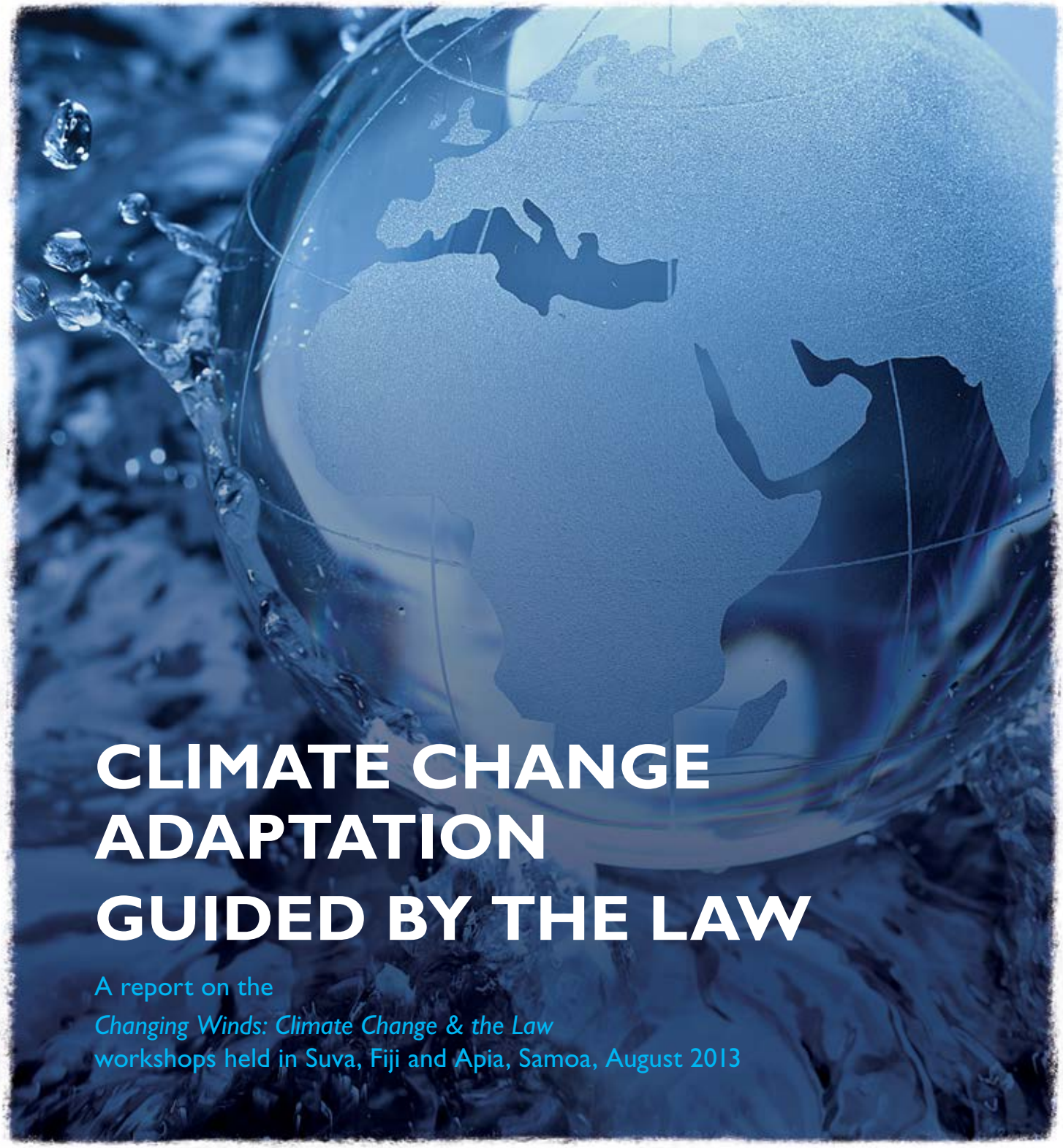

CLIMATE CHANGE ADAPTATION GUIDED BY THE LAW

A report on the
Changing Winds: Climate Change & the Law
workshops held in Suva, Fiji and Apia, Samoa, August 2013

Lead authors:

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FOREWORD

Our climate is changing. There is now greater certainty that human activity is the cause of most of the temperature increases in recent decades. It seems that sea levels could conceivably rise more than a metre by the end of the century if emissions continue at their current pace.

For those of us living and working in cities like London, New York, Shanghai or Sydney, the prospects for the coming decades are worrying. But for those living in Pacific Island Countries (PICs), there is far more concern. PICs are already experiencing the effects of climate change and rising sea levels, with further impacts expected to affect their economic, environment, social, cultural and traditional sectors, as well as limit their food security. According to the Intergovernmental Panel on Climate Change (IPCC), the Pacific is one of the regions most vulnerable to the effects of global climate change, leading some countries to already actively explore possible migration options for when their land is flooded.

As a leading provider of pro bono services, at DLA Piper we are committed to using our resources and legal knowledge to support those in greatest need, upholding access to justice and the rule of law. As the first law firm to achieve global certification to ISO 14001 for our environmental management, we recognise the importance of minimising our own footprint and achieving a positive impact through the climate change legal advice we give our clients and our environmentally focused pro bono work.

Given the significant human impact climate change is already having in the Pacific, we felt compelled to use our extensive pro bono and legal experience to develop workshops that could promote an awareness and understanding of the law relating to climate change adaptation for lawyers in the Pacific. In August 2013, we ran *Changing Winds: Climate Change & the Law* workshops in Suva, Fiji and Apia, Samoa. The workshops were held in partnership with the Centre for Asia-Pacific Pro Bono (CAPPB) and the United Nations Educational, Scientific and Cultural Organisation (UNESCO). Presenting at the workshops were a range of climate change experts including our climate change adaptation legal specialist, Mark Baker-Jones.

The workshops were a tremendous success, bringing together lawyers, academics, students, NGO workers, government officers from all levels of government, town planners and other professionals from East and West Samoa, Fiji, Tuvalu, the Solomon Islands, Vanuatu and Papua New Guinea. The attendees provided our lawyers with wonderful insight into work that is already being done in the Pacific to adapt to the impacts of climate change, some examples of which have been included in this report.

Going forward we will seek additional opportunities to engage in further collaborative efforts focused on the important issue of climate change adaptation and contributing to a global climate change solution.

Sir Nigel Knowles,
Global Co-CEO and Managing Partner of DLA Piper International LLP

ACKNOWLEDGEMENTS

The authors and DLA Piper acknowledge the generous support of the Centre for Asia-Pacific Pro Bono (CAPPB), the United Nations Educational, Scientific and Cultural Organisation (UNESCO), Climate Planning and the University of Queensland.

A thank you is also due to all the presenters and attendees at the *Changing Winds: Climate Change & the Law* workshops in Fiji on 5 August 2013 and in Samoa on 9 August 2013, some of whom have kindly contributed material to this report.

A special thank you to the Government of Samoa and the Fijian Government for kindly supporting this concept and inviting us to their beautiful countries; to Sue Vize UNESCO for her regional support and guidance; Rory Walshe, natural science intern (UNESCO), for support in identifying participants; the Secretariat of the Pacific Regional Environment Programme (SPREP) and the Secretariat of the Pacific Community (SPC) for kindly promoting the workshops; Daniel Creasey, Asia Pacific Pro Bono Manager, DLA Piper, for organising the workshops; Hannah Gassman, solicitor with DLA Piper for administrative support; Mrs Perelini Hamuferi for her assistance at the Samoa workshop; and to the warm and generous people of American Samoa and (Western) Samoa, Fiji, Tuvalu, The Solomon Islands, Vanuatu and Papua New Guinea, that we met during our time in Fiji and Samoa, and who contributed to the success of these workshops.

Vinaka vaka levu and *Fa'afetai tele lava*

We also thank the contributing authors to this report for taking time to share their experiences and knowledge, and to the attendees for their valuable feedback.

Please note that any opinions expressed in this report are solely those of the individual authors and contributors, and do not necessarily represent those of DLA Piper or UNESCO.

ABOUT THE AUTHORS

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Mark Baker-Jones leads DLA Piper's climate change adaptation team. Mark is a Special Counsel in the firm's Real Estate and Commercial Property Group. His main areas of work relate to planning and environment law, and climate change adaptation law.

He advises on the assessment and management of organisational climate legal risk through identification of the climate change risks, identification of relevant regulatory frameworks that impose legal obligations related to climate change risk, and development and implementation of strategies and guidelines for dealing with those risks.

His key area of expertise is in the development of decision-making procedures and protocols designed to give organisations an understanding of climate change related legal risk and a means of managing and responding to climate legal risk.

Mark is a recognised leader in this emergent area of law.

DONOVAN BURTON
Principal, Climate Change
Adaptation Specialist,
Climate Planning

Donovan is a climate change adaptation specialists at Climate Planning where he undertakes climate change risk assessments, creates climate change adaptation plans and provides specialist advice. Donovan has completed almost 70 climate change projects for a diverse array of clients including insurers, infrastructure providers, information communication technology companies, property developers, local governments, state governments, and United Nations agencies.

Donovan specialises in helping cities and businesses consider the effects of climate change. His key area of focus is identifying indirect and emerging issues associated with climate change including insurance availability and affordability, market opportunities and failures and cascading impacts from adaptation decisions.

Donovan is an environmental planner with a first class honours, a recipient of the prestigious Wentworth Scholarship and a part-time PhD candidate with Griffith University's Urban Research Program. Donovan believes that the private sector can play a significant role in climate change adaptation.

L-R: **Dr Denis Chang Seng, Mark Baker-Jones, Dr Justine Bell, Donovan Burton**

DR JUSTINE BELL

Lecturer, TC Beirne School of Law at the University of Queensland.

Justine Bell is a lecturer at the TC Beirne School of Law at the University of Queensland. Justine coordinates and teaches courses on environmental law and climate change law across the undergraduate and postgraduate law programs at UQ. Justine also has a strong research profile in these areas of law, particularly in climate change adaptation law.

Justine obtained a PhD from the Queensland University of Technology in 2010, and was awarded an ARC funded Postdoctoral Fellowship in 2011. Justine undertook her postdoctoral research at the Global Change Institute at The University of Queensland, focussing on legal, policy and insurance responses to sea-level rise.

Justine has published widely on climate change adaptation law, in Australia and internationally. She is also particularly interested in multidisciplinary approaches to these issues, and has collaborated widely with scientific researchers.

Justine is currently working on a book titled 'Climate Change and Coastal Development Law in Australia', due for release through Federation Press in 2014.

DR DENIS CHANG SENG

Science Programme Specialist/ Advisor for the Pacific States, UNESCO

Dr Denis Chang Seng is currently UNESCO's science programme specialist/advisor for the Pacific States.

Denis has worked for a period of five years with the United Nations University Institute for Environment and Human Security (UNU-EHS) in Bonn, Germany from 2007-2012.

He specializes and works in the areas of climate science, global environmental change, institutions, policies and governance of disaster risk, climate change adaptation and early warning systems.

Key projects he has worked on while at UNU-EHS include the embrace project, which deals with building resilience across communities in Europe; the UK Government Office for Science FORESIGHT project on Migration and Global Environmental Change, as well as a German Disaster Risk Platform (DKKV) project on Adaptive Disaster Risk Reduction in the light of Climate Change. Earlier he provided expertise knowledge to DKKV and the United Nations International Strategy for Disaster Reduction (UN/ISDR) towards a report on "Emerging Challenges for Early Warning Systems" in the context of climate change and urbanization.

EXECUTIVE SUMMARY
A GUIDE TO MANAGING CLIMATE LEGAL RISK

EMBEDDING CLIMATE CHANGE ADAPTATION

The Pacific is one of the world's most vulnerable regions to the impacts of climate change. Climate change is already affecting Pacific Island Countries and their people, and although much is being done to find solutions, any truly effective solution must be bound with, or driven by, a robust legal framework – that is, a climate change legal framework. But the establishment of a climate change legal framework is only part of the solution.

One of the key findings from the workshops was that in order to truly embed climate change adaptation into organisations and communities, it is essential that the risks and liabilities related to climate change have been identified, assessed and managed. This can only be achieved if decision makers at all levels understand how climate change impacts will affect their decision making.

In preparing for the workshops, the presenters considered how the impacts of climate change are affecting organisations, countries, and peoples. Whereas to date, much of the work in climate change adaptation has been focused on the direct physical impacts, there is much more to climate change than just the direct impacts. As evidenced in the presentations at the workshops, it is the indirect impacts that pose a particularly complex challenge for government and other organisational decision makers, the two most significant of which are insurance risk and legal risk.

The Australian Government House of Representatives Committee Report, *Managing our Coastal Zone in Changing Climate: The time to act is now*, identified in 2010 a need to address liability issues for local governments. This was recognised as a common concern amongst governments throughout Australia. Studies carried out by DLA Piper[1] and reported on in our *Climate Change Adaptation in the Boardroom*[2] report in June 2013 show that this remains a key concern, and more importantly, apprehension about legal liability is one of the primary barriers at the local government level to implementation of climate change adaptation strategies.

Following on from its findings, DLA Piper has sought to address concerns about legal liability associated with climate change, and to facilitate the implementation of climate change adaptation strategies within organisations, that is, not only private sector but government organisations as well. It does this through the development of guidelines for decision makers that seek to minimise the risk of a legal challenge to decisions and matters arising from those decisions.

The guidelines provide protocols and procedures that an organisation's decision makers at all levels can follow when making decisions about climate change, or decisions that are affected by climate change. The procedures and protocols take into account the direct and indirect impacts of climate change and inform the decision maker as to how the organisation's legal liability will be affected by the decision. In essence, the guidelines take into account the statutory powers pursuant to which decisions are made, the results sought to be achieved in making the decisions, the effects any projected climate change impacts will have on the decisions and any consequent exposure to legal liability arising from the decisions.

Whereas the guidelines can take various forms, the specific output will depend on which is the most convenient to the end user. Whatever the format, the guidelines establish a user friendly, intuitive process that steps the decision maker through any mandatory considerations to arrive at a series of proposed actions informed by an associated legal risk assessment. The decision maker can then balance the legal risk against other considerations such as economic benefits, to arrive at a final decision.

The result of this is to ensure that climate change adaptation strategies and plans are embedded within the organisation while protecting the organisation and its decision makers against legal challenges.

We see this as the most effective way to implement and embed climate change adaptation.

[1] In cooperation with the National Climate Change Adaptation Research Facility, Climate Planning and Future Ready.

[2] Johnston, GS, Burton, DL & Baker-Jones, M 2013 Climate Change Adaptation in the Boardroom, National Climate Change Adaptation Research Facility, Gold Coast, 68 pp.

RELATIONSHIP WITH DISASTER RISK MANAGEMENT

The law of climate change adaptation in the Pacific cannot be viewed in complete isolation from disaster risk reduction or vice versa. As experience with both disaster risk reduction and climate change adaptation grows, there is increasing recognition in the Pacific that these two fields share a common focus: reducing the vulnerability of communities and contributing to sustainable development. Given the high magnitude of climate-related risks in the Pacific, disaster risk reduction and climate change adaptation should be key policy goals.

Recently, the Pacific region expressed support for the development of a Pacific integrated regional strategy for disaster risk management and climate change adaptation by 2015. The recent Joint Meeting of the Pacific Platform for Disaster Risk Management & the Pacific Climate Change Roundtable held in Nadi, Fiji is a significant event in the process of developing the integrated strategy and road map, as it brings together the disaster risk management and the climate change adaptation 'communities' at a regional level for the first time to elaborate on the Pacific Roadmap process. From this perspective, the linking and integration offers new opportunities in terms of the legal arrangements and the laws of disaster risk reduction and climate change adaptation.

> There are many human rights that are affected by climate change, and there are also good governance issues. Consequently, climate change is an important issue for those of us here at the Samoa National Human Rights Institution/Office of the Ombudsman to be aware of and engaged in. This helped us to become aware of the specific areas in which Samoa needs to take a rights-based approach with legal and policy decisions in climate change adaptation and mitigation.
>
> **Dr Melanie O'Brien**, Samoa National Human Rights Institution, Office of the Ombudsman

ABOUT THE WORKSHOPS

In partnership, DLA Piper and the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Office for the Pacific States provided free, specialised and interactive 'climate change and the law' workshops in Fiji and Samoa. The workshops were held in the first week of August 2012 in Suva, Fiji and Apia, Samoa.

These specialised workshops were intended to give lawyers and other interested groups assistance in understanding climate change law, particularly the law relating to climate change adaptation, thereby allowing them to act as leaders in developing effective legal solutions to the problems being presented by climate change impacts in the Pacific.

The workshops were aimed at a broad cross-section of lawyers, academics, legal researchers, government officers and other professionals, involved in planning, development (eg, urban planning), environment and infrastructure. Professionals with a particular interest in climate change adaptation and disaster risk reduction were invited to attend.

This report contains abstracts of the presenters' papers. In light of the valuable contribution the attendees made to the workshop through the expression of their knowledge, skills and varied experience in climate change adaptation, a number of attendees, who, through work, studies and research, are affected by or have involvement in climate change adaptation related law, were invited to contribute articles. Some of those articles have been included in this report.

1. PRESENTATION ABSTRACTS

INTRODUCTION

This section includes abstracts and key messages of the various presentations.

The presenters for the workshop in Fiji were, in order of presentation:

1. **Donovan Burton**, Climate Planning
2. **Mark Baker-Jones**, DLA Piper
3. **Dr Justine Bell**, University of Queensland
4. **Dr Denis Chang Seng**, UNESCO

The presenters for the workshop in Samoa were, in order of presentation:

1. **Donovan Burton**, Climate Planning
2. **Dr Justine Bell**, University of Queensland
3. **Dr Denis Chang Seng**, UNESCO
4. **Paul Donohoe**, SPREP
5. **Mark Baker-Jones**, DLA Piper
6. **Peniamina D Leavai**, SPREP

Please note this report and the presenters' PowerPoint slides can be downloaded from www.dlapiper.com/australia/climate-change-adaptation. We encourage you to contact the presenters to discuss their presentations and their work.

CLIMATE CHANGE LEGAL RISK

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ABSTRACT

Climate legal risk arises from the impacts that changes in the natural environment have on legal risk. Organisations can assess their climate legal risk and consider ways in which they can manage it by:

- Identifying the physical climate risks, with a view to determining the range of legal decisions that may be required to be made as a consequence of physical risk to which the organisation is exposed;
- Analysing how the relevant law regulates the issues at stake (ie, a hypothetical application of the law). This will involve identifying what, why, where, when and how climate events could impact the achievement of the organisation's objectives. In order to assess the legal risk, the analysis will assess what impact the applicable law and other relevant material may have on the rights and duties of the organisation;
- Evaluating whether the legal outcome serves the organisation's interests by distinguishing between acceptable legal risks and those legal risks that should be considered for treatment, and seeking to estimate the likelihood and consequence values for a range of typical climate legal decisions; and
- Treating climate legal risk with adequate measures and focusing on how identified risks can be treated.

KEY MESSAGES

There are two very important messages that government and non-government organisations need to accept. The first is that organisations that deal with or interact with the natural environment need to ensure that legal risk is an integral part of their climate risk management process. The second message is that the climate legal risk management process is part of the organisation's overall strategy and embedded in the organisation's decision making processes. Organisations need to ask themselves, 'What costs am I liable to incur if I don't consider the climate legal risk'; not only in terms of loss of revenues and profits or investor support, but also in terms of civil or criminal penalties.

CONCLUSION

Early recognition of climate legal risk can potentially reduce the likelihood of subsequent legal action by affected stakeholders. But recognition alone is not enough; it is essential that protocols and procedures are in place that facilitate management of climate legal risk through implementation of climate change adaptation strategies and decision making process. It is only once these protocols and procedures are implemented that climate legal risk can be effectively managed.

CLIMATE CHANGE AND THE LAW: THE CONTEXT AND THE EMERGENCE OF CASCADING RISKS

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Climate change is already having an impact on human settlements, the natural environment, and global and local economies. Although it is impossible to attribute any single extreme weather events to climate change, there has been an array of global climatic extremes experienced in the past decade which show that we are entering a world where extremes that once where classed as outliers or tail events are becoming the norm. These include the 2003 European Heat waves, the Black Saturday Bushfires in Australia 2009 and the Russian Heat-wave of 2010, all of which beat the previous extreme temperature records by over 2.4°C[3].

In Australia the majority of adaptation responses to climate change have been ad hoc, use limited robust science and contain very limited considerations of climate legal risk. In fact, it would be fair to assume that most organisations who have considered climate change are still only in the scoping or detailed risk assessment stage, and very little adaptation planning is being mainstreamed into government or private sector activities at all.

Australia had forged strong leadership in developing climate change risk assessment awareness and actions (especially at the local government level) together with internationally leading adaptation research. However, in recent years there has been a significant slowdown in activities and political support for climate change adaptation – especially at the State and Federal level. For example, some states wound back the regulatory provisions, which specifically addressed planning for sea level rise.

Ironically, while State and Commonwealth support for climate change adaptation has waned in the past two years, Australia has experienced numerous multi-billion dollar extreme weather events (eg, the Brisbane and Victoria Floods of 2011 and ex Tropical Cyclone Oswald in 2013, all of which resulted in over $2 billion in damages each). Australia also experienced what has been coined, "The Angry Summer" in 2013, in which 123 climate records were broken in 90 days.

While the public sector focus on adaptation has diminished somewhat, the private sector now recognizes the very real threats from direct physical risks (eg, asset risk from flooding) and indirect risks (eg, insurance availability and affordability). The World Economic Forum which met in Davos in January 2013 listed failure to address climate change adaptation as one of the most pressing risks to the global economy and one that was likely to manifest in the coming decade.

The insurance sector, which is the holder of many of the world's economic risks, may not be as across climate risks as much as many assume. For example, a survey undertaken recently by the US National Association of Insurance Commissioners (NAIC) identified that only 13% of insurers had a comprehensive climate change strategy for their policy portfolio or capital investment[4].

Although insurance can play an important role as the conduit for adaptation they also can trigger market failure by removing insurance from a region (this has been the case with some insurers in parts of Australia, the US and the UK). This may have a cascading impact on lenders

[3] see Coumou and Rahmstorf (2012) A Decade of Weather Extremes, Nature Climate Change 2, 491–496 (2012) doi:10.1038/nclimate1452

[4] Leurig and Dlugolecki (2013) Insurer Climate Risk Disclosure Survey, 2012 Findings and Recommendations, CERES

who may have adopted policies to only lend funds to the purchase of properties that are insurable. If insurance were to be withdrawn lenders would then be faced with a difficult decision around the calling in of mortgages (facing reputational and considerable capital impacts) versus potential shareholder challenges for not adequately identifying these risks.

It should also be noted that although insurance can protect physical assets, it currently does little to offer security for emerging climate-related impacts on the natural environment, which underpins the entire global economic system. Trying to place a value on the ecosystem services of Australia's Great Barrier Reef for example would be a futile task as no amount of money would be able to offset the losses of the known ecosystem services that it provides.

Climate change is a complex phenomenon that cannot be managed by a one size fits all approach. It is also very unlikely that any true win-win solutions exists, and climate change adaptation will come with trade-offs that will need to be carefully managed. Examples of trade-offs include, but are by no means limited to:

- Impacts on environmental flows as a result of flood protection;
- Damage to the natural coastal environment and neighbouring properties from costal defences;
- Stranded assets as a result of tighter development controls;
- Increased energy usage and environmental pollution as a result of increased air conditioner use;
- Loss of property value after flood map releases frighten insurers; and
- Loss of local government rateable value due to climate-related loss of property value (eg, after multiple extreme events and /or insurance pricing).

It is becoming increasingly evident that well-intentioned climate change responses present a considerable risk, and to manage this risk all adaptation actions should be based on sound science and robust legal frameworks.

Note: Mr Burton's PowerPoint presentation can be downloaded at www.dlapiper.com/australia/climate-change-adaptation.

CLIMATE CHANGE AND COASTAL DEVELOPMENT – LEGAL ISSUES

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ABSTRACT

There are a broad range of legal approaches and tools that can be employed to facilitate climate change adaptation. For new developments, legal approaches can be used to avoid, accommodate, defend against, or retreat from sea-level rise. All of these approaches have been used, to some extent, by governments throughout Australia. Australia therefore provides a number of useful case studies. This presentation introduced how these various approaches have been used in Australia, and highlighted the main problems with and barriers to implementation.

Implementing climate change adaptation measures in existing developments is much more complex, given that governments cannot retrospectively impose planning standards. This presentation outlined how governments can use land acquisition laws in flexible ways to gradually reduce the number of private residences subject to sea-level rise impacts by transitioning them into public ownership regimes.

KEY MESSAGES AND RECOMMENDATIONS

It is impracticable to prescribe a single legal approach to climate change adaptation that is appropriate for use in all jurisdictions. Local governments need to determine a locally appropriate response, reflecting the needs of the community. However, once a government has decided on a policy approach (for example, a choice to allow development in the short-term, and retreat as sea-level rises), the lessons learned from Australia may assist with addressing some of the potential problems at the outset.

In the case of existing developments, moving people out of harm's way through land acquisition is a theoretically good approach, but this approach has many practical barriers to implementation. Acquiring land is often prohibitively expensive, and disruptive to established communities. Governments should explore whether there are mechanisms within their legal system to effectively 'time limit' development, allowing people to live the rest of their lives in the community, with their land transitioning into public ownership thereafter. Given the long timescale for sea-level rise impacts, this may be an effective way of gradually removing at risk property from private ownership, whilst addressing some of the financial and social barriers.

Note: Dr Bell's PowerPoint presentation can be downloaded at www.dlapiper.com/australia/climate-change-adaptation.

AN INSTITUTIONAL PERSPECTIVE OF DISASTER RISK GOVERNANCE IN AN ENVIRONMENT OF 'CHANGING WINDS'

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ABSTRACT

Climate Change is expected to lead to an increase in weather-related extreme events while Disaster Risk Reduction (DRR) concomitant to this aims to mitigate the impacts of those extreme events. Therefore, DRR needs to become an integral part of Climate Change Adaptation (CCA). However, despite the importance of this general acknowledgement, it is time to move beyond generic statements and think of concrete measures. It is essential to develop the discussion further and to improve the understanding of how exactly the experiences of DRR can inform CCA strategies and tools. That means researchers as well as practitioners need to identify the most relevant and effective DRR methods and tools to inform Climate Change Adaptation and the adaptation to extreme events.

Research has shown that strengthening institutional capacities and addressing the underlying risk factors are among the most important tools and strategies to build adaptive and resilient capacities from climate change and socioeconomic development stress (Birkmann and Chang Seng et al 2011).

The term "institution" includes more than agencies and organizations but rather the rules (eg, laws, regulations) both formal and informal (Ostrom 1990) imposing constraints on human behaviour to facilitate collective action (eg, disaster risk reduction and climate change adaptation). However, institutions (eg, legal arrangements) need to be adapted, improved and strengthened to foster effective synergies between DRR and CCA. In this context, the paper presents an institutional perspective of Disaster Risk Governance in an environment of 'Changing Winds' by drawing on examples of lesson learnt and opportunities for reorganization in Indonesia and Samoa following recent natural disaster shocks.

KEY MESSAGES

Institutional and governance perspective of Disaster Risk acts as a bridge towards informing climate change adaptation. Strengthening institutional capacities and addressing the underlying risk factors are among the most important tools and strategies to build adaptive and resilient capacities from climate change and socioeconomic development stress.

CONCLUSION

Tools and methods of DRR particularly institutional capacities (eg, legal arrangements) can be enhanced and adapted to address the key challenges of climate change.

Note: Dr Change Seng's PowerPoint presentation can be downloaded at www.dlapiper.com/australia/climate-change-adaptation.

ECOSYSTEM BASED ADAPTATION – A SOCIAL AND ECOLOGICAL IMPERATIVE IN THE PACIFIC REGION

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ABSTRACT

Sustainable livelihoods for Pacific Island peoples are highly dependent upon significant natural marine and terrestrial resources within the region. Many of these resources have international and national economic value (eg, tuna stocks) and global recognition (eg, biodiversity). In addition, continued development, population pressure and widespread non-sustainable land use practices are exacerbating vulnerability to extreme events and climate change impacts. Whilst consideration is given to conservation activities and relevant ecosystem services in the planning process, there is limited evidence of full integration of Ecosystem-based Adaptation (EbA) or direct comparisons of EbA options with alternatives in the process for identifying and prioritising adaptation activities. There is also a broad lack of awareness of the relative benefits of EbA at local and government levels in the region.

KEY MESSAGES

The need to maintain delivery of climate-relevant ecosystem services provides a strong social and ecological imperative to develop and widely implement EbA solutions throughout the Pacific Islands. There are a number of characteristics that can make adaptation approaches that utilise the benefits of ecosystems a compelling and viable alternative to other adaptation approaches.

CONCLUSIONS

Considerations for ecosystem based adaptation:

- can be integrated with other approaches in an adaptation plan;
- are frequently highly cost effective;
- are included in the National Adaptation Programmes of Actions of many Pacific countries;
- do often need greater explanation of benefits;
- are likely to increase in protection over time;
- can provide protection while sustaining livelihoods; and
- provide greater ownership of solutions – using local knowledge/skills.

Ecosystem based adaptation is highly linked to environmental and resource management legislation. For example, ecosystem resilience and ecosystem health is affected by legislation that regulates resource extraction and development, ie, logging, fishing, environmental protection legislation.

Note: Mr Donohoe's PowerPoint presentation can be downloaded at www.dlapiper.com/australia/climate-change-adaptation.

CASE STUDY: PACC PROJECT, KOSRAE STATE, FEDERATED STATES OF MICRONESIA – SECTOR: COASTAL MANAGEMENT

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ABSTRACT

Small island developing States are highly vulnerable to climate change and sea level rise owing partly to their small land masses surrounded by ocean, and their location in regions prone to natural disasters. Given the urgency for adaptation in small island states there has been an increase in *ad-hoc* stand-alone projects, rather than a programmed or strategic approach to the funding of adaptation options and measures. This case study of the PACC project in Kosrae State of the Federated States of Micronesia (FSM) looks at piloting a strategic approach to integrating climate change risks into the various levels of the state legislation framework, in particular, in infrastructure development. The objective is to enforce changes in the way coastal and infrastructure development is carried out, with the goal to promote resilient development, enhance coastal resilience and reduce vulnerabilities to people and environment in Kosrae State. The lessons learned and best practices will be shared and communicated at all levels of development intervention.

KEY MESSAGES

The need to effect national policy changes, mainstreaming climate change risks into legislative frameworks, policies, plans – is an important approach in sustaining innovative climate-resilient development. A top-down and bottom-up approach will be the most effective option to ensure that changes at the policy and legislation levels are positive at the ground and demonstration levels. Strengthening partnerships of government and the private sector is an important building block for such changes in states and communities to happen and ensure a successful long-term outcome. Further, that:

- Sharing of up-to-date adaptation information to and with decision-makers assists effective climate change and disaster risk reduction mainstreaming into policy & planning frameworks;
- Incorporating climate change risks into law reinforces a sense of responsibility towards climate resilient development approaches amongst stakeholders;
- Proactive adaptation measures saves Disaster Risk Management significant resources if implemented systematically and efficiently (minimizing costs)

Link to video shown at the beginning of this presentation, titled *Pacific Adaptation to Climate Change Project (PACC) Overview 2013* http://www.youtube.com/watch?v=FacPFyLtVrA&feature=youtu.be

The FSM project is one of 14 projects that are demonstrating practical adaptation measures in 14 Pacific Island Countries and territories. The projects aim to reduce vulnerability of communities to climate change, with focus on three key climate-sensitive sectors: coastal zone management, food production and food security, and water resources management.

The PACC programme is funded by the Global Environment Facility and the Australian Government with support from the United Nations Institute for Training and Research (UNITAR) Climate Change Capacity Development (C3D+). The Secretariat of the Pacific Regional Environment Programme (SPREP) is the implementing partner, and the United Nations Development Programme acts as implementing agency.

Note: Mr Leavai's PowerPoint presentation can be downloaded at www.dlapiper.com/australia/climate-change-adaptation.

2. LESSONS FROM THE PACIFIC

INTRODUCTION

A number of attendees at the workshop were invited to contribute to this section of the report. The purpose was to bring together a range of insights from people working and living in the region, and to highlight to those outside the Pacific the exceptional work that is being carried out in the Pacific Island Countries. These are lessons from those at the forefront of climate change adaptation.

"This workshop has embedded in us a passion to be involved more in the area of environmental law and climate change adaptation and policy in our legislation and local subsidiary legislation, whether voluntary or on a full time basis."

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CLIMATE CHANGE AND HUMAN RIGHTS IN THE PACIFIC

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The issue of climate change has become a pressing concern in the 21st Century. A significant issue arising from the consequences of climate change is the impact that such consequences are having and will have on the human population. There are many human rights that are affected by climate change, such as the right to life, the right to take part in cultural life, the right to use and enjoy property, the right to an adequate standard of living, the right to food, the right to water, the right to sanitation, the right to development, the right to adequate housing, and the right to the highest attainable standard of physical and mental health.[5] Other areas of rights that come into play are gender rights, education, culture, migration and resettlement, and trade.

The UN Human Rights Council (HRC) has included climate change and human rights on its agenda, and has issued several resolutions in which they acknowledge that climate change is a threat to human rights.[6] At the request of the HRC through these resolutions, the Office of the High Commissioner for Human Rights undertook a study on the relationship between climate change and human rights in 2008,[7] and in 2012 held a seminar on human rights and climate change.[8]

Those particularly susceptible to the adverse effects of climate change are the world's poor, 'low-lying and other small island countries, countries with low-lying coastal, arid and semi-arid areas or areas liable to floods, drought and desertification, and developing countries with fragile mountainous ecosystems'.[9] Climate change impact is of particular concern to the islands of the Pacific, as, due to their size and location, 'small islands are most at risk from floods, storms and coastal flooding, increased salination of the ground water and eventual submerging'.[10] Some of the main concerns in this regard are the rights of people to adequate housing and health, and rights associated with migration. Rising sea levels is a particular challenge that may result in land becoming uninhabitable or the complete disappearance of an entire island. In such circumstances, the population of that state becomes permanently displaced and must be relocated. Such migrants are not considered refugees under the 1951 Convention Relating to the Status of Refugees, which only allows for the granting of refugee status based on a 'well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion'.[11] Consequently, there are significant gaps in the normative framework of rights

[5] See e.g. Male' Declaration on the Human Dimension of Global Climate Change, November 2007, available at http://www.ciel.org/Publications/Male_Declaration_Nov07.pdf. The Office of the High Commissioner for Human Rights has stated: "Viewing the data through a human rights lens, it is clear that projected climate change-related effects threaten the effective enjoyment of a range of human rights, such as the right to safe and adequate water and food, the right to health and adequate housing. Equally, the human rights perspective brings into focus that climate change is set to hit the poorest countries and communities the hardest." Available at http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx.

[6] Human Rights Council Resolutions 7/23, 28 March 2008; 10/4, 25 March 2009; 18/22, 28 September 2011.

[7] OHCHR study on the relationship between climate change and human rights, submissions and reference documents available at http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/Submissions.aspx.

[8] Human Rights Council seminar on human rights and climate change (23-24 February 2012), seminar documents, videos and statements available at http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx.

[9] Human Rights Council Resolution 7/23, 28 March 2008.

[10] *Protection of persons affected by the effects of climate change, including the displaced: Observations and Recommendations*, Paper submitted by the Representative of the Secretary General on the Human Rights of Internally Displaced Persons to the OHCHR Study on the relationship between climate change and human rights, 15 November 2008, available at http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/Submissions.aspx.

[11] Article 1.A.(2).

applicable to people affected by climate change, who fall outside of the definitions of both refugees and migrants.[12] Possible frameworks in existence that may be used include instruments such as the 1990 International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, and the Guiding Principles on Internal Displacement,[13] as well as a state's general obligations under human rights instruments such as the International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social and Cultural Rights (ICESCR). ICESCR rights resonate in particular in relation to climate change threats: the right to an adequate standard of living, including adequate food, clothing and housing; the right to freedom from hunger; the right to enjoyment of the highest attainable standard of physical and mental health; and the right to take part in cultural life.[14] Under the Guiding Principles on Internal Displacement, '[n]ational authorities have the primary duty and responsibility to provide protection and humanitarian assistance to internally displaced persons within their jurisdiction', and shall respect and ensure human rights obligations.[15]

Also of relevance is the fact that in the case of a complete loss of territory, displaced persons may be rendered stateless. The legal position on whether the submersion of a territory results in statelessness is currently unclear.[16]

There may also need to be forced relocation within a territory, which will involve governments relocating residents away from areas designated high-risk (eg, flooding, landslides). Such relocations must be undertaken with respect to rights of the residents to have adequate housing and access to infrastructure to enable adequate standards of life, security and health (eg, water, electricity).

There must also be caution exercised to ensure that climate change mitigation projects do not violate human rights. Such violations may include the displacement of peoples from their traditional land for the purposes of reforestation, the 'pricing out' of forest dwelling communities from using their own commodities, or the prohibition of people from use of forested areas for traditional means of survival.[17]

Any legal responses that take climate change into account, such as those considering regulations for new or existing developments, the relocation of residents to low-risk areas, or climate change mitigation projects, should take a rights-based approach, which will result in a more holistic outcome with long-term benefits. A rights-based approach should also be integrated into natural disaster management, in order to ensure that essential rights are protected and provided for in situations of natural disasters.[18] Disaster risk management law, policies and regulations must take into account the need for protection of housing, infrastructure, and facilities that will be needed in the aftermath of a natural disaster (eg, sanitary facilities, food, water, clothing, medical treatment facilities).

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[12] *Displacement Caused by the Effects of Climate Change: Who will be affected and what are the gaps in the normative frameworks for their protection?* Background Paper submitted by the Representative of the Secretary General on the Human Rights of Internally Displaced Persons, 10 October 2008, p. 4, available at http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/Submissions.aspx.

[13] See http://www.idpguidingprinciples.org/.

[14] Articles 11, 12 and 15.

[15] Principles 3 and 5. Of course, it must be remembered that the Guiding Principles do not constitute a binding instrument.

[16] *Displacement* Background Paper, supra note 12, p. 5. There are two conventions relating to statelessness: 1954 Convention relating to the Status of Stateless Persons; 1961 Convention on the Reduction of Statelessness; see http://www.unhcr.org/pages/4a2535c3d.html. A stateless person is 'a person who is not considered as a national by any State under the operation of its law' (1954 Convention, Article 1).

[17] Olivier De Schutter, 'The Emerging Human Right to Land', *International Community Law Review* 12 (2010), pp. 308-9.

[18] See eg, UNDP, OHCHR Checklists for Integrating Human Rights in Natural Disaster Management in the Pacific, available at http://www.undppc.org.fj/_resources/article/files/Checklist_Integrating_HumanRights_in_natural_Disaster_Management.pdf.

CLIMATE CHANGE AND MULTI-LEVEL GOVERNANCE

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At the end of July 2013, as part of my volunteer assignment with the Samoa Law and Justice Sector, I attended the official opening of a new narcotics testing laboratory at the Scientific Resource Organisation of Samoa.

This was a project of the Sector, managed by the Office of the Attorney General, which also involved government departments and ministries from other sectors. In his address, the Prime Minister, Tuilaepa Sa'ilele Malielegaoi, noted that the launch of this new facility demonstrated what could be achieved when different agencies and Sectors worked together to address a practical issue.

This cross-sectoral and multi-level approach to governance is, in my opinion, the key to addressing climate change in our societies. 'The anchors of the climate system have come undone,' as Donovan Burton reminded us in his workshop presentation, and climate change will come to affect many facets of our lives, from what we eat and wear to where we live.

In Australia, national and state legal frameworks preserve and regulate the use of areas of ecological significance, while local governments make every-day planning decisions that determine factors such as housing density and the use of coastal areas.

In Samoa, there exists a system of parallel governance. Prior to European colonisation, Samoa had no system of national government. In Samoa today, customary or traditional law and the formal legal system operate side by side. Whereas the Government of Samoa and its ministries and Government corporations administer and apply the formal legal system—which Samoa inherited from English common law by way of New Zealand administration—the village Fono (council of chiefs) of Samoa are responsible for the application of their customary laws.

The Samoa Law and Justice Sector is working to harmonise the integration of these customary and formal justice systems. The key to integration in this linkage is that the systems work together to develop and respond to the community's needs. Customary Samoan law is built into various statutes of Samoa as well as its founding document, the Constitution of Samoa, and in various ways, customary law and formal law recognise each other and work together for the development of Samoa and its people. A significant feature of Samoan society is that many of the leaders of Government and the formal agencies of the public sector are also customary leaders (matai).

Collaboration between local government and national ministries empowers communities to engage with the challenges of climate change, including managing water resources and fisheries and protecting coastal areas. In other words, a framework is in place (and is already being utilised) to develop climate change mitigation and adaptation policies in Samoa.

We are racing towards a climate tipping point, and international consensus on climate change policy (such as a global carbon emissions trading scheme) may be impossible to achieve. However, states are already capable of unilaterally implementing strategies, contributing to the impetus for change at the international level.

Multilateral efforts to mitigate climate change must, of course, continue. A commitment to eradicate global poverty (a major cause of unsustainable practices) is also crucial, because developing countries are driving global emissions trends.

There is currently much misconstruction of and distraction from the key issue inherent in climate change: the issue of survival. Skepticism and scientific uncertainty distract from the fundamental need for sustainability. As Derrick Jensen explains, 'For an action to be sustainable, you must be able to perform it indefinitely.' Sustainability is imperative because many of our natural resources are finite and there is no miracle cure for greenhouse emissions.

I am not arguing that carbon trading systems are a useless environmental regulatory tool. After all, the ultimate goal is to equate economic efficiency with ecological sustainability. However, a market-based cap is not comprehensive, and by depending on it we will take longer to achieve sustainability. Our planet and our societies are incredibly complex and there is no simple answer to climate change, the greatest challenge of our time.

Although there is increasing recognition of the need to 'green' economies worldwide, in practice, environmental policies are secondary always to building GDP (an attitude that Professor Clive Hamilton calls the 'growth fetish'). The challenge for states and communities is to adapt legal and regulatory frameworks to maintain economic stability through the necessary transition towards achieving intergenerational equity (a sustainable living standard to pass on to future generations).

Arresting climate change requires a change in lifestyle and culture (consumption practices) for just about every community on the planet. Upper-tier governments must encourage local government institutions to implement environmental solutions independently. In the current context, where policy is often too far behind the science of climate change, is it important to recognise the power of local action to generate significant change with less bureaucratic delay.

Surviving climate change involves economic risks, but it is our choice whether to treat it as an opportunity or a burden. The incentive to create effective frameworks for mitigation and adaptation is the guarantee that global sustainable economies limit environmental refugees, they stabilise resources for the future and consequently they address the causes of the problem rather than its symptoms.

SECRETARIAT OF THE PACIFIC REGIONAL ENVIRONMENT PROGRAMME – LAW IN THE PACIFIC ENVIRONMENT

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The Secretariat of the Pacific Regional Environment Programme (SPREP) is the competent regional organisation for environment in the Pacific region. As its 14 island country members are minimal polluters but are among the worst affected as a result of global warming, the focus of work has been on adaptation. The Pacific Adaptation to Climate Change (PACC) Project is the main project undertaken by SPREP in relation to adaptation. It is a five year project with donor assistance in excess of US 10 million from the GEF, UNDP and AusAID.

The PACC project covers 14 participating countries and helps to develop three key areas that build resilience to climate change in Pacific communities. In Fiji, Palau, Papua New Guinea and the Solomon Islands, the focus is on Food Production and Food Security, in the Cook Islands, Federated States of Micronesia, Samoa, Tokelau and Vanuatu, it is on developing Coastal Management capacity, and Nauru, Niue, Republic of Marshall Islands, Tonga and Tuvalu are looking to strengthen their water resource management.

Legal involvement relates mainly to contracts between the various countries and SPREP (as the implementing agency), and between the countries and various contractors contracted to perform works or services in relation to the three areas of food security, coastal management capacity and water management. It is envisaged that environmental impact assessments will precede any works to be performed, for example, climate-proofing of coastal roads. The islands in the north Pacific (FSM, Palau, Marshall Islands) have environmental protection agencies which grant consents under regulations dealing with earthworks and environmental quality.

Recently USAID provided funds for ecosystem-based adaptation work (natural buffers such as mangroves, seagrasses, coral reefs) in the Solomon Islands. Again, the legal work involved mainly contractual understandings amongst the various levels of government involved and SPREP.

As most, if not all, island countries are without well-enforced or even functional planning laws, there is not much in the way of a consent procedure. Land throughout the Pacific is predominantly held according to customary usage, although roads and other infrastructure are held by the State, as is land below the high water. Samoa, for example, has a Land Board which provides consent regarding developments in this zone such as reclamations.

Adaptation work is also carried out by the Secretariat of the Pacific Community (SPC), which focuses on sectors specific to their mandate.

ADAPTING TO CLIMATE CHANGE IN THE SOUTH PACIFIC – SAMOA'S EFFORTS TO ADAPT TO ENVIRONMENTAL CHALLENGES

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INTRODUCTION

Samoa is uniquely vulnerable to the impact of climate change, especially to rising sea levels and increased frequency and severity of extreme weather events. This vulnerability arises as a result of the combination of geographic and developmental factors.

Samoa's vulnerability is almost completely detached from its contribution to climate change, which is among the lowest in the world.

Samoa has a long history of extreme weather events, the most recent of which was the Tropical Cyclone Evan that destroyed properties to the value of approximately US $200 million with four confirmed casualties and ten people still missing.

The Samoan Government is acutely aware of the risk that the increased frequency and intensity of such events presents a fundamental challenge to the safety, wellbeing and financial security of the Samoan people.

Samoa is committed to taking measures to adapt to the effects of climate change. General adaptation efforts target health, agriculture, tourism, biodiversity, urban planning and water resources management; however, marrying these efforts to specific legislation carries difficulties. There are a number of environmental issues that Samoa is facing, including land use, and climate change is another factor which needs to be considered in any new environmental legislation.

Climate change is cross-cutting, affecting basically everything, from people (health), the environment and economy (in terms of the impacts to the backbone of the economy ie, agriculture, tourism and others). Long-term recovery measures such as relocation and resettlement efforts are a challenge for Samoa due to the following:

- The cost of relocation will not be economical to the government and its people. The cost of relocation includes cost of public services and infrastructure, cost of rebuilding houses, roads, water, communication, hospitals, schools and others; and
- The availability of land, and the quantity of land that is vulnerable to climate change. Explicitly, coastal lands are vulnerable to climate change impacts such as sea level rise and strong wave activities. On the other hand, lands located inland are vulnerable to other hazards such as landslides, flooding and forest fires and cyclone winds in particular higher grounds/high lands. Even if people are relocated inland, the issue would be settling on lands that require conservation to ensure sustainability of habitats and ecosystems which are critical to the survival of the Samoan people and its culture.

Despite challenges such as this, the Samoan Government continues to look to ways to improve the capacity of the nation to adapt to the effects of climate change, including through the introduction of further legislation.

CURRENT RELEVANT LAWS

Samoa's legislative framework principally concerns measures for mitigation and reaction to the extreme weather events which are linked to climate change.

For instance, the *Disaster and Emergency Management*

Act 2007 ('the Act') was established to provide for the management of disasters and emergencies in Samoa by effective planning and risk reduction, response and recovery procedures and the promotion of coordination amongst the response agencies, and for related purposes.

The Act also sets up the National Disaster Council ('NDC'), whose powers include overseeing the implementation of risk reduction, preparedness, response and recovery activities by all government agencies and other agencies performing roles related to disaster management.

In section 1 of the Act, 'disaster risk reduction' (DRR) is defined as 'all mitigation activities undertaken in accordance with this Act to reduce the risk of hazards to the community and its property'. Furthermore one of NDC's roles in section 5 (d) is to ensure that there is implementation of risk reduction, preparedness and recovery activities by the Government. Section 9 of the Act highlights the development of the National Disaster Management Plan (NDMP) to address DRR, preparedness, response and recovery. The purpose of this Plan is to detail disaster risk management arrangements to ensure the sustainable mitigation of, preparedness for, response to and recovery from the impact of hazards.

Building climate resilience occurs through the implementation of climate change adaptation and mitigation. Adaptation is one way of reducing the risks due to sea level rise, strong wave activities generated by severe weather events, flooding and cyclones or even droughts. Climate change mitigation centers on the reduction of greenhouse gas (GHG) emissions, and this is addressed through the use of energy efficient technologies such as vehicles, building structures, renewable energy sources such as solar, wind, biomass, and geo-thermal. Reducing GHG emissions is another way of reducing the risks of worsening climate change impacts so in general climate change mitigation and adaptation is inclusive. Disasters are caused due to both hazards (cyclone, flooding, earthquake, tsunami, diseases and others) and the level of vulnerability (based on the locations of people and infrastructure, social cohesion and others), so from another perspective, disaster risk management is all encompassing of climate change adaption and mitigation.

Further, the *Planning and Urban Management Act 2004* ('PUM Act') is established to implement a framework for planning the use, development, management and protection of land in Samoa in the present and long-term interests of all Samoans and for related purposes.

The Act does not contain specific provisions for climate change resilience and/or adaptation.

However it does provide for the Agency's powers in relation to urban planning, and national development regulation. As per s. 46 of PUM Act, the Agency must give consideration to environmental issues such as climate change risks and vulnerabilities when a development application is considered. The Agency has broad powers to accept, reject or set conditions upon the approval of land used for development. For instance, in assessing proposed coastal developments and in coastal flood hazard areas (Hazard zones are identified under each *Coastal Infrastructure Management Plan* per district), appropriate conditions may then be imposed on the development consent approval. For example, conditions to elevate floor levels for developments in flood prone areas, and measures concerning emergency evacuation for disaster events in accordance with Samoa's Natural Disaster Management Plan for tourism sector developments. The same as well for the PUM Board in their review of major projects submitted for development consent, an environment impact assessment is required and must always contain any concerns on climate risks.

The *PUMA Environment Impact Assessment (EIA) Regulation* provides for the requirements of an Environmental Impact Assessment to be conducted by a developer. The Agency acts as the auditor of the EIA to ensure content and process has been complied with. The considerations available to the Agency generally refer to the impact of the development on the environment, rather than the impact of a changing environment on the development. One exception is that the Agency has the power to consider 'adverse impacts in conjunction with natural hazard risks'. Part 2 (1) of the EIA Regulation provides that EIA must identify appropriate mitigation measures to minimize any significant unavoidable environmental impacts arising from the development. However, there is no reference to the requirement for the EIA to deal with adaptation.

In addition to legislation, the Samoan Government has in place a number of national strategies and plans which are designed to deal with the effects of climate change.

The purpose of *the National Disaster Management Plan 2011-2014* is to detail disaster risk management arrangements to ensure the sustainable mitigation of, preparedness for, response to and recovery from the impact of hazards.

The *Coastal Infrastructure Management Project – CIM Strategy* was developed as part of the Government of Samoa's Infrastructure Asset Management Programme. The main purpose of this strategy is to provide national guidance for infrastructure development, protection and maintenance in the coastal environment.

The strategy has as its central vision 'Resilience – Coastal Infrastructure and Communities Resilient to Natural Hazards'. The word 'resilience' as used in the strategy is appropriate to the philosophy of better coastal management because it encourages adaptation, responsiveness and recovery from damage resulting from coastal hazards.

The CIM Strategy also sets out the need for Coastal Infrastructure Management Plans (CIM Plans). One of the required Policies in CIM is to develop and strengthen legislation for Government to manage coastal development and coastal hazard resilience. CIMs also provides for a detailed Strategy Evaluation Model in page 22. This model will be applied both for the CIM Plans and as an interim management tool.

The *Samoa Codes of Environmental Practice (COEP) 2007* have been prepared to define methods and/or procedures to be followed by consultants, designers and contractors for the avoidance or mitigation of adverse environmental effects that may arise out of infrastructure development projects or maintenance work. The COEP must be followed for the planning, design and construction of all development works, where development consent is required under the PUM Act. In section 1.7, it states that the development and refinement of COEP is an ongoing process. These COEP have been introduced to the Government Ministries, infrastructure providers and the construction industry through a series of training workshops. There are three implementation mechanisms for the COEP.

The Code sets out also the planning and design phases of road projects that the designer should follow. At the planning phase, the designer should consider the preparation of an Environmental Management Plan (EMP), to be completed by the contractor. The EMP shall set out the management, mitigation measures, and monitoring requirements that will be put into place during the project.

The Martin Associates P/L *Government of Samoa Environmental Assessment for IAMP-2 Final Report* is an Environmental Assessment of the proposed Infrastructure Asset Management Project (IAM-2), which was conducted by Martin Associates P/L on behalf of the Government of Samoa. The study is important in that it identifies the environmental issues associated with the project; indicates adverse environmental impacts of proposed activities; assesses the efficacy of the existing environment management framework, and sub-project specific environmental assessment procedure and suggests measures to strengthen and /or enhance existing consultative, legal, and regulatory procedures to meet the requirements of IAM-2.

One of the Project Components which is relevant to climate change resilience is mentioned in section 2.5 of this report and referred to as the *Infrastructure, Land, Natural Resource and Emergency Management*. This component of the report includes sustainable management of infrastructure in coastal and other hazard zones; restructured management of the use of land and natural resources. National emergency management systems are also strengthened to achieve improved readiness, response and recovery. Interestingly enough section C.4 of the Report makes reference to the Natural Risk Management including the incorporation of climate change adaptation and emergency management themes into the CIM Strategy.

Samoa is a party to various Multilateral Environmental Agreements (MEAs) which include MEAs for the Climate Change namely the United Nations Framework Convention on Climate Change (UNFCCC), Kyoto Protocol, 2005 Montreal Protocol on Substances that Deplete the Ozone Layer, 1987; Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, 1986.

While Samoa has yet to domesticate its obligations under these Climate Change treaties into national laws, Samoa's ratification of these treaties has resulted in their consideration when any new legislation is drafted.

ADAPTATION CASE STUDY – SEA WALL

Seawall construction (amongst others) is another part and puzzle of several coastal management projects such as the World Bank funded Cyclone Emergency Recovery Project in 2006, Pacific Adaptation to Climate Change (PACC) Project recently in 2009 and other assessments which identified options and solutions to address the issues of coastal erosion.

These hard shoreline protection structures (seawalls) were put in place to address the most urgent to medium term needs for coastal protection in several selected sites. Some of these shoreline structures were implemented as part of the Tsunami rehabilitation and recovery works, and more recently TC Evan recovery works.

Originally, the Land Transport Authority (LTA) was responsible for the structures that were put in place to protect public assets such as the Apia Town seawall and along the stretches of main roads leading around the country. It was considered a priority as 70% of Samoa's population and important infrastructure and assets are located within the coastal areas. The role was later shared with the Ministry of Natural Resources and Environment (MNRE) in 2008, which focused on structures that protected the community assets and properties. Presently, sea walls cover large portions of the populated areas of Samoa.

The project was funded by the World Bank, the Government of Samoa and a number of overseas donors. The LTA in conjunction with the MNRE are responsible for overseeing the continued development of sea walls.

While the sea wall represents a modest adaptation measure when compared with the overall challenges to adapt to climate change, it does provide a significant measure of protection against rising sea levels in Samoa's most inhabited areas.

OTHER MEASURES BEING TAKEN TO ADAPT TO CLIMATE CHANGE IN SAMOA

The MNRE continues to develop strategies for adaptation to climate change in Samoa. Climate Change adaptation is already treated as a cross cutting issue across sectors in Samoa. Various policy instruments have been developed as part of the enabling environment for adaptation implementation activities. It is not just MNRE that is now responsible for the development of adaptation strategies, but rather a multi-sectoral approach, with climate change concerns now integrated in other sectors' pieces of legislation, policies, and sector plans. For instance, the National Adaptation Program of Action sets out the national priorities and the respective sectors in terms of vulnerabilities. These project profiles are then implemented by each sector such as Health, Agriculture and Tourism through available donor funds.

'Soft options' focus on continuous awareness programs and capacity building through community consultations country wide on the realities of climate change impacts, climate change projections, and how well they can make informed decisions regarding settlement locations, house re-buildings, re-planting of mangroves and other trees at the coastal areas (such as, coastal salt tolerant tree species to create green bio shields to aid the hard structures that have been put in place) in order to reduce soil erosion from the rising sea level. These measures seek to address the challenge borne out of land tenure and ownership issues restricting government initiatives aimed at enhancing resilience and adaptive capacity of the communities.

Hard structure options include the relocation of the people from coastal areas to inland. Relocations to higher grounds are a good but difficult option, considering the resettlement costs involved. This measure depends on the cooperation of the people affected by the relocation, and, as is made more sensitive by the strong tradition of and attachment to customary land use in Samoa.

SUMMARY

Samoa's location and economic constraints create a significant vulnerability for Samoa and its people in attempting to adapt to the effects of climate change.

Samoa has a long history of extreme weather events which appear to have informed the ways that the country seeks to plan and respond to extreme weather events. The aim of the Samoan Government is to adapt to the long-term impacts of climate change and its effects through policies and strategies. There is also already in place a climate change policy which provides a national framework to mitigate the effects of climate change and adapt to its impacts in an effective and sustainable manner.

FIJI AND CLIMATE CHANGE

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Fiji, like other countries in the Pacific, is susceptible to the risks and effects of climate change and sea level rise; these effects are real and pose a threat to the future environmental and socio-economic welfare of the country. The vulnerability of human settlements and built up areas are envisaged to increase with rising sea levels, inland floods, episodes of increased heat, increase in frequency and intensity of tropical cyclones, and increase in the spread of diseases.

Thus adaptation measures to combat climate change and its effects are essential in decreasing the country's vulnerability to climate-related threats. Combating climate-related threats at the grass-roots level can also serve to create sustainable, resilient communities as well as aid Fiji in coping with future climate change impacts.

Fiji's Climate Change Unit (CCU) is currently housed under the Ministry of Foreign Affairs portfolio. The Climate Change Unit is responsible for the implementation of the National Climate Change Policy (NCCP) as well as coordinating climate change programmes and projects in Fiji. The CCU was established in the Department of Environment under the Ministry of Local Government, Urban Development, Housing and Environment (MLGUDHE) in 2009 and was moved to the Division of Political and Treaties Division under the Ministry of Foreign Affairs and International Cooperation (MFAIC) on 11th November 2011. The Director of the Political and Treaties Division of the MFAIC holds overall responsibility for the CCU. The relocation of the CCU was considered a strategic move that was aimed at strengthening political and national support for climate change activities in Fiji.

The designated national focal point for the United Nations Framework Convention on Climate Change (UNFCCC) was also transferred from the Permanent Secretary of the MLGUDHE to the Permanent Secretary of the MFAIC.

A National Climate Change Country Team (NCCCT) was established in 1997, with representatives from various government agencies, NGO's and academic institutions. The NCCCT was formed mainly to assist in the establishment of the 2005 Fiji Initial National Communications (INC) to the UNFCCC Secretariat. The NCCCT resumed in 2010 and its core role is climate change project progress reporting and information sharing. The NCCCT also assists the CCU with regard to other climate-change related matters.

The National Climate Change Policy was finalized and launched in February 2012 and is based on the Fiji National Climate Change Policy Framework that was endorsed by Cabinet in 2007 and reviewed and updated in 2011 to reflect current and emerging climate change issues at the local, national and international level. The Framework outlined the position of Government and other stakeholders with regard to issues of climate change, climate variability and sea level rise, and highlighted the responsibilities of each stakeholder in the short and long term.

The National Climate Change Policy provides a platform for coordination among sectors as well as guidance on national positions and priorities regarding climate change mitigation and adaptation. The Policy is also aligned to the Government's Roadmap for Democracy and Sustainable Socio-economic Development 2009 – 2014, which highlights the need to prioritize the protection of

the environment and the sustainable management and utilization of natural resources.

Following the successful launching of the National Climate Change Policy in February 2012, a National Summit on Building Resilience to Climate Change (BRCC) was held in Labasa on Fiji's second largest island of Vanua Levu. The 2012 Summit came about following Government's realization that in order for the Policy to be effective, all stakeholders needed not just to be involved but to take ownership of the policies and strategies that had been established. Thus practitioners, educators, community leaders, communicators, media, managers and related government agencies converged at the Summit to discuss ways to build resilience to climate change, and an outcome statement was developed whereby participants were able to identify gaps, challenges and shared recommendations on ways to address climate change issues in Fiji.

Recently the CCU hosted the second National Climate Change Summit on August 12th – 16th, 2013 in Narewa Village, Nadi. The purpose of the Summit was to build on the outcome of the first National Climate Change Summit 2012 and to propose commitments to the National Climate Change Policy as well as open discussions on improved methods to incorporating the issues of climate change in development and business in Fiji.

To address the issue of climate change in Fiji, different sectors are working both individually and in collaboration on different projects that aim to tackle the many different areas that climate change issues encompass. These sectors include the Government, private organizations, local and international Non-Government Organizations (NGOs) and educational institutions.

One such project that aims to address the effects of climate change is the UN-Habitat Pacific Cities and Climate Change Initiative (CCCI), which specifically targets climate change issues within urban areas. Towns and cities are considered to be the most vulnerable areas to the effects of climate change due to the large population base with associated infrastructure, housing, utilities and services, as well as being located along coastal areas and along large river systems and within flood plains. Informal settlements are also considered the most vulnerable areas

within urban centres as they are often faced with the poorest living and housing conditions with few resources available to adapt to the effects of climate change.

The CCCI strives to improve the adaptation capacities of cities and local governments to the effects of climate change as well as to create opportunities for Pacific local governments and their city networks, associations and partners to apply useful mitigation and adaptation actions or projects. It is envisaged that through the CCCI project, resistance to climate change can be encouraged by integrating principles of sustainable development into Fiji's policies and programmes and by undoing the loss of environmental resources in developing nations like Fiji.

In Fiji, the CCCI programme is a part of the UN-HABITAT Cities Alliance project and the project works was undertaken by the Ministry of Local Government,

Urban Development, Housing and Environment in conjunction with Lami Town Council in 2010 as a pilot project which included a Vulnerability and Adaptation Assessment (V&AA) of Lami town and its peri-urban areas, a National Scoping Study (NSS), and a Greenhouse Gas (GHG) Inventory of Lami Town Council's operations all undertaken by SCOPE Pacific Limited, a registered planning and environmental consultant in Fiji.

The outcome of the CCCI project works revealed areas within existing planning and local government legislation, development policies and guidelines that were considered 'weak' in terms of responses to climate change issues, as well as the need for more specific policy actions and development guidelines for climate change adaptation that is more pro-active than reactive following natural disasters.

The recent August workshop that was an initiative of DLA Piper with the support from UNESCO and Centre for Asia Pacific Pro Bono, also highlighted the lack of clear understanding of the legal implications associated with climate change impacts in terms of liability, insurance risk and disaster management risk, and the need for similar workshops to be conducted with a broader range of key stakeholders which shall include the Climate Change Unit, the Department of Environment and the Department of Town & Country Planning (DTCP), the Department of Local Government and all Town and City Councils, etc. This workshop was timely in that DTCP is currently undergoing a review of the Town Planning Act (Cap 139) and therefore, Climate Change adaptation should be one of the key components that is incorporated into the review process.

ACRONYMS AND ABBREVIATIONS

BRCC	Building Resilience to Climate Change
CCCI	Cities and Climate Change Initiative
CCU	Climate Change Unit
GHG	Greenhouse Gas Inventory
INC	Initial National Communications
MFAIC	Ministry of Foreign Affairs and International Cooperation
MLGUDHE	Ministry of Local Government, Urban Development, Housing and Environment
NCCCT	National Climate Change Country Team
NCCP	National Climate Change Policy
NGO	Non-Government Organizations
NSS	National Scoping Study
UNFCCC	United Nations Framework Convention on Climate Change
V&AA	Vulnerability and Adaptation Assessment

THE LAW OF CLIMATE CHANGE ADAPTATION IN THE PACIFIC – FIJI

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The impacts of climate change are already being felt in Fiji. Climate change has brought an increase in the frequency of extreme events such as flooding, droughts and cyclones as well as increasing sea level rise and its associated impacts. Up until recently there were no cohesive institutional frameworks in respect to climate change present in Fiji. The introduction of Fiji's National Climate Change Policy in early 2012 has helped to solidify the importance of climate change at the national level and has helped to mainstream the issue of climate change at different levels of the government and society. At present there is no climate change legislation in Fiji, however the initial steps to the formulation of climate change legislation has begun in earnest with submissions to the Cabinet already been made.

The importance of the introduction of Fiji's National Climate Change Policy cannot be overstated. The policy provides a clearly defined position for the government and other stakeholders on issues of climate change, climate variability and sea level rise. Furthermore the policy provides for coordination among stakeholders and direction on national positions and priorities regarding climate change mitigation and adaptation. This policy also supports Fiji's International obligations under the United Nations Framework Convention on Climate Change (UNFCCC) as well as other relevant conventions and treaties. Prior to its introduction, coordinating and effectively administrating matters pertaining to the issue of climate change was difficult and slow. Now however this policy provides a platform for addressing the issue of climate change and facilitating the resulting adaptation and mitigation strategies that need to be taken.

The governmental agency responsible for climate change issues in Fiji is the Climate Change Unit, which falls under the arm of the Ministry of Foreign Affairs. The Climate Change Unit liaises with the relevant government agencies and stakeholders in order to implement climate change measures such as planning, mitigation and adaptation tools within the various facets of the government and community. The Climate Change Unit is also responsible for heading the Fiji delegation in international climate change negotiations.

Adaptation is one of the key objectives of the National Climate Change Policy. Adaption reduces the vulnerability and enhances the resilience of Fiji's communities to the impacts of climate change and disasters. The following are the key adaptation strategies that are outlined in the policy:

1. Integrate related disaster risk reduction and climate change adaptation strategies and actions into national and sectoral planning to streamline responses;
2. Include vulnerability assessments and climate change impact projections into resource management planning, such as integrated coastal and watershed management plans;
3. Incorporate climate change impact projections into infrastructure and urban and rural planning;
4. Develop sustainable adaptation technologies and systems that take traditional knowledge into account and are culturally acceptable;
5. Support the ecosystem-based approach throughout Fiji, recognising that ecosystem services, such as food security, natural hazard mitigation and physical coastal buffer zones, increase resilience;
6. Develop and make accessible hazard maps of coastal, riverine, urban and inland areas in Fiji, using the comprehensive hazard assessment and risk management tool to guide all development planning; and
7. Assess poverty, health and food security issues to determine their vulnerability to climate change, and consider these vulnerabilities in future policies and initiatives.

While there is no climate change legislation at present in Fiji, the National Climate Change Policy does provide direction and institutional coordination in respect to matters pertaining to climate change. Adaptation to climate change is a very important issue in Fiji given Fiji's vulnerability to climate variability and sea level rise and therefore there is an urgent need for stronger legislative and institutional mechanisms to guide this process.

CLIMATE CHANGE ADAPTATION AND COASTLINE DEVELOPMENT

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Fiji as a developing nation must adapt its legislation, with regards to planning and development, for a more climate friendly and sustainable future.

Our critical analysis of the *Town Planning Act (1978)* of Fiji had shown us that it is neither climate friendly or sustainable for Fiji's future given the current climate issues that we face in the Pacific. This is echoed in the report compiled by Amadou S. Dia for the 46th ISOCARP Congress 2010 (Amadou S. Dia. *The Fiji Town and Country Planning Act Case Study.* 46th ISOCARP Congress 2010)

Local town councils in Fiji, such as the Nasinu Town Council, have developed policies for the reclamation and extension of the foreshore for human convenience. The town council had not foreseen climate change as an issue that would affect these developments. Thus the Kinoya, Nadawa and Laucala Beach suburbs were developed on reclaimed foreshore land. These suburbs now face coastline degradation that is causing damage to their property as a direct result of climate change and rising sea levels.

The town council in trying to curb this problem has initiated a project targeted at replanting mangrove plants along the Kinoya, Nadawa and Laucala Beach coastline aimed at securing the foreshore along this damaged coastline. The Town council is also planning on reclaiming more land along this coastline for tourism purposes. This project is forecasted to begin sometime towards the end of this year.

It is important to note that it is not always beneficial to reclaim land for human convenience, as given the current climate circumstances, a better study of the evolution of the reclamation of land needs to be done to further understand the impact it has on the coastline and its surroundings. As already highlighted, the suburbs that were developed on reclaimed land are now facing coastline degradation and the properties affected have devalued as a result of not having an efficient study conducted.

"I wanted to take the opportunity to thank you and your team for your hard work in bringing the climate change workshop to Apia… it provided valuable insight into the legal challenges that we face in adapting to climate change, particularly pertinent to us in the South Pacific. It is exactly the kind of legal education and exposure that lawyers in Samoa desperately need."

Nick Mann, Principal Lawyer, Civil Division, Office of the Attorney General

FIJIAN COMMUNITIES' ROLE IN CLIMATE CHANGE ADAPTATION

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A Fijian community is always described as a self-reliant and self-sufficient village society rich in culture and values. These culture and values, which mainly focus on communalism and advocate members to live and work together for the common good of their society, has been the cornerstone of their survival during trying times, for instance, during tribal wars in the olden days. Over the years, these communities still gripped onto some of these values and cultures and are able to withstand some of the contemporary issues, one of which is climate change and its challenges. This brief article intends to highlight some of these values and discuss how they are applied in Fijian villages in order for them to adapt to challenges brought about by climate change.

People within a Fijian village are all related to one another. The existence of this social relation has influenced members' motivations and their acceptance of communal goals. Therefore, during challenges brought about by climate change, people work together and ensure the safety of all members of the society.

The act of being considerate in Fijian communities guarantees that nobody feels ignored in the village, and it also ensures that your welfare is looked after during natural disasters. With this attitude, villagers feel obliged to assist fellow villagers in trying times that need manpower and time, without any monetary reward. Financial rewards gained from such activities are a lesser consideration because of the knowledge that there will be a time when one will need the support of others.

Traditional leadership in the form of a chief is central to Fijian societies and to decision making about issues affecting them. During severe flooding, hurricanes and adverse weather conditions, the chief of a village, with advice from the village headman and live radio broadcasting updates, usually coordinates and makes decisions in regards to mitigating measures that villages needs to follow. These decisions are always relayed to village members, who in return always act accordingly. For instance, during cyclone Thomas in 2009, one of the coastal villages along the northern tip of Vanua Levu, Fiji's second largest island namely, Nukudamu was battered with strong winds and heavy swells resulting in the destruction of more than half of the houses. Apart from the strong wind and heavy swells, the severity of the cyclone in this particular village was also due to its overly exposed location. Straight after the cyclone, the chief through the tribal council meeting, made a decision for the relocation of the village to a much safer and secure location. Today, Nukudamu has been able to withstand other major natural disasters, mainly because of that collective chiefly decision.

Even though Fijian communities have the assets and tools to overcome challenges brought about by climate change, a robust legal framework to add onto this existing system is needed. With the current trend in social structure breakdown, these tools will soon be washed away in the next tide, therefore, policy makers need to weave a mechanism for the protection of these vulnerable Fijian societies and ensure they continue to adapt to challenges of climate change.

3. VIEWS ON THE WORKSHOPS

INTRODUCTION

There was a great deal of feedback provided from attendees about the workshops. In the next section of this report we provide a summary of the feedback for consideration when planning for future workshops.

We will use the attendees' valuable comments and recommendations to inform and develop the structure and content of future workshops.

Thank you to all attendees who took time to contact us and for your warm welcome and support during our time in Fiji and Samoa. We learnt a lot.

COMMENTS FROM WORKSHOP PARTICIPANTS

It was a great opportunity for me to attend the climate change adaptation workshop last week. Thanks for the invitation.

Ruben Marano
Senior Legal Analyst, Samoa Law Reform Commission

It was great to meet you at the Workshop, which I really enjoyed. I learnt a lot, and found it very interesting.

Dr Melanie O'Brien
research fellow in the ARC Centre of Excellence in Policing and Security at Griffith University in Brisbane, Australia, currently undertaking the role of Human Rights Legal Officer at the Office of the Ombudsman in Samoa

Thank you for the opportunity to participate in a fantastic Workshop.

Solamalemalo Hai-Yuean Tualima
Human Rights Communication & Education Officer, Office of the Ombudsman, Samoa

I wanted to take the opportunity to thank you and your team for your hard work in bringing the climate change workshop to Apia … it provided valuable insight into the legal challenges that we face in adapting to climate change, particularly pertinent to us in the South Pacific. I know that our junior lawyers also took a great deal from the day, and it is exactly the kind of legal education and exposure that lawyers in Samoa desperately need.

Nick Mann
Principal Lawyer, Civil Division, Office of the Attorney General

Thank you for your very informative tips. We may yet use these in our advice to clients.

Marie A Chan
Chan Law Legal Practitioners

We would like to first take this opportunity to thank you for having us at the workshop. It was indeed an insight to a growing problem that is prevalent now in Fiji and the Pacific region.

We were privileged to be a part of the workshop conducted in Fiji on August 5th. As students at law who focused on environmental law, and have graduated with a law degree and have thus been admitted on the 16th August 2013 to the High Court of Fiji, this workshop has embedded in us a passion to be involved more in the area of environmental law and climate change adaptation and policy in our legislation and local subsidiary legislation, whether voluntary or on a full time basis.

We see the issues discussed as prevalent to Fiji and the Pacific as we see the impacts of climate change every day. However, we also echo the comments made on that day by our friend from the Solomon Islands, who stated that it is imperative that workshops or forums as such include speakers from the Pacific. We recognize the efforts of DLA Piper, Australia and UNESCO in organizing the workshop, it was indeed an eye opener for new graduates as ourselves and an introduction to a prevalent area of the law that needs to be addressed.

Litiana. M. Seibouma and Mathew C. Young
Law Graduates, University of the South Pacific

Climate change is an issue that has a specific and worrying relevance here in the Pacific, where populations live on small islands, some of which are low-lying, and all of which are subject to the extreme weather events of climate change. Only recently in December 2012, Samoa was hit by Cyclone Evan, which devastated large areas of the islands.

There are many human rights that are affected by climate change, and there are also good governance issues. Consequently, climate change is an important issue for those of us here at the Samoa National Human Rights Institution/ Office of the Ombudsman to be aware of and engaged in. Three NHRI/Ombudsman members participated in the workshop. It was extremely useful to understand how climate change is impacting the law and legal decisions in Australia. In addition, the UNESCO focus on the specific areas in Samoa that are at issue, for example, greater public education on conduct during natural disasters (eg, not driving through flood waters or standing on collapsed structures), and the SPREP presentations on practical solutions that are being implemented throughout the Pacific, such as road reinforcement and the promotion of eco-based adaptation solutions (eg, replanting mangroves) were both vital in gaining a greater perception of the local impact of climate change and actions that can and need to be taken to mitigate the impact of those changes. From the human rights perspective, this helped us to become aware of the specific areas in which Samoa needs to take a rights-based approach with legal and policy decisions in climate change adaptation and mitigation. All of this information is incredibly important in Samoa, where climate concerns need to become more at the forefront of the minds of government, organisations, the private sector, and the general public.

We would support more of these workshops in the future. It would be useful for future workshops to be more widely advertised to ensure a greater attendance, as this kind of workshop would be constructive for many people in different sectors, eg, the judiciary, the ministries, engineering companies, and more. It would also be good to hear from locals who have experience in this field, eg, in policy or from NGOs, to find out more about what directions are being taken in Samoan policy and law. More local engagement and dialogue would have been good, to enable the locals to take advantage of the expertise of workshop presenters.

Dr Melanie O'Brien
Samoa National Human Rights Institution, Office of the Ombudsman

I thought the workshop was great. … I thought the order and range of subject matter of the presentations was excellent … Thanks again for a great workshop.

Julia Maurus
Australian Youth Ambassador for Development, Communications Officer, Samoa Law and Justice Sector Secretariat

Thanks for the wonderful workshop. I found it interesting, … Furthermore, the workshop inspired me and I am starting up my research soon.

Hyo Mee Duerinck
Climate Change Adaptation Intern, United Nations Development Programme

I thought it was an excellent workshop and looking at the bigger picture and putting things into perspective as in regards to the International legal framework. I personally would have appreciated a more regional and national approach so that I could better understand from my existing knowledge. … The reason why I'm emphasising on the regional or national awareness is relation to its practical application of relevant strategies to achieve objectives in line with the laws of climate change adaptation in the Pacific.

Luseyane Ligabalavu
research assistance, Naco Cahmbers, Suva, Fiji

PROPOSED CONTENT FOR FUTURE WORKSHOPS

The following topics were identified as being of value to practitioners in the Pacific.

- Climate change legal risk assessment, and procedures and processes for managing the risk;
- How traditional knowledge might be employed to inform climate change actions;
- What Pacific Island Countries are doing to adapt to climate change;
- Climate change adaptation programs in Australia that could be used to assist in adaptation for Pacific Island countries;
- Existing laws and policies dealing with climate change;
- Drafting effective legislation to deal with climate change legal risk;
- The interaction between climate change and disaster risk management;
- Planning for climate change;
- Financing climate change adaptation actions;
- Climate change litigation, including litigation around international treaties, local environmental and marine legislation and adverse environmental and indigenous consequences, including case law;
- Local development and climate change;
- Strategies to deal with climate change;
- How adaptation and mitigation can be contextualised in Fiji and Samoa in terms of their current policies and legislation;
- Identifying development policies affecting climate change and dissemination of the policies for public consumption; and
- The human impact of climate change eg, forced migration.

IT WAS SUGGESTED THAT THE WORKSHOPS COULD BE IMPROVED BY PROVIDING FOR THE FOLLOWING:

- More local presenters and specialists or experienced local professionals in the area of climate change legal risk;
- More Pacific case studies. For example, consideration of the issue of sea level rise, how it affects the Pacific Island Countries, and how they can implement policies to address development affected by sea level rise; and
- Greater participation by local legal and government representatives as well as the private sector.

4. CONCLUSION

A visit to the Pacific leaves no doubt that the peoples and communities in that region are being affected by climate change. At the time the workshops were being held, Esala Nayasi, director of the political and treaties division of the Fijian Government Ministry of Foreign Affairs, stated that the adverse effects of climate change was a security threat to Pacific Island Countries (PICs) because of the way in which it affected the survival of people through the impact it had on resources. Mr Nayasi went on to say, 'As PICs, it is incumbent on us to endeavour to advance our interest within the international community. We need science, we need research, we need data and we need climate change engineering.'

It was clear to us from the extent of the impacts being experienced in the Pacific that adaptation strategies need to target change at all levels, from the actions of individuals through to the broad regime changes of those that manage systems. While this change was certainly occurring, it was apparent to us that legal frameworks necessary to support and promote the adaptive capacity of which Mr Nayasi spoke, were missing. This was no secret. It was acknowledged by the people we meet in Fiji and Samoa and in the papers and feedback we received following the workshops.

But the establishment of legal frameworks is only part of the solution. There are of course multiple layers of organisational interest and an appropriate legal framework will need to provide adaptation principles and goals, but ultimately it is through the implementation process that adaptation occurs. This can only be achieved if decision makers at all levels understand how their decisions affect or are affected by climate change. It is with the decision maker, we found, that knowledge and understanding of climate legal risk is most needed and most crucial.