better understanding some of the plight of other Pacific countries. Vanuatu, a collection of more than 80 islands, lies between Fiji and the Solomon Islands. Vanuatu's population has grown from 77,988 in 1967 to 234, 023 in 2009.  According to the last census in 2009, 75.56% of the population lived in the rural zone. Vanuatu's archipelagic layout and rugged terrains in most of the islands poses a challenge in ensuring health services in general reach far and wide. Accessibility to services and communication remain a challenge.

Dr Jimmy Obed, a Medical Doctor in Vanuatu oversees the facilitation of Mental Health Care, Support and Services in Vanuatu. He sits on the Vanuatu National Mental Health Committee, which is responsible for planning, policy and decision-making with regards to how mental health programs/services are run at the national level. He is currently the only local doctor with specialist qualification in Mental Health, and heads a team of about 9 mental health nurses. These nurses are scattered across the 6 provinces of Vanuatu offering mental health services once a week in their respective provincial hospitals. As part of the mental health team, they advocate for people with mental illness and also offer support to the service providers of the mentally ill in the form of awareness, education and home visits.

The model that they intend to adopt is a community-based model where we work more closely with the community and schools in education and empowerment through awareness, workshops and basic trainings. Currently, mental health services are offered only to adults but they plan to extend services to children in the near future.

The mental health team also networks with regional organizations such as the Pacific Island Mental Health Network (PIMHNet) under World Health Organisation (WHO), which offers assistance in training.

### 4.1.1 Mental Health in Vanuatu

For so many years, Mental Health in Vanuatu has been neglected until recently. Consequently, very little research been done into mental health in Vanuatu and most of which was done by visiting consultants and Non Governmental Organisations. These published papers make recommendations on ways forward but there has been minimal progress due to poor coordination and lack of leadership in the area of mental health.

Besides affecting human lives and assets, disasters have a profound psychological impact on human beings, and specifically their ability to cope with and recover from difficult situations and part of their recovery and resilience stem from the sense of belonging that is rooted in their culture and religion. Vanuatu is diverse in culture, language and has a strong religious heritage. Because mental health in Vanuatu is still developing it is therefore malleable. Which means careful, deliberate and strategic

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[19] ibid

[20]

[21] http://www.cdms.uci.edu/PDF/Disaster-Mental-Health-Handbook-Oct-2012.pdf

planning is crucial. Those with mental health ailments are part of those that are vulnerable pre, during and post disaster situations.

Dr Jimmy Obed has recently been working with an ad hoc task team tasked to draft a standard operating procedure for a Vanuatu Medical Assistance Team. This project aims to outline roles of key people in response to any disasters. Mental health and people with disability will be included in the Project.

### 4.1.2 Strategies for Sustainable Engagement Involves Mental Health

Whilst there is no research in this area yet, suffice to say, it can be inferred from the lack of appropriate systems and mechanisms involving Mental Health that in the Pacific when it comes to health and disaster, the focus is mostly on the immediate physical injuries but not so much the mental health aspect. Part of this could be because depression or other mental illness is not well defined culturally because it is thought to be a "foreign" disease that only affects Western societies. There is also a misconception of mental illness, being translated as 'crazy'. Because of this, mental health following disasters is not well discussed in the region.

Disaster Management and Risk Reduction need to include mental health. At the moment, this could be a challenge as there is only a handful of mental health specialist in the region. However, within the communities in the Pacific, there are churches and pastors and other counselors who should be actively included in strategic response mechanisms.

### 4.1.3 Challenges in Vanuatu

There are several challenges in Vanuatu where gender and a largely patriarchal society restrict open dialogue. However there are many creative mechanisms that can be deployed to address some of these issues. Vanuatu has the world's largest language per capita and there is so much diversity. Whilst diversity is strength, there are aspects of diversity that make it a challenge to mainstream certain issues and solutions particularly when rolling out models within diverse communities. To come up with one overall blanket solution to issues might not be entirely practical in some Pacific Island countries.

When it comes to developing policies and strategic plans of action, one size does not fit all. Each individual Pacific country and territory has its own unique context. What works for one country might not necessarily work for another. However, one thing that is common in the Pacific is the concept of community. Pacific Islanders are community oriented people which is an advantage and a useful resource to pivot upon.

## 4.2 Recommendation

Mental Health needs to be included in Disaster Risk Management Planning. Rights Based Approach is not complete without the inclusion of Mental Health. This can be done through:

a) Identifying targeted research in the area of mental health and DRR in the Pacific
b) Facilitating research in the area to identify the landscape

## 5.0 Transportation – Setting the Context for Disaster Reduction

Disasters are out of the ordinary situations that require significant and substantial logistical deployment to transport equipment and humanitarian goods to affected and vulnerable communities. An efficient response system helps to reduce the social, health, economic and environmental impact of the crises. In the Pacific, very little research has been done on identifying the Transportation challenges encountered by disaster stricken areas and some of the challenges that crisis managers face. The development of high quality transportation plans for emergency managers is critical and utilizing mathematical models and algorithms[22] to generate simulations can often help in the development of clear and efficient plans.

It is imperative for countries and national crisis managers to be able to know the resources on the ground at any given time and working closely with stakeholders to develop:-

- Enhanced Information Sharing
- Evacuation Management and Operations
- Transportation Operations During Disasters

These types of planning should not be happen post or during disasters but should be developed well before disasters strike a country. The nature of the disasters differ from natural disasters – earthquakes, tsunamis, cyclones, volcanic eruptions, civil war or insurrection, nuclear proliferation, chemical spills, poisoning of water sources etc. Whilst some evacuation plans may exist for a type of disaster, care has to be taken to plan for other disaster scenarios as well. The development of Transport Emergency Plans will be unique to the context that it is designed for. The Pacific is also home to two thirds of the world's ocean and contributes to two thirds of the world's tuna stock. With the passage of ships in the Pacific waters carrying Nuclear waste, it is a hazard to those on board and also to Pacific Islanders who rely on the Ocean for their livelihood. Whilst the International Atomic Energy Agency (IAEA) has developed plans for emergency response mechanisms[23] involving radioactive material, it is still incumbent on Pacific countries to plan and prepare for the worst case scenario situations and disaster prone communities.

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[22] Berkoune,D, Renaud,J, Rekik,M and Ruiz, A. 2012. Transportation in Disaster Response Situations. Socio Economic Planning Sciences, Volume 46. Issue 1 in
http://www.sciencedirect.com/science/article/pii/S0038012111000309
[23] http://www-pub.iaea.org/books/IAEABooks/6348/Planning-and-Preparing-for-Emergency-Response-to-Transport-Accidents-Involving-Radioactive-Material-Safety-Guide

**5.1 A Case Study on a Stakeholder in Papua New Guinea: Steamships**

Aside from Australia, Papua New Guinea (PNG) is the largest populated Pacific Island country at 6.43 million with an internet penetration rate lower than most of her neighboring Pacific countries at 2.01%. Mobile penetration in PNG has increased with the liberalization of the market in the last decade[24]. The well being of the diverse communities in PNG has increased.

Steamships Trading Company Limited is a well established business conglomerate that has been operating for more than 90 years. From humble beginnings that is from the company's first ship SS Queenscliffe which was used to trade along the Papuan coast where it was a one-vessel trading operation to one of the largest employers in PNG to date.

At each stage of the economic development of the largest nation and economy in the South Pacific, Steamships has fostered businesses and industries that have helped build PNG[25]. The Group has boosted local economies through businesses initially established in Port Moresby, the gulf and western reaches of the former territory of Papua and later in New Guinea and the Highlands[26]. Steamships' coastal shipping and stevedoring services supported the PNG economy as it started to develop and explore its rich and diverse endowment of natural resources, including plantation crops and mining[27]. In response to new opportunities, Steamships diversified into hotels, manufacturing, distribution and other services[28].

Steamships Trading Company has a long tradition of investing in Papua New Guinea's growth, development and progress. Its transition from pioneer coastal trader to a diversified leader in shipping, transport, property, manufacturing, hotels and information technology has been integral to, and part of, Papua New Guinea's development[29]. More recently that development has accelerated so that Steamships is triple the size it was ten years ago and PNG has become a modern and formative leader within the Asia Pacific region[30].

**5.1.1 Mona Giheno in Steamships**

The conglomerate has seven divisions operating as Logistics, Property and Hotels, and Commercial Operations. Mona Giheno is a legal officer employed with Steamships Limited. Her work includes:

- assistance in litigation matters for East West Transport, one of Papua New Guinea's largest multifaceted transport and logistics companies
- providing legal advice and assistance to the Steamships Group of Companies including our Shipping division, to Marine Engineering Shipping Service, our ships repair facility and to our JV Stevedoring businesses which are joint ventures between Steamships and local landowner groups at respective ports of Port Moresby, Lae, Oro, Madang, Kimbe, Kavieng and Kiunga.

Mona advises that when disasters strike in Papua New Guinea, it also has an impact on commercial stakeholder operations as services get affected translating to access challenges for consumers. She reports that the linkage to DRM is distribution and supply of goods and services to affected areas and accessibility to some of the remotest of areas. For road transportation, the economic corridors of the

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[24] http://www.budde.com.au/Research/Papua-New-Guinea-Telecoms-Mobile-and-Broadband.html

[25] http://www.steamships.com.pg/about-us/our-company/company-history/

[26] ibid

[27] ibid

[28] ibid

[29] ibid

[30] ibid

national highways are serviced by Steamships trucking company. In shipping, the port sector plays a crucial role in the distribution and supply of goods and providing services to some of the most remote and sparsely populated areas on the mainland and islands. Of the 22 provinces, 15 are on the coast. More than 60% of the country's 6.43 million people are dispersed across 600 offshore islands, coral atolls and along the banks of major rivers. In some areas there are no road links and access to these parts are through waterways channels. Of the 46 airports and numerous airstrips that serve very remote communities, air transport is very expensive. Their Consort Express Lines ship in excess of 1000 bags of fresh produce from sweet potatoes, potatoes, cabbages, broccoli and onions on a weekly basis.

Food supply, medical supplies, ICT, mining and all other dynamic industries in Papua New Guinea heavily rely on Transportation and Logistics and it is incumbent from a national planning perspective that the linkages are properly measured and mapped out. Stakeholders like Steamships are an important vein in the cardiovascular system of a country and region and it follows that mapping critical infrastructure dependencies is critical in terms of developing disaster rights matrix as it affects basic rights to shelter, food, medical supplies etc.

Part of building resilience is to map the socio economic and development indicators pertaining to the distribution of goods and services and the vulnerabilities that exist with the different types of disasters. There are parts of the Pacific such as the Lau Group in Fiji where shipping is irregular which affects the supply of basic goods and services including the petroleum needed to power base stations to power communications, health supplies etc. Shipping challenges in Fiji is exacerbated during disasters.

## 5.2 Recommendation

There should be research focusing on Transportation and the Impact of stakeholders in Transportation to explore linkages with Disaster Risk Reduction and identifying key economic indicators. This should involve:

a)  Mapping the transportation landscape and identifying linkages
b)  Designing model simulations on critical infrastructure and identifying threats, challenges etc

## 6.0 Conclusion
ICT, Mental Health and Transportation should be factored into the DRR and DRM processes. Research is also important to highlight vulnerable areas and lead to informed planning by various agencies.

## Appendix A

| Country/Territory | Population | IDI Rank 2012 [31] | Internet Users [32] | Internet Penetration Rate % | ccTLD | ccTLD Operator | Tampere Convention |
|---|---|---|---|---|---|---|---|
| American Samoa (T) | 69,543 [33] | | 3129 | 4.49 | .as | AS Domain Registry ( | Signature 17th November 1998 |
| Australia (C.) | 23.13 million [34] | 11 | 17.80 million | 76.97 | .au | .au Domain Administration (auDA) | No |
| Cocos (Keeling) Islands (T) | 596 [35] | | 0 | 0 | .cc | VeriSign Inc. | No |
| Cook Islands (T) | 14, 974 [36] | | 5485 | 36.63 | .ck | Telecom Cook Islands | No |
| Christmas Island (T) | 1513 [37] | | 464 | 30.66 | .cx | Christmas Island Internet Administration Limited | No |
| Fiji (C.) | 883, 763 [38] | 82 | 281,042 | 31.80 | .fj | .FJ Domain Name Registry | No |
| Micronesia Federated States of (C.) | 106,104 [39] | | 24,191 | 22.79 | .fm | FSM Telecommunications Corporation | No |
| Guam (C.) | 160, 378 [40] | | 105,078 | 65.51 | .gu | University of Guam Computer Center | No |
| Kiribati (C.) | 103,248 [41] | | 10,390 | 10.06 | .ki | Ministry of Communications, Transport, and Tourism Development | No |
| Marshall Islands (C.) | 69,747 [42] | | 5,683 | 8.14 | .mh | Office of the Cabinet | Signature 11 Nov 1998 |

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[31] ICT Development Index via http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2013/MIS2013_without_Annex_4.pdf
[32] http://bgp.potaroo.net/iso3166/v4cc.html
[33] http://bgp.potaroo.net/iso3166/v4cc.html
[34] http://www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0/
[35] http://bgp.potaroo.net/iso3166/v4cc.html
[36] http://www.mfat.govt.nz/Countries/Pacific/Cook-Islands.php
[37] http://www.indexmundi.com/christmas_island/population.html
[38] http://worldpopulationreview.com/countries/fiji-population/
[39] http://www.indexmundi.com/federated_states_of_micronesia/demographics_profile.html
[40] http://www.indexmundi.com/guam/demographics_profile.html
[41] http://www.indexmundi.com/kiribati/demographics_profile.html
[42] http://www.indexmundi.com/marshall_islands/demographics_profile.html

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Northern Mariana Islands (T) | 61,174[43] | | 13,496 | 22.06 | | .mp | Saipan Datacom, Inc. | No |
| New Caledonia (T) | 249,000[44] | | 119,425 | 47.96 | | .nc | Office des Postes et Telecommunications | 6 August 2009 (a) |
| Norfolk Island (T) | 2302[45] | | 696 | 30.23 | | .nf | Norfolk Island Data Services | No |
| Nauru (C) | 15,118[46] | | 8163 | 53.99 | | .nr | CENPAC NET | No |
| Niue (T) | 1,611[47] | | 1076 | 66.79 | | .nu | IUSN Foundation | No |
| New Zealand (C.) | 4.50 million[48] | | 3.77 million | 83.69 | | .nz | Internet New Zealand Inc Group - Domain Name Commission (policy and regulation); NZ Registry Services (registry) | No |
| French Polynesia (T) | 277,293[49] | | 149,379 | 53.87 | | .pf | Gouvernement de la Polynésie française | 6 August 2009 (a) |
| Papua New Guinea (C.) | 6.43 million[50] | | 129911 | 2.01 | | .pg | PNG DNS Administration Vice Chancellors Office The Papua New Guinea University of Technology | No |
| Pitcairn (T) | 50[51] | | 0 | 0 | | .pn | Pitcairn Island Administration | No |
| Palau (C.) | 21,108[52] | | 6027 | 28.55 | | .pw | Micronesia Investment and Development Corporation | No |
| Solomon Islands (C.) | 597,248[53] | 125 | 39,559 | 6.62 | | .sb | Solomon Telekom Company Limited | No |
| Tokelau (T) | 1383[54] | | 809 | 58.49 | .tk | Telecommunic | | No |

[43] http://www.tradingeconomics.com/northern-mariana-islands/population-total-wb-data.html
[44] http://www.tradingeconomics.com/new-caledonia/population-total-wb-data.html
[45] http://unstats.un.org/unsd/demographic/sources/census/2010_phc/Norfolk_Island/report.pdf
[46] http://bgp.potaroo.net/iso3166/v4cc.html
[47] http://www.spc.int/prism/niue/
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| Vanuatu (C.) | 234,023[57] | | 21353 | 9.12 | .vu | Telecom Vanuatu Limited | No |
| Wallis And Futuna (T) | 15,542[58] | | 1349 | 8.67 | .wf | AFNIC (NIC France) - Immeuble International | 6 August 2009 (a) |
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