

A STUDY ON THE CHALLENGES OF GLOBAL WARMING FOR LIVING SPECIES

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ABSTRACT

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 were 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 2.4o C3 . In Australia the majority of adaptation responses to climate change has been ad hoc, use limited robust science and contain very limited considerations of climate legal risk.

KEYWORDS: *Climate, Global, Environment*

INTRODUCTION

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 investment⁴. 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).

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 sealevel 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.

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.

CHALLENGES OF GLOBAL WARMING FOR LIVING SPECIES

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 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“.

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.

DISCUSSION

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.

CONCLUSION

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.

REFERENCES

- [1]. Environmental Policy and Law IOS Press, The Netherlands. Everyman`s Science Indian Science Congress Association, Kolkata.
- [2]. Fordham Environmental Law Review Fordham University School of Law, USA. Forest Case Update Available online: <http://www.forestcaseindia.org>
- [3]. Indian Journal of Environmental Law
- [4]. National Law School of India University (NLSIU) ejournal. www.nlsenlaw.org
- [5]. Indian Journal of Law and Technology
- [6]. National Law School of India University, Bangalore, India.
- [7]. International Environmental Agreements: Politics, Law and Economics Springer Online www.springer.com
- [8]. Journal of Environmental Law. Oxford University Press, New Delhi.
- [9]. Journal of Environmental and Sustainability Law