Tourism, the Millennium Development Goals and Climate Change in the South Pacific Islands

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Abstract:

As the leading industry in most Pacific Island Countries (PICs), tourism plays an important role in the achievement of Millennium Development Goals (MDGs) for Pacific people. Heavily dependent on climate and the environment, tourism is very vulnerable to risks and impacts rising from climate change. This vulnerability of tourism is worse for those remote and small island countries in the Pacific. The already occurring climate changes are hindering MDGs in the region by having negative impacts on tourism. Therefore, Pacific tourism needs to take adaptation measures to reduce vulnerability and increase resilience to climate change impacts. This paper discusses the interactions between tourism, the MDGs and climate change in South Pacific. Comparison of tourism intensity to indicators of standard of living for Small Island developing states show that tourism is a powerful agent of poverty alleviation. As a highly climate sensitive economic sector in a highly climate vulnerable region, Pacific tourism needs to adapt immediately to climate change impacts to build and increase resilience to fight against it. Therefore, more efforts are needed to fill in the knowledge gap of tourism adaptation to climate change from various disciplines and perspectives.

Keyword:

Tourism, the Millennium Development Goals (MDGs), climate change, South Pacific

Introduction

Tourism is a primary source of foreign exchange earnings in 46 out of 50 of the world's Least Developed Countries (LDCs) (DeLacy, 2009). With its potential to lift people out of poverty through the employment and entrepreneurial opportunities it provides, the tourism sector has the potential to make a substantial contribution to the achievement of the UN's Millennium Development Goals (MDGs) (UNWTO, UNEP, and WMO, 2008). In the South Pacific, tourism is the largest export sector for most PICs and offers great opportunity for economic growth, employment and sustainable development (DeLacy, 2009).

As a highly climate-sensitive economic sector, tourism and Pacific tourism in particular, is vulnerable to climate change impacts. According to climate change projections in the 4th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (2007), small islands states like those in South Pacific will confront risks from climate change such as sea level rise, warming weather and increases in number and intensity of tropical cyclones, which will impede the ability of the tourism sector to make a key contribution to achieve the MDGs in the region. Tourism demand may also be impacted due to global mitigation policies and "green" ethical concerns affecting long haul travel (DeLacy et al, 2007).

This paper discusses the interactions between tourism, the MDGs and climate change in the South Pacific. Following the introduction, section two highlights the importance of tourism for South PICs to achieve the MDGs. Section three of the paper provides an overview of climate change in the region including climate change impacts that have already been witnessed as well as projected risks from future climate change related activity in the South Pacific Islands. Section four then discusses adaptation to climate change that the South Pacific tourism sector needs to make to contribute to the achievement of the MDGs and section five draws overall conclusions and implications.

MDGs and Tourism in the Pacific

The Millennium Development Goals (MDGs) formulated as a result of the Millennium Declaration at the Millennium Summit in 2000 are the commitment of the world community to eliminating poverty and improving peoples' lives. All Pacific island governments endorsed the MDGs in 2002. In 2004, the Secretariat of the Pacific Community (SPC) prepared the Pacific Islands Regional Millennium Development Goals Report in cooperation with the United Nations and the UN/CROP MDG Working Group. This report reviewed the state of development in the Pacific Islands against the MDGs and their associated indicators and targets. (SPC, 2004) The Pacific MDGs Report concluded that progress towards the MDGs in the Pacific has been slow and in some cases even a worsening of status with regard to certain indicators (SPC, 2004). Traditional Pacific societies embrace caring for and sharing with family and clan, and therefore extreme poverty such as starving children is generally absent from the Pacific Islands (Abbott and Pollard, 2004; SPC, 2004). However, evidence has shown that hardship and hunger is much more widespread than generally thought in the Pacific (SPC, 2004; Abbott and Pollard, 2004). As shown in the following table of the Human Development Index (HDI) of selected Pacific countries, most of them are low- and medium- HDI countries.

Table 1: Human Development Index of Selected PICs

Selected Pacific Countries	1995	2000	2005	2007/ranking out of 182 countries	2007 GDP per capita (PPP US$)/ranking out of 182 countries
Cook Islands	..	..	..	..	..
Fiji	0.743	0.747	0.762	0.741/108th	4,304/115th
Kiribati	..	..	..	..	..
Nauru	..	..	..	..	..
Palau	..	..	..	..	..
Papua New Guinea	0.532	0.544	0.530	0.541/148th	2,084/138th
Samoa	0.740	0.765	0.785	0.771/94th	4,467/113th
Solomon Islands	..	..	0.602	0.610/135th	1,725/145th
Tonga	..	..	0.819	0.768/99th	3,748/120th
Tuvalu	..	..	..	..	..
Vanuatu	..	..	0.674	0.693/126th	3,666/122th

Source from: UNDP, 2008; UNDP, 2009.

According to ADB poverty and hardship studies in 13 PICs (including Cook Islands, Federated States of Micronesia, Fiji Islands, Kiribati, Nauru, Papua New Guinea, the Marshall Islands, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu), the average incidence of basic needs poverty is around 25% for all countries for which data

are available (Abbott and Pollard, 2004). It means that these households experience the inability to meet the costs of food and other basic needs and services essential for a minimum standard of living (Abbott and Pollard, 2004). Despite less prevalent hunger in the region, malnutrition is present and even increasing as shown in the following table of proportion of underweight children below five years of age in several PICs.

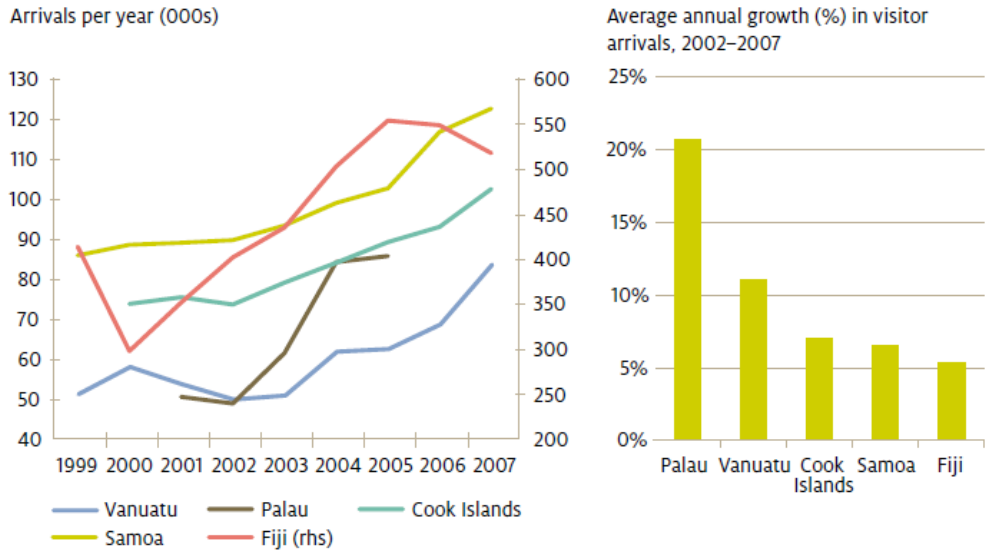
Table 2: Proportion of underweight children below five years of age in several PICs

Countries	2004 Pacific MDGs Report (%)	2009 Human Development Report (for 2007) (%)
Fiji	15.0 (1994)	8.0
Kiribati	13.0 (1999)	13.0
PNG	24.9 (2000)	35.0
Vanuatu	12.1 (1996)	20.0

Source from: UNDP, 2009; SPC, 2004.

As the largest export sector for most PICs (DeLacy, 2009), tourism has played a significant role in economic growth as well as human development in the region. Whilst a decade ago tourism in the region was dominated by Fiji and the two French territories, Tahiti and New Caledonia, the sector is now truly widespread in its economic impact and has led growth in several PICs (Everitt, 2009). The AusAID 2008 Pacific Economic Survey stated that several Pacific countries including Fiji, Vanuatu, Palau, Samoa and Cook Islands have shown they can deliver tourist-led growth, which have all sustained growth of 5% or more over the last five years in tourism arrivals (Figure 1) (AusAID, 2008). Tourism is almost half of GDP in Cook Islands and Palau, closer to 20 % in Vanuatu and 10%-15% in Samoa and Fiji (AusAID, 2008).

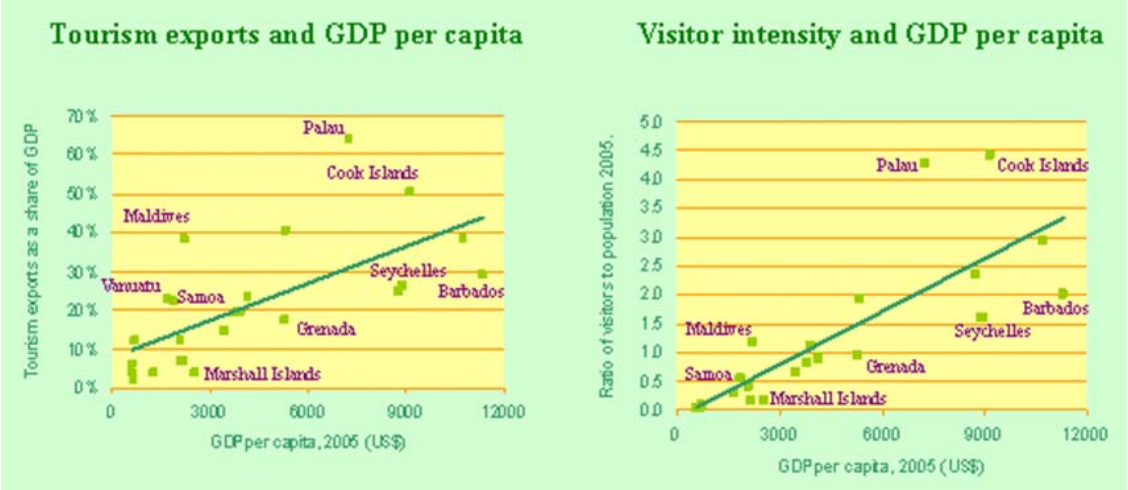
Figure 1: Growth of visitor arrivals in several PICs



Source from AusAID, 2008

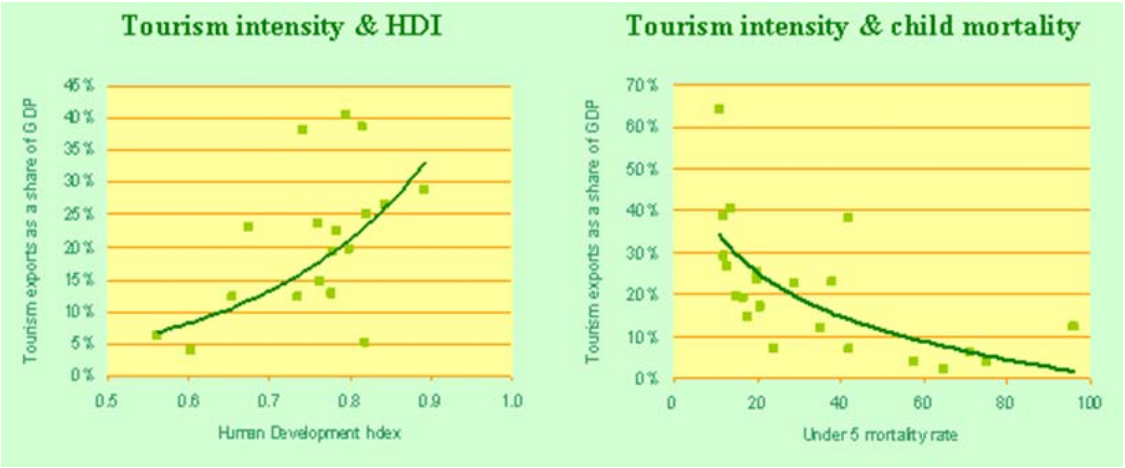
AusAID research has investigated the link between tourism and development for small island states. The research findings as shown in the following figures reveal that tourism does alleviate poverty.

Figure 2: The link between tourism intensity and prosperity for small island states



Source from Levantis, 2008

Figure 3: The link between tourism intensity and human development for small island states



Source from Levantis, 2008

The Pacific region is also home to 10 percent of the world's Least Developed Countries (LDCs), with 5 of the 50 LDCs. They are: Kiribati, Samoa, Solomon Islands, Tuvalu, and Vanuatu. These countries are in a very vulnerable position on economic, environmental, social and institutional fronts (UNDP, 2006a). The following table indicates that Kiribati, Samoa and Vanuatu are heavily dependent on tourism while tourism is still a small-scale activity in Solomon Islands and Tuvalu.

Table 3: Tourism development in 5 Pacific LDCs

Pacific LDCs	Tourism development
Kiribati	• Tourism acknowledged by the Kiribati Development Plan 2008-11 as one of the key economic priorities • The Kiribati National Tourism Action Plan 2009-14 released in November 2009, which stated a number of key action items developed in MDGs • The vision for the Kiribati tourism industry 2009-14: "For tourism to become the largest and most sustainable economic sector driving employment, growth and the Kiribati economy" • The tourism's share of GDP currently about 20% • The 2014 target for the tourism's share of GDP: 40-50%
Samoa	• Tourism acknowledged by the Strategy for the Development of Samoa 2008-2012 as one of key sectors led economic growth and employment creation and priority areas of economic policies • The Samoa Tourism Development Plan 2009-2013 released in July 2009 • The tourism's share of GDP currently about 10% • The 2013 target for the growth of visitor arrivals: 40%
Solomon Islands	• Tourism has remained a small-scale activity in Solomon Islands, partly because the government did not actively promote tourism as an economic alternative until the mid-1990s. • Tourism identified as one of development priority areas by the Solomon Islands Medium-Term Development Strategy 2008-2010
Tuvalu	• Due to its remoteness, tourism does not provide much income for Tuvalu; only a handful of tourists visit Tuvalu annually. Almost all visitors are government officials, aid workers, non-governmental organization officials or consultants.
Vanuatu	• Tourism identified as one of priority areas in private sector development and employment creation by Priorities and Action Agenda of Vanuatu 2006-2015 • 12.5% average annual growth in visitor arrivals by air into Vanuatu between 2003 to 2008 • Tourism development in Vanuatu has helped place it on a higher growth path than other PICs - averaging 6% per year since 2003

It can be concluded that tourism, as a key economic sector in the Pacific, plays an important role in alleviating poverty and achieving the MDGs for Pacific communities. In PICs where tourism is the leading industry, the sector provided jobs for many people, such as 31% of total employment in Fiji and 42.4% in Vanuatu (ESCAP, 2008). The growth of tourism in PICs has the potential to lift people out of poverty through the employment and entrepreneurial opportunities it provides.

Climate Change Impacts on the Pacific Tourism

Despite uncertainty as to the magnitude of future changes in climate at both global and regional scales, there is scientific consensus that climate change is a major global challenge which will increasingly affect environments, societies and economic sectors around the world.

Global atmospheric concentrations of greenhouse gases (GHG) such as carbon dioxide (CO_2), methane and nitrous oxide have increased markedly as a result of human activities (fossil fuel use, land use change, and agriculture, etc) since 1750. As the Intergovernmental Panel on Climate Change (IPCC) declared in its fourth climate change assessment report, 'warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.' (IPCC, 2007a) The global mean temperature has increased approximately 0.76°C between1850-1899 and 2001-2005 and according to the IPCC's conclusion, most of the observed increase in global average temperatures since the mid-20th century is '*very likely*' (> 90%

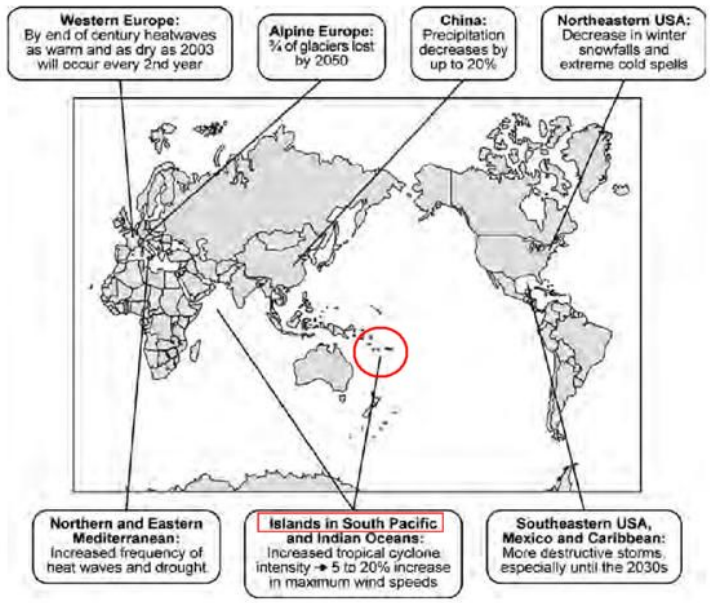
probability) due to the observed increase in anthropogenic GHG concentrations (IPCC, 2007a).

A range of the IPCC Special Report on Emission Scenarios has projected that, with continued GHG emissions above current rates, global average surface temperatures will raise by 1.8°C to 4.0°C during the 21st century. Even if GHG concentrations were to be stabilised at current levels, a significant warming of the earth will occur resulting in many changes in the global climate system (IPCC, 2007a). These include changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones (IPCC, 2007a).

Small island states in the Pacific 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 (SPREP, 2008). Phenomena consistent with the adverse consequences of climate change on natural and human systems for small island states anticipated by the IPCC 2007 report are already an unfortunate reality for Pacific islanders (SPREP, 2008). These impacts include inundation of low-lying areas, extensive coastal erosion, coral bleaching, salinization of groundwater, persistent alternation of regional weather patterns, decreased productivity in fisheries and agriculture, and increases in the distribution and frequency of mosquito-borne disease. The potential magnitude of the climate change impacts threatens the very existence of some Pacific island states, and the achievement of sustainable development and MDGs (SPREP, 2008). While climate change affects all people globally in different countries, Pacific people are on the front line as the catastrophe is unfolding for them, slowing progress towards MDGs and deepening inequalities within and across countries (UNDP, 2007).

With its close connections to the environment and climate itself, tourism is highly sensitive to climate change risks similar to agriculture, insurance, energy, and transportation. Pacific tourism is particularly vulnerable to climate change impacts. The region is one of 'climate-tourism hotspots' where climate change can have a major adverse effect on tourism. (Figure 4) Climate change impacts on Pacific tourism will definitely hinder tourism's capacity to achieve the MDGs of Pacific communities.

Figure 4: Climate – Tourism Hotspots



Source from Becken and Hay, 2007

Tourism is a climate dependent industry, and climate is a key factor in destination choice and holiday experience. Many tourists travel to particular destinations to enjoy pleasant or suitable weather during their holiday periods (Becken and Hay, 2007). Therefore climate change can have direct climatic impacts as well as indirect environmental change impacts on the tourism sector. Climate change is not a remote future event for tourism in the Pacific, but is already affecting destinations in the region and influencing decision-making in the tourism sector. For instance, sea-level rise as a result of global warming causes increased flooding and inundation of many low-lying areas, accelerated erosion of sandy shorelines, salinization of groundwater, and renders some islands uninhabitable. Increases in number and intensity of tropical cyclones lead to coastal erosion from storm surges, waves, etc. This affects the tourist product by threatening investment and damaging natural attractions (Harrison, 2009).

In addition to climatic and environmental impacts, climate change indirectly affects the tourism sector by changing tourist mobility (UNWTO, UNEP and WMO, 2008). In order to seek to reduce GHG emissions, national or international mitigation policies are having an impact on tourism, especially on tourist flows by leading to an increase in transport costs, fostering changed environmental attitudes towards GHG emissions which will affect the travel patterns of tourist. Due to the remoteness of the Pacific islands, the Pacific tourism industry heavily relies on a long haul travel market, which is threatened by these climate change induced changing consumer demands.

Consequently the tourism sector needs to adapt to climate change to minimise negative impacts and identify and take advantage of opportunities or positive changes resulting from climate change. As they are more vulnerable than other societies and sectors, Pacific communities and their tourism sector will need to make greater efforts to build the resilience and adaptive capacity to protect and grow local livelihoods in the context of urgent climate change impacts on them.

Tourism Adaptation to Climate Change in the Pacific

Mitigation and adaptation are the two main policy responses to the global challenges of climate change. While mitigation seeks to reduce GHG emissions and thereby the rate and magnitude of climate change, adaptation is the “adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities” (IPCC, 2007b). Historically, adaptation to climate change has received less attention than mitigation. This was mainly because prevention was seen as better than a cure, and the effects of mitigation are more measurable than adaptation. The tourism sector has often been overlooked by governments and policy makers when examining adaptation options, with sectors such as agriculture and water receiving more attention (Scott et al, 2009). Therefore knowledge of appropriate climate change adaptations for tourism is very limited. Some researchers state that adaptation research in the tourism-recreation sector is 5-7 years behind that of other sectors that have been actively engaged in adaptation research (Scott et al, 2009).

Different approaches and perspectives have been reported to develop climate adaptation frameworks and models for various areas including climate change, vulnerability, adaptation, risk and disaster management and resilience. By reviewing existing adaptation frameworks and models, several essential elements involved in climate change adaptation are summarized below (Simpson et al, 2008; Lim & Spanger-Siegfried, 2004; Becken & Hay, 2007).

- Adaptation involves different stakeholders at all levels from the individual to the organization, both public and private sectors, as well as households and communities.

- Adaptation involves a process of several steps which defines the problem, formulates and implements adaptation strategies, policies and measures, and evaluates outcomes.
- Adaptation is a participatory process involving key local stakeholders who are able to identify the real issues on the ground and make the appropriate decision in planning adaptations.
- Vulnerability assessments are crucial to understand vulnerability as well as adaptive capacity and resilience on which the development of adaptation strategies, policies and measures are based.
- Rather than being isolated and fragmented, adaptation to climate change has to be mainstreamed into integrated planning and policy making of the sectoral and national sustainable development.

Despite the significance of tourism in the Pacific and its vulnerability to climate change impacts, adaptation of the Pacific tourism sector to climate change have not been addressed in any systematic way. The Pacific Adaptation to Climate Change (PACC) project collaboratively run by UNDP and Secretariat of the Pacific Regional Environment Programme (SPREP) has been a significant step towards addressing vulnerabilities and risks associated with climate change and implementing adaptations in national and community level planning and governance process for 13 countries in the Pacific (SPREP, 2008). However, tourism adaptation has not been covered systematically as a key climate change concern in this project as it focuses on food security, water and coastal management (SPREP, 2008).

A five step vulnerability assessment methodology for coastal tourism in Fiji was recently reported (Moreno and Becken, 2009). These include:

- System analysis. In this step, the geographical, social and institutional scope of the study area is clearly defined, main stakeholders are identified and involved in the process and relevant tourism activities are described and prioritized according to their relevance. In addition, it also includes an analysis of existing management plans and relevant policies.
- Identification of activity and hazard sub-systems. This step analyses potential climate hazards, makes an explicit link between tourism activities and hazards, and disaggregate the tourism destination into a number of coupled activity-hazard sub-systems such as “diving/snorkelling-coral bleaching”, “hotel-water supply”, and “beach-cyclone”. It also involves a selection of the sub-systems to be analysed in collaboration with stakeholders.
- Vulnerability assessment for the different sub-systems at risk. Key vulnerability components and quantitative indicators to measure them are identified and fine-tuned by using the vulnerability scoping diagram (VSD).
- Integration for the destination as a whole and scenario analysis. The overall climate change impact on the destination is assessed by stakeholders with different attitudes to risk and the goals to tourism. Scenario could be constructed with analysis of system attributes such as non-linearities, inter-dependencies and feedback loops.
- Communication. To improve the methodology and also facilitate its application to other contexts and regions, the last step involves the communication of the results to stakeholders beyond those who were involved in the decision-making process.

This vulnerability assessment model for coastal tourism in Fiji can act as a basis for developing a more comprehensive vulnerability resilience framework to underpin the development of adaptation to climate change strategies for Pacific island tourism.

As the policy level adaptation to climate change for the tourism sector remains at the very early stage in the Pacific. Several PICs such as Fiji and Samoa do acknowledge the need for government to understand implications of climate change on tourism in

their national tourism development plans and climate change strategies. But to date no country is conducting systematic vulnerability and resilience assessments for the tourism sector or developing adaptation policies and strategies to assist the sector build and increase resilience to cope with climate change impacts.

Conclusion

Although hunger is less prevalent in the Pacific, poverty and hardship is present and of significant concern. The achievement of MDGs in most of PICs are off track. Tourism as a key economic sector provides opportunities for employment and GDP growth for Pacific communities, and thereby makes a significant contribution to reducing poverty and growing livelihoods. Indeed, PICs have increasingly realized this and have identified the tourism sector as a priority area for their economic and social development.

Pacific people are confronting more severe challenge of climate change than others. While climate change remains a remote projection for some regions, the Pacific has already been experiencing various changes of the climatic system and resulting impacts. As a highly vulnerable sector, tourism in the Pacific has been witnessing real climate change impacts on both the supply and demand side of the sector.

Therefore it is crucial for the Pacific tourism sector to respond immediately to adapt to climate change so as to reduce vulnerability and build resilience to fight against it. Currently, however, adaptation research lags behind mitigation research and tourism adaptation research behind other sectors. Tourism adaptation remains a knowledge gap in the literature despite a recent growth of attention and efforts from various disciplines and perspectives.

Vulnerability assessment and adaptation policies, strategies, and measures need to be developed at local level. There has been lack of systematic work to look at the vulnerability and resilience of the Pacific tourism sector and to develop an adaptation framework for it. More efforts are needed in terms of filling this knowledge gap. The existing adaptation frameworks and models available in the literature in vulnerability, adaptation, resilience, and risk and disaster management could be used as a good start.

Tourism is an important element in achieving MDGs for Pacific communities. Climate change responses and poverty alleviation are simultaneous objectives of sustainable tourism. On one hand, tourism adaptation to climate change would definitely assist the ability of the sector to provide employment opportunities for Pacific people and generate economic development for the communities. The achievement of MDGs, on the other hand, should be incorporated into the integrated development of adaptation policies, strategies, and measures for the Pacific tourism sector to respond to climate change impacts.

References:

- Abbott, D., and Pollard, S. (2004): *Hardship and Poverty in the Pacific: Strengthening Poverty Analysis and Strategies in the Pacific*, Asian Development Bank, Pacific Department.
- AusAID (2008): *08 Pacific Economic Survey: Connecting the Region*, available online at http://www.ausaid.gov.au/publications/pdf/pacific_economic_survey08.pdf
- Becken, S., and Hay, J. E. (2007): *Tourism and Climate Change: Risks and Opportunities*, Channel View Publications: Clevedon, Buffalo, Toronto.
- DeLacy, T. (2009): *Pacific Tourism Adaptation to Climate Change Risks*, presentation to the UNDP Conference on Climate Change in the Pacific: Impact on Local Communities, 1 August 2009, Apia, Samoa.

- DeLacy, T., Jago, L., Truong, T-H and Lipman, G. (2007): *Carbon Clean Sri Lanka,* Sri Lankan Ministry of Tourism and UNWTO Davos Congress on Tourism and Global Warming Background Documents, Colombo, Sri Lanka and Madrid, Spain.
- ESCAP (2008): *2008 Statistical Yearbook for Asia and the Pacific*, United Nations Economic and Social Commission for Asia and the Pacific.
- Everitt, Tony (2009): *Tourism's Role in the South Pacific Economy*, presentation at the Kick-off workshop of AusAID Pacific Tourism-Climate Adaptation Project, 24-25 June, 2009, Suva, Fiji.
- Harrison, David (2009): *Tourism, South Pacific and Climate Change*, presentation at the Kick-off workshop of AusAID Pacific Tourism-Climate Adaptation Project, 24-25 June, 2009, Suva, Fiji.
- IPCC (2007a): *Climate Change 2007 - the Physical Science Basis*, contribution of working group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, available online at http://www.ipcc.ch/ipccreports/ar4-wg1.htm
- IPCC (2007b): *Climate Change 2007 – Impacts, Adaptation and Vulnerability*, contribution of working group II to the Fourth Assessment Report of the IPCC, available online at http://www.ipcc.ch/ipccreports/ar4-wg2.htm
- Levantis, T. (2008): Personal communication with Professor Terry DeLacy, AusAID.
- Ministry of Communications, Transport & Tourism Development of Kiribati, (2009): *Kiribati National Tourism Action Plan 2009-2014*, available online at http://www.kiribatitourism.gov.ki/images/stories/FactsheetandBrochures/Tourism_action_plan.pdf
- Ministry of Environment, Conservation & Meteorology of Solomon Islands (2008): *Solomon Islands National Adaptation Programmes of Action (NAPA)*.
- Ministry of Finance and Economic Management of Vanuatu(2006): *Priorities and Action Agenda 2006-2015: An Educated, Healthy and Wealthy Vanuatu*, available online at http://nztri.aut.ac.nz/planningtoolkit/pages/vanuatustrategies.php
- Moreno, A., and Becken, S. (2009) A Climate Change Vulnerability Assessment Methodology for Coastal Tourism, *Journal of Sustainable Tourism*, 17(4) 473-488
- Samoa Tourism Authority (2009): *Samoa Tourism Development Plan 2009-2013*.
- Scott, D., de Freitas, C.R., Matzarakis, A. (2009) *Adaptation in the Tourism and Recreation Sector*. In Ebi, K.L., Burton, I., and McGregor, G.R. (eds) *Biometeorology for Adaptation to Climate Variability and Change.* New York: Springer.
- Simpson, M.C., Gössling, S., Scott, D., Hall, C.M, and Gladin, E. (2008): *Climate Change Adaptation and Mitigation in the Tourism Sector: Frameworks, Tools and Practices*, UNEP, University of Oxford, UNWTO, WMO: Paris, France.
- SPC (2008): *Solomon Islands and Secretariat of the Pacific Community Joint Country Strategy 2009-2012*, available online at http://www.spc.int/sppu/images/JCS/solomon%20islands%20jcs%202009-2012%20approved%20%282%29.pdf
- SPC (2004): *Pacific Islands Regional Millennium Development Goals Report*.
- SPREP (2008): *Pacific Adaptation to Climate Change Project Description*, available online at http://www.sprep.org/climate_change/PACC/index.asp
- UNDP (2009): *Human Development Report 2009*.
- UNDP (2008): *Tackling Corruption Transforming Lives: Accelerating Human Development in Asia and the Pacific*, Asia-Pacific Human Development Report 2008.
- UNDP (2007): *Human Development Report 2007/2008: Fighting Climate Change: Human Solidarity in a Divided World*.
- UNDP (2006a): *Trade on Human Terms: Transforming Trade for Human Development in Asia and the Pacific*, Asia-Pacific Human Development Report 2006.
- UNDP (2006b): *Country Background Note: Tuvalu*, available online at http://www.undp.org.fj/index.cfm?si=main.resources&cmd=forumview&cbegin=0&uid=tuvaluprofile&cid=56
- UNWTO, UNEP and WMO (2008): *Climate Change and Tourism – Responding to Global Challenges*, UNWTO, Madrid, Spain.