



ISLAND DYNAMICS

Political Ecology, Island Tourism Planning, and Climate Change Adaptation on Boracay, Philippines

Virgilio Maguigad

College of Marine and Environmental Sciences, James Cook University, Australia

virgilio.maguigad@my.jcu.edu.au

David King

College of Marine and Environmental Sciences, James Cook University, Australia

david.king@jcu.edu.au

Alison Cottrell

College of Marine and Environmental Sciences, James Cook University, Australia

alison.cottrell@jcu.edu.au

Abstract: This research paper presents a case study of the island of Boracay, Philippines, utilising a political ecology approach to climate change adaptation. The research finds that the island's political ecology, especially the relationships among stakeholders, is strained. This creates challenges for various urban planning processes that require good working relationships. Climate change is expected to highlight these divisions as interactions among stakeholders (fulfilling zoning ordinance obligations, climate change adaptation-compliant land use plans, *etc.*) are dependent on good stakeholder relations. Stakeholders realise that climate change is real and that sea level rise is already challenging existing zoning ordinances on urban beach development. However, this realisation must be integrated into political decision-making processes involving tourism stakeholders. The research also shows that the political ecology approach and methodology is applicable to studying the dynamics of climate change adaptation and tourism urbanisation on small islands.

Keywords: Climate change adaptation, island tourism planning, Philippines, political ecology, tourism urbanisation

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Island Dynamics, Denmark - <http://www.urbanislandstudies.org>



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1. Introduction

The theoretical and methodological foundations for the research described in this paper are set out in detail in Maguigad, King, and Cottrell (2015). In this previous paper, we discussed how global climate change phenomena are experienced locally in diverse ways, despite being widely identified as a threat to coastal and island communities, including the Philippines. Similarly, we discussed how tourism has been identified as a vital economic activity in many developing economies, including the Philippines, despite also being identified as a contributor to climate change (Broderick, 2009; Dubois *et al.*, 2011). Climate change and tourism thus have a tense relationship in a country such as the Philippines, which is experiencing the economic benefits of strong tourism growth (DOT, 2012; Arnaldo, 2012) alongside a recognition that it is highly vulnerable to climate change (Harmeling, 2011) and that its urban populations are exceptionally at risk from rising sea levels (Dasgupta *et al.*, 2012; Nicholls *et al.*, 2007).

The present paper focuses on Boracay Island (Malay municipality, Aklan province) in the Philippines. Boracay is a major and well-documented tourism destination. Boracay has been an overwhelming success in terms of the tourism industry, and its visitor arrivals outnumber all other Philippine small island destinations according to Department of Tourism statistics. However, current development on the island, which has been subject to rapid tourism urbanisation, points to a stagnation stage in the Tourism Area Life Cycle (TALC) model, with massive intervention needed to avoid environmental, infrastructural, and visitor experience degradation (Smith *et al.*, 2011).



Figure 1: A view of the main beach of Boracay during the southwest monsoon season (Author's Fieldwork Photos, August 2012).

Indeed, although Boracay is frequently portrayed as a tourism gem, it is cited in the literature as an example of tourism gone wrong, with a myriad of environmental and social problems (Carter, 2004; Ong *et al.*, 2011). As early as 1997, researchers sounded the alarm on the need to remain within physical, tourist, resident, transport, and governance carrying capacity thresholds if Boracay was to continue as a sustainable destination (Trousdale, 1997, 1999). The growth since the 1990s has so far resulted in a situation characterised by *ad hoc* coastal tourism development, emphasis on improvement and cleanliness of the 'visual environment' but lacking in social and cultural sustainability, and mutual adjustment among various stakeholders (Carter, 2004; Ong *et al.*, 2011). The island is deemed very important to the Philippines' tourism, and its challenges are currently co-managed by the national government through the Department of Tourism (DOT), Department of Environment & Natural Resources (DENR), and the local government of Malay, thereby going against the spirit of local government devolution. Nevertheless, the Malay municipal planning and development officer Alma Belejerdo (2012) acknowledges the municipality's challenges and admits that the municipality needs all the help it can get from both the national government and the private sector.

On the basis of research undertaken on Boracay, this paper presents the intimate political ecology dynamics of an urbanised tourist island in the context of climate change adaptation. The adaptive capacity of the agents, systems, and institutions internal and external to the islands' tourism system with respect to climate change is dependent upon various factors, one of which is how these agents or actors perceive their roles and participation in the culture of tourism, climate change adaptation, and governance. Unravelling these factors and perceptions is best done by applying the theoretical and methodological political ecology approach set out in the previous paper (Maguigad, King, & Cottrell, 2015).

2. Methods

Fieldwork was undertaken on Boracay during three distinct periods: August 2012 for preliminary preparatory fieldwork, including securing permissions from the Malay local government to undertake the research; July-August 2013 for the main fieldwork, including interviews and small group meetings; and April 2014, including final interviews and opportunities to react to preliminary results of the 2013 interviews, which were made available to selected key stakeholders. Human ethics and fieldwork methodology approvals were obtained from James Cook University prior to the commencement of the fieldwork.

A total of 20 interviews and small group meetings with a total of 27 participants were undertaken, with a majority of the interviews recorded using a digital voice recorder. The interviews were conducted in a mixture Filipino (the national language) and English (the second official language). The researcher had previously prepared guide questions for the interviews and discussed the overall objectives of the PhD research with each of the respondents. If and when consent was secured, the interview proceeded in a semi-structured process, though hewing closely to the previously prepared guides. This method of data collection tends to result in rich discussions and a wealth of non-quantifiable data that reveals a complex web of personal experiences, which would otherwise be lost in traditional methods such as questionnaire surveys. This method is highly suited to the political ecology framework.

The questioning technique and delivery of questions to the respondents was made in such a way as to avoid preconditioned, stock responses. Because we sought to uncover the nuances of the relationships between the various tourism actors on the island in the context of climate change adaptation, the questioning technique required a delicate consideration of local customs, trust between the researcher and respondents, and sometimes 'beating around the bush' and small talk as well as indirect questioning in order to obtain answers. The semi-structured interview technique allowed the researcher to ask unprompted and prompted questions. Unprompted questions usually inquired into the respondents' backgrounds, working and living conditions, and experiences on the island. Prompted questions would relate to the research's themes on climate change and tourism, which were explained before the start of the interviews. The nature of relationships among stakeholders would be called into question as these would emerge naturally from the follow-up questions fielded throughout the interview.

There were instances when some critical and sharp-thinking respondents asked the researcher why questions would revolve around certain topics, for instance, experiences concerning public consultations on tourism and land use planning, and how this relates to climate change (*e.g.* 'I thought you were asking about tourism and climate change, so why are you asking about the local government?'). These were isolated instances, however, and presented further opportunities to deepen the discussion with the respondents. While conducting the interviews and small group discussions, the responses would vary and could include long-winded answers that might or might not be related to the question asked. It is during these rambling moments that some other underlying beliefs, serendipitous, or volunteered privileged information might be shared, which would have been left uncollected by a less flexible questioning technique.

The interviews and small group meetings totalled 1114 minutes (18 hours and 34 minutes) and were translated and transcribed by the researcher in Nvivo, generating 187,158 words of codable transcript. The transcript was coded according to the emerging themes in each of the paragraphs of transcript, consistent with the ethnographic research framework. Aided by the use of Nvivo, all subsequent stakeholder analyses were then derived from these themes. A total of 103 themes were generated from the interview transcripts, and each of the respondents were grouped into five stakeholder nodes, namely: Visitors, Tourism Businesses, Government, Residents, and Non-Governmental Organisations. These groups correspond to the stakeholder groups that were identified as most likely to be involved in the tourism sector. Each of the 27 Boracay respondents who participated in the interviews and small group discussions was classified into the five groups, with the possibility that they could belong to more than one group. For example, a resident could also be classified as belonging to the government sector by virtue of working with any of the government offices. I have classified tourism workers who have worked on the island for more than five years as residents as it is deemed that they have acquired some perspective that would be comparable to that of local island residents.

Coding and theming as well as the resulting theme names were derived directly from the respondents' own words as translated into English. The 'Five Ways of Being' (Thompson *et al.*, 1990) in Cultural Theory (CT), using the pioneering studies by anthropologist Mary Douglas, argues that the extent of individuals' involvement in community life depends on the extent to which they are immersed in 'groups' as well as how far their lives are affected

by external factors (termed ‘grids’) in CT (Forsyth, 2003). It is thus expected that although respondents may belong to different stakeholder groups (*e.g.* resident and government, tourism sector and resident), their responses may vary depending on their affinity to these groups. During the interviews, some would express ‘personal views’ that would not reflect their groups’ position, and these would be coded according to themes that have emerged.

Nvivo is a tool that has made qualitative research more systematic and taps into the technology to gather, record, transcribe, visualise, organise, and quantify qualitative data previously believed to be too unwieldy and ‘messy’ to handle using traditional methods (Welsh, 2002). Notwithstanding the debates and discussions that such an approach stirs in academic circles (Brown *et al.*, 1990), we believe that Nvivo enhances rather than interferes with the capabilities of any researcher undertaking this type of research.

We used Nvivo’s Pearson’s correlation functionality to measure similarity between pairs of nodes (the resulting themes) as well as the sources of the transcripts (stakeholder grouping). To form cluster diagrams, Nvivo first builds a table in which the 103 resulting nodes (themes) are paired with one another to calculate the degree to which they are related using Pearson product-moment correlation coefficient (PMCCC), more simply known as Pearson correlation coefficient. This is a measure of correlation or dependence between two variables, which is scaled from +1 (total positive correlation) to -1 (total negative correlation), with a value of zero indicating no correlation (NVIVO, 2014). The correlation analysis was carried out between two themes or nodes, between two stakeholder groups, and between a theme and a stakeholder group.

A summary of the clustering processes undertaken using Nvivo is provided in Table 1 below

Table 1: Nvivo cluster analysis done via Pearson’s correlation.

Table rows	Clustered by	Table columns	Table cells
Sources (5 stakeholder groups)	Word similarity	Each different word that appears in the text of the sources	The number of times the column’s word appears in the row’s source
	Coding similarity	Each node that codes the sources’ content	1 if the column’s node codes the row’s source, 0 otherwise
Nodes (103 themes)	Word similarity	Each different word that appears in the text of the nodes	The number of times the column’s word appears in the row’s node
	Coding similarity	Each source coded by the row’s node	1 if the column’s source is coded by the row’s node, 0 otherwise
Words (top 100 words in Word Frequency query results)	N/A	Each source or node that in which the query searches	The number of times the row’s word appears in the column’s source or node

The Pearson correlation coefficient computation was done using Nvivo with a total of 5779 pairings between and among 103 coded themes and 5 stakeholder classifications. The coefficients generated ranged from -0.013251 between the nodes/themes 'greenwashing' and 'emergency services' to a near-perfect correlation between the themes generated within the stakeholder groups 'Tourism Business' and 'Residents'. The sheer amount of correlation computations done with the aid Nvivo certainly adds to the richness of perspectives, which would never have come to light if researched using traditional means. This facility enabled the researcher to delve into the themes that help create a picture of the island's political ecology that could be relevant to the mainstreaming of climate change adaptation on tourist islands.

3. Stakeholders' views and lived experiences in their urbanising island environment

Boracay is frequently mentioned by the national tourism organisation as the crown jewel of Philippine tourism, and one of the marketing foundations for the island is that it is dubbed as having the world's best beaches (ABS-CBN News, 2013; Ong *et al.*, 2011). This claim is at best valid for the majority of the interviewed stakeholders: "Because of the strong marketing being done for Boracay, it has become a tradition for some families or visitors to make it a tradition to visit the island" (TourismBiz_JCS, 2013).

There is often a sense of awe and excitement that prevails when first-time visitors alight on the island, and the experiences they have set them on course for repeated visits. One frequent visitor to the island enthuses:

I first came here together with my partner who has just come from Mexico, his sister who already visited the Maldives, and myself which at that time I have recently visited Bali, and when we arrived, we all fell in love with the island at that very moment. Boats then would bring passengers right in front of the boat stations, so the moment our feet touched the sand, we fell in love. The quality of sand is still the same after all these years (Visitor_ACG, 2014).

All stakeholders recognise Boracay's endowment of superfine white sand, and they acknowledge that it is the reason why visitors return to the island: "For first timers, visiting Boracay is really an exciting experience for them with the clean waters and the superfine sand as being commonly mentioned as the main attractions" (TourismBiz_ML, 2013). However, the awareness of the island's beachfronts and foreshores as an attraction and destination (P coefficient 0.812222) is also tempered by the stakeholders' comments that their beachfront is confronted by beach erosion (Pearson coefficient 0.75924). Stakeholders have noted:

There was a time at Station 1 where the roots of the trees near the beach were already showing, which points to beach erosion. I think it has been a problem for several years now. Boracay is always in the news for these types of issues (TourismBiz_LR, 2013).

There are subtle differences in the way beach erosion is viewed among stakeholders, probably due to the roles and the groups to which the respondents belong. For example, a provincial-level environment official views beach erosion as something that can be 'managed', reflecting the corresponding Cultural Theory representation of the 'managerial role' played by governments in managing environmental concerns (Forsyth, 2003) as they view nature as "perverse and tolerant." The provincial government official says:

Other environmental concerns of Boracay would be beach erosion, and there would be scouring in times of active wave activity like storm surges. The locals, however, say that it is only natural for sand to be eroded but then it will return during the *habagat* monsoon season. The provincial government is studying the possibility of beach nourishment activities as are being done in Florida, but it has never been done. There were concerns that the beach sand that will be used to replace eroded beachfronts will not be as white as the existing sand (Govt_JKA, 2013).

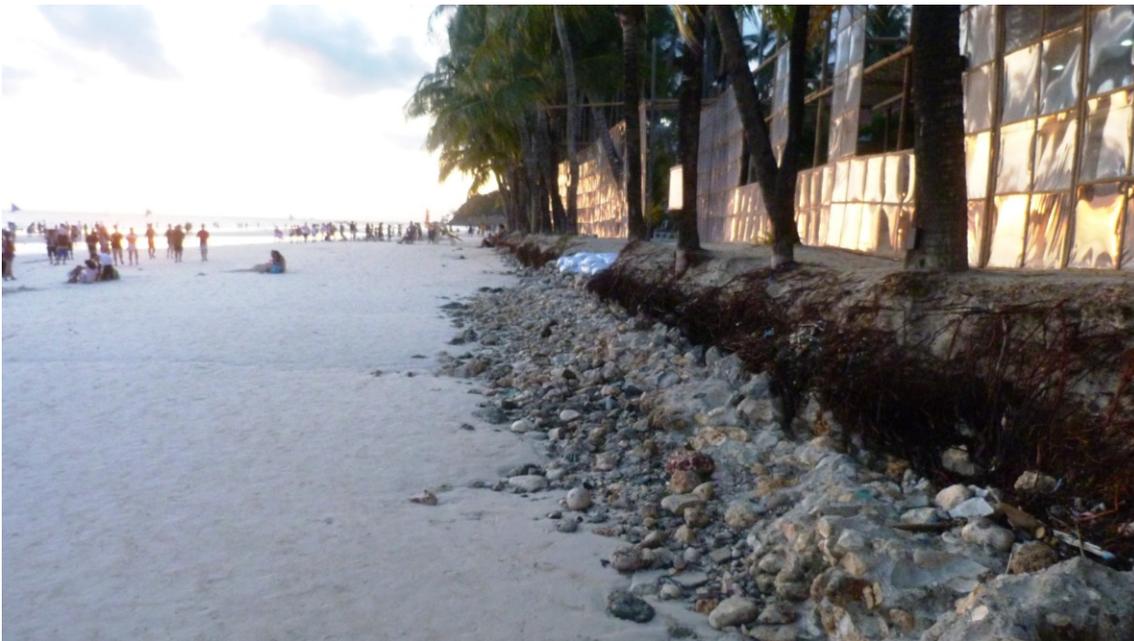


Figure 2: Eroded sections of White Beach on Boaracay. The high tide reaches up to the roots of the coconut trees. The visible concrete aggregates are remains of the banned semi-permanent concrete structures that have been illegally constructed by the resorts in violation of beach setback rules.

Long-time residents who are engaged in the tourist trade have also noted that beach erosion has become more severe and more noticeable. They are simultaneously critical of the comments by the Department of Environment & Natural Resources (DENR) offices regarding the reasons for erosion, saying that:

The Diniwid beach area is where the beach erosion has been severe, near Microtel after the grotto after passing Station 1. The DENR said that the bagging of sand and the illegal embankments that were constructed have caused more erosion as it impeded the flow of sand. However, it is counter-intuitive as the southwest monsoons have eroded much of the beach in that part of the area. The sloping beach has become a sudden drop where the water gets deep so close to shore (Resident&TourismBiz_JDT&JCT, 2013).

Tourism business operators are easy targets for the provincial government, which accuses most resort owners of violating environmental laws. That is, tourism urbanisation is blamed for exacerbating erosion. The provincial government thus places responsibility for uncontrolled growth near the high water mark of the beach on the Malay municipality, which has land use and tourism oversight of the island. One of the managers of a resort mentions that:

There has been a big discussion related to the 25+5 meter rule [easement] as the sea seems to be ‘getting the sand’, where the sand is really removed from the beachfront, especially in Diniwid. They say that because the resorts are putting sandbags, fences, or illegal structures that beach erosion has been more prevalent (TourismBiz_RA, 2013).

The acknowledgement of beach erosion and its link to sea level rise (refer to Table 3 for values) is not lost on various stakeholders, though the issue can be confused with extreme weather events like typhoons. One of the island residents, who is also a high-ranking municipal official, recounts:

There has been no change in typhoon patterns here in Boracay, and we still get typhoons. The last major typhoons we experienced were Typhoons Seniang and Frank, maybe in the last two to three years. We usually get sea level rises during major typhoons, especially along the shorelines. When we were kids, we usually go to the beach when the seas churn due to the coming storms (GOVT&Resident_FDLS, 2013).

However, the manner in which planning interventions have been interpreted by the various stakeholders vary, reflecting the biases inherent to their groups. The Aklan provincial government official, for example, relates:

After proclamation PD1064, the buffer zone of 25+5 meters must be maintained on the beaches. After that, the NAMRIA has designated markers for measuring setbacks. However, if they measure from the highest tide, nothing will be left to be built as we will have to demolish everything. This will even be compounded by sea level rise and storm surges. That is something the public cannot understand as they think that we are just making their lives difficult, but in fact it is only for their safety (Govt_JKA, 2013).

A regional government official representing the Housing and Land Use Regulatory Board (HLURB), the national agency that promulgates land use and planning guidelines for local governments, is even more critical of the exceptions accorded on Boracay:

According to the Water Code of the Philippines, there should be an easement of 40 meters from the highest tide of the shorelines, but they are insisting on the 25+5 meter rule. We are actually advocating not only land use but land and water use planning. The reason why their CLUP [comprehensive land use plan] could not pass the provincial land use council and the provincial council is precisely because the law says 40 meters’ easement. One can go beyond the legal requirement but not below what the law prescribes (Govt_RL, 2014).

The open conflict between the various levels of government – the municipal government of Malay, the provincial government, and the various national government agencies – on the interpretation of setbacks has ramifications for physical planning. It also has an impact on the more contentious issue of demolishing illegal structures. The comprehensive land use plan for Malay municipality must legally secure approval from the Aklan Provincial Land Use Committee, which includes HLURB as member, yet approval has not been secured since 2011.

The interpretation of beachfront setbacks as a first step in planning interventions with regards to the real, ongoing threat of sea level rise as well as gridlock on the approval of the comprehensive land use plan (CLUP) indicates a challenging political environment for all stakeholders, especially for the local government of Malay. One of the many requirements for compliance for all municipal planning departments is the mainstreaming of both the

Disaster Risk Reduction and Management Act (RA10121) and the Climate Change Adaptation Act. The same national-level official said:

There was previously a zoning ordinance for Boracay, but I could not understand why it is not being followed. Even the agricultural land is now being bulldozed for all these buildings. It is really critical that the PLUC reviews all these plans and actual implementation, and that includes if climate change adaptation and disaster risk reduction is mainstreamed into the CLUP. Despite the RA10121 and the Climate Change Act being relatively new laws, all municipalities are required to supplement and enhance existing CLUPs with additional chapters for climate and disaster vulnerability assessments (Govt_RL, 2014).

Table 2: Degree of similarity between responses recorded between and among themes and source classifications/stakeholders related to their Boracay environment (excerpt).

Node/Source A	Node/Source B	Pearson Correlation Coefficient
Beach erosion	Awareness of local environments	0.68874
Beachfronts and foreshores	Awareness of local environments	0.81222
Beachfronts and foreshores	Beach erosion	0.75924
Building and construction	Beachfronts and foreshores	0.67659
Congestion	Awareness of local environments	0.56492
Congestion	Beachfronts and foreshores	0.54615
Disasters, risk reduction, and management	Awareness of local environments	0.48153
Disasters, risk reduction, and management	Beach erosion	0.18238
Sea level rise	Beach erosion	0.61754
Sea level rise	Perception of tourism change in the island	0.53465
Sea level rise	Beachfronts and foreshores	0.67515
Environmental degradation	Awareness of local environments	0.73105
Environmental degradation	Beachfronts and foreshores	0.72624
Environmental degradation	Building and construction	0.63284
Environmental degradation	Beach erosion	0.57581
Environmental degradation	Congestion	0.57146
NON-GOVERNMENTAL ORGANISATIONS	Environmental management	0.70097
RESIDENTS	Environmental management	0.85146
TOURISM BUSINESS	Environmental management	0.80588
GOVERNMENT	Environmental management	0.89689
VISITORS	Environmental management	0.91033
VISITORS	Illegally built structures	0.67238
TOURISM BUSINESS	Perception of tourism change in the island	0.85755
RESIDENTS	Perception of tourism change in the island	0.87150
Perception of tourism change on the island	NON-GOVERNMENTAL ORGANISATIONS	0.68496
Perception of tourism change on the island	Infrastructure development	0.79198
Perception of tourism change on the island	Beachfronts and foreshores	0.78171
Perception of tourism change on the island	Congestion	0.70275
Perception of tourism change on the island	Illegally built structures	0.69995

Note: Stakeholder groups are indicated in capital letters while the resulting interview themes are listed in normal letters.

The planning interventions require rapid implementation, and some interview respondents regard national laws on disaster risk reduction and climate change adaptation as necessary due to Boracay's rapidly degrading environment (see Table 3). Stakeholders are almost

unanimous in saying that Boracay's environment requires drastic management measures to maintain its status as a sustainable tourism destination, with visitors as the stakeholder group registering the highest similarities in their responses regarding environmental management (Pearson coefficient 0.910329).



Figure 3: Tourism has transformed two-thirds of the island into dense urban spaces. This aerial photo shows the northern rural barangay (district) Yapak and the central urban *barangay* Balabag (Author's Fieldwork, July 2013).

Tourism development is the main driver of environmental change on Boracay, which has been subject to a process of rapid urbanisation. This theme emerges strongly in the analysis of the stakeholder interviews and is evident in the comments stakeholders make in connection to infrastructure development, the island's beaches and foreshores, traffic congestion, and the proliferation of illegal construction (see Table 2). The only plausible reason for this perception of change is that the island's economy is entirely dependent on tourism. This is in keeping with the TALC model's stagnation stage, in which significant deterioration of tourism assets and the breaching of carrying capacities inhibits further growth and necessitates stakeholder intervention, especially by government (Butler, 1980). Recent studies have highlighted that the island may already have entered TALC's decline stage, meaning that, absent intervention, it will not become the kind of tourism metropolis predicted by some models (Smith *et al.*, 2011). This active involvement from the public sector and various stakeholders necessitates intensive political negotiation as tourism development will only be able to make a positive contribution to the island without further social, economic, and environmental degradation when current stakeholder relationships are evaluated and acted upon (Butler, 2006). The island's political, social, economic, and natural conditions will be further tested and indeed are already being challenged by various climate-related disasters occurring around the country, the most recent of which was Typhoon Haiyan in 2013.

Some of the first migrants to establish their own resort and tourism businesses as well as repeat visitors have observed the significant changes occurring on Boracay. A husband-and-wife team, who settled and are now operating a small accommodation business, recalls:

We've been living here on the island most of the time since 1986. There's been a lot of changes since then. There was no electricity on the island, no cement roads, and there were just only three or four delivery tricycles. The road was narrow, muddy, and rough, same location. It was just about two meters wide. I arrived in February of 1986 [...] after we were stuck in Manila because of the People Power Revolution (Resident&TourismBiz_JDT&JCT, 2013).

Stakeholders who have been intimately familiar with the island since the 1980s and 1990s have also witnessed the social changes brought by tourism, which have been experienced by similar island resorts (Picornell, 2014). The increasing number of tourism establishments and subsequent urbanisation has contributed to congestion and crowding:

In the early '90s when I first came here, it wasn't that congested with establishments. There were no multinational firms engaged in the tourism businesses, mostly local businesses. There are now more clubs, and I've seen prostitution openly. A lot has changed. It's just like Ermita and Makati with sand. I'm not a fan of the island already, we're just here because we're organising the tournament for my cousin, who's based abroad, and we're not spending our trip here (Visitor_PJS&ADR, 2013).

I started living here in 1996 when I was 16 years old. I graduated from high school on the island. I remember that Boracay wasn't crowded then. There was no electricity. We used gas lamps for lighting at night. My mother was working at Marimar Resort then, and all the resorts were made of local, native materials. It was really rustic. A majority of the tourists then were Japanese, unlike now where it's dominated by Koreans. Buildings have sprung up all over now (Resident&TourismBiz_MW, 2013).

Adding to the crowding and congestion is the influx of labour for various tourism-related establishments as well as the families of migrants. The local government has legislated to place controls on the hiring of workers and labour migration, especially for construction workers:

One of the major problems is migration to the island from other islands, especially construction workers, who will also bring their family members. After the construction project is over, they remain and will usually just live in informal dwellings while they find more work. Jobs intended for locals are currently prioritised under Municipal Ordinance 6040, and population control is linked to jobs management within the island (GOVT&Resident_FDLS, 2013).

The concentration of both locals and migrant workers on the island, together with tourist visitors, compared to the rest of Malay municipality has made Boracay one of the most densely populated areas in the municipality. Despite Boracay's reputation as an island idyll, two of the island's three *barangays* (villages or districts) are now considered urban. Although Malay town on the mainland is the municipal capital, Boracay today accounts for three-fifths of Malay's population and wields tremendous political and economic power over the rest of the municipality. Yet densely populated small islands are also particularly prone to conflicts over land use (Salvacion & Magcale-Macandog, 2015). Such is the importance of the island that

the municipal government has field offices on Boracay, with major officials regularly commuting from the town hall on the mainland. This tourism-driven upsetting of traditional island-mainland centre-periphery relationships (Grydehøj, 2014; Grydehøj *et al.*, 2015) can render governance more complex.

Table 3: Malay municipality's rural-urban population (2010).

Location	Urban Districts	Rural Districts	Population	% of Total
Boracay Island	2	1	28,369	61.9%
Mainland Malay	2	12	17,442	38.1%
Totals	4	13	45,811	100%

The immense political and economic power of the island's three districts is not lost on stakeholders. Tourism businesses in particular are critical of the perceived cross-subsidy by which the island's tax revenues are shared among the rest of the municipality's other 14 districts. A long-time migrant and established accommodation property owner as well as a long-time resort manager echo the same thoughts:

I think it's unfair that the revenues of Boracay are used in other areas of Malay. Boracay should become a municipality and split from Malay. I'm not in favour of making Malay a city. Malay is just a small, sleepy town. Where will they build a city? There's no established town proper where you can build into a city proper, and commercial establishments (Resident&TourismBiz_JDT&JCT, 2013).

They want to subdivide Aklan into two congressional districts, which is convenient for political families. But converting Malay into a city is problematic because of the land area requirement, so I think it wouldn't qualify. But if you ask me, Boracay is Boracay, and Malay is nothing but a sleepy town. Most of the revenues of Malay, about 80-90%, come from the island (TourismBiz_JC, 2013).

The island is also a base for launching political campaigns, especially in local elections:

If you win in at least two barangays/districts here during elections, you'll win in the elections in the entire Malay municipality. The island is well populated and rich in votes. I still strongly suggest that Boracay becomes a municipality rather than that Malay becomes a city (Resident&TourismBiz_JDT&JCT, 2013).

In contrast, however, some contributors see the potential cityhood of the town of Malay, from which the island is politically and administratively governed, as a pathway to better services, more independence from the provincial government, and a more capable local government, responsive to the needs of the town's stakeholders. Achieving city status for Malay municipality would allow it to rival the provincial capital of Kalibo, which is similarly seeking city status. A high-ranking local government official, who is also a Boracay resident, states:

We foresee Malay becoming a city of which Boracay is a part. We already fulfil the criteria for population size, annual income, and land area. Since the municipality has an island, it is exempt from the size requirement. We're preparing it in our Annual Investment Plan to have Malay cityhood legislation be passed in the Philippine Congress. However, we should start preparations within our local government unit (GOVT&Resident_FDLS, 2013).

Though the cityhood option could be a welcome political exercise to pursue, a long congressional campaign should not replace good governance and control of tourism development and investment on the island to manage the island's adaptive capacities to urbanisation and by extension to climate change adaptation.

Stakeholders who are privy to new rules in tourism investment regulation on the island concede that these have already been imposed to control construction activities since the island's infrastructure is being stretched to its limits. A 20 million peso (AU\$604,000) minimum investment rule for new tourism establishments has been passed by the municipal council. Despite this, there are reports that monitoring of these construction permits is so weak that some establishments proceed with expansion or construction regardless: Compared with the money earned from the investments, the fines imposed by the municipality are puny, described by one stakeholder as "loose change" (Govt_RC, 2013).

Members of the tourism industry are supportive of the move to impose a minimum investment rule as legislated by the municipal council since this would discourage the establishment of run-of-the-mill resorts and would prevent competition with existing local businesses. The industry group Boracay Foundation Inc. (BFI) says:

The purpose of the moratorium is really to stop construction work that did not go through the proper processes, like shanties that have sprung up like mushrooms. The point is that, if you are going to invest and you are an outsider, you had better invest big since if you are just going to invest a small amount, you will be competing with the locals, and the locals can invest that amount themselves (TourismBiz&NGO_DS&PM, 2013).

This industry group also supports the local government moratorium on building and construction within 15 meters of the island's main road (Municipal Executive Order 25), effective 1 October 2014 (Interaksyon, 2014). This moratorium pales in contrast with Proclamation 1064 issued by Office of the President Gloria Arroyo in 2006, which imposes a "15-meter buffer zone on each side of ALL existing roads and trails that are reserved for right-of-way and shall form part of the area reserved for forestland protection purposes" (Macapagal-Arroyo, 2006).

These conflicting legal statutes set forth by the Philippine national government and the Malay local government are a manifestation of the legal quandaries faced by tourism stakeholders, which must fight in the courts when confronted by legal challenges. It is also a manifestation of the lack of foresight and poor integration of planning legislation across different levels of governance. This legal conflict simply transfers the burden to the courts, which could involve years of litigation, when it would have been more practical to 'do it right the first time'. Climate change adaptation would require fine-tuned approaches to the legislation and implementation of existing and future laws impacting on the capability of planners and stakeholders to undertake required action. Such stalemates do not help efforts in this policy direction.

4. Stakeholder views and realisations regarding climate change and climate change adaptation

One objective of the present research is to qualify the various stakeholders' awareness of issues concerning climate and climate change, tourism, and governance. The coded responses

made by the various stakeholder groups indicate that climate change awareness and climate change adaptation tend to be strongly associated with one another (see Table 4). A couple who have been living on the island and who have owned and operated a small hostel since the 1980s have noted:

Whenever there were typhoons, we experienced before they were very strong, unlike now. So if you're talking about climate change, there have really been changes in the typhoon patterns. I really believe that there's climatic change because usually the onset of the rainy season is the third week of May. There were very distinct times when there is a change from the *amihan* (northeast monsoon) to the *habagat* (southwest monsoon). Now you can't tell if there will be a change in the monsoons, and the rainy season is getting shorter. The rains have also become less predictable than when I first came here. There was never any rain during the Holy Week or Easter period. Now, it rains even during Holy Week when it should be hot and dry (Resident&TourismBiz_JDT&JCT, 2013).

The local government sector, at both the municipal (Malay) and provincial (Aklan) levels, is cognisant of the management challenges accompanying the realisation of climate change as a policy issue. The passage of the Climate Change Act has prompted various levels of government to initiate steps toward adaptation and to integrate these into existing planning processes:

The province was able to produce a climate change map, especially those that will affect land use, including a hazards map from the Mines and Geosciences Bureau. The Provincial Land Use Committee is comprised of national agencies, which include the departments of Agrarian Reform, Public Works and Highway, Environment and Natural Resources, Tourism, among others. The Provincial Planning and Development office is the secretariat. The provincial land use plan is due for an update as its validity is from 2008-2013, and we are in the process of collecting data. The mandate is now therefore to update it with climate change adaptation in one of the chapters of the provincial land use plan (Govt_RE, 2013).

Whether or not these resulting plans serve their purpose of guiding and providing appropriate action for adaptation remains to be seen since, at the time of writing, there has never been a land use plan that has been compliant with the new guidelines of the Housing and Land Use Regulatory Board (HLURB), which was implemented in 2014. Local governments are required under the Republic Act 10121 (Philippine Disaster Risk Reduction and Management Act of 2010) and the Climate Change Act to integrate climate change adaptation and disaster risk reduction into their comprehensive land use plans. The current practice is for climate change adaptation offices to be combined with municipal disaster risk reduction and management offices, which are tasked with undertaking CCA/DRR plans. However, there is currently only one pilot municipality in which CCA, and disaster risk reduction is still in the process of being integrated into the comprehensive land use plan (Govt_RL, 2014).

The introduction of climate change adaptation and disaster risk reduction into a governance system in which planning technology and capacity remain in their infancy would be a budgetary if not an internal staffing capability problem for many local government units. Major cities and higher-income municipalities would have no difficulty securing funding for what could be an expensive planning exercise, especially if the local governments procure the services of consultancy firms. Malay municipality, Boracay's parent government unit, has

hired external consultants for both the municipality's comprehensive land use plan and the island's tourism master plan. Despite this, the municipality has failed to actually submit a functional and integrated CLUP to the Aklan Provincial Land Use Committee. One of the national oversight agencies has noted that:

Malay and Boracay hired consultants for the CLUPs for their respective areas, so we in particular don't provide any technical assistance to the municipality. The officials of Malay attended all four of the training modules for CLUP, and they have been able to produce outputs for each of the modules, but they have not submitted a consolidated CLUP (Govt_RL, 2014).

A hotel manager who was invited to one of the consultative planning sessions for the municipality's comprehensive land use plan noted that the municipality presented a vision for its tourism future:

In 2011, the arrivals were about 900,000, in 2012 1.2 million, and in 2013 they are targeting 1.3 million. I attended the comprehensive land use plan public presentation, and they are really expecting Boracay to accommodate more guests. They have an idea for the future, but the details seem lacking. We really don't have the infrastructure at the moment that could keep pace with the arrivals of travellers (TourismBiz_RA, 2013).

That the municipal government identifies tourism as a foundation for its comprehensive land use planning says much about the importance of this economic sector. Both the municipal and provincial governments feel that they need support for climate change adaptation:

The provincial government of Aklan still considers agriculture and tourism as the twin engines of growth for the province, and we hope the national government will continue to show support to help us protect the island of Boracay. Preservation of the environment and climate change adaptation will be a priority, and we hope that we will be able to collaborate with other stakeholders to help us prepare (Govt_RE, 2013).

The thousands of severely understaffed and technically deficient municipal planning and development offices (MPDOs) in particular require support following the recent publication of the 'Supplemental Guidelines on Mainstreaming Climate and Disaster Risks' in the Comprehensive Land Use Plan in 2014 (PCCC, 2014). At the time of fieldwork, one of the resource workers from the Housing and Land Use Regulatory Board (HLURB) emphasised that the process of preparing CLUPs had become more stringent:

We're preparing a supplemental guidebook for climate change adaptation mainstreaming aside from the existing CLUP guidebooks, and it will be completed soon. The process of getting CLUPs approved has gotten more stringent since they're now required to have chapters on climate change adaptation in their CLUP submission to the provincial councils for approval. According to the Climate Change Commission, we're the third-most vulnerable country, and we see that it's through the CLUP and the Zoning Ordinance that mainstreaming will be undertaken. It's through the CLUP that disaster-prone areas will be identified, and the implementation tool will be the zoning ordinance (Govt_RL, 2014).

This respondent also recognised the limited capability of local governments within the Western Visayas region (where Malay, Aklan is located) even to update their lapsed CLUPs. The burden of integrating all legislation affecting land and water use planning in individual municipalities (and in the case of the parent provinces, of integrating the municipalities'

various CLUPs into a cohesive Provincial Physical Framework Plan), combined with the multiple work functions of planning officers (such as taking on the role of agriculture or environment officer) is simply too daunting for municipal and provincial governments. This is a common quandary repeated regions across the country. This same respondent gives a sobering account of the state of completion of CLUPs in her region:

These multiple functions of municipal planning officers hamper the completion of the mandated functions of their offices. In Western Visayas, only 10% of municipalities were able to have their municipal comprehensive land use plans approved by their respective provincial land use committees and provincial councils. This is one of the reasons why they couldn't complete their CLUPs as well as numerous laws and projects that need to be implemented, like bottom-up planning [...]. The mayor presses their planning offices to produce a CLUP since investors will be looking at these documents as well. Under RA10121 and the Climate Change Act, they are required to integrate climate change adaptation into their land use plans. They don't have additional budgets for that purpose. The Climate Change Commission is just piloting the project of integrating into CLUP in just one town in Davao (Govt_RL, 2014).

The regional HLURB office is nevertheless critical of Malay municipality's failure to update its CLUP despite the support extended to it from all levels of government (Govt_RL, 2014).

Since Boracay has a special status as the country's premier small island tourism destination, it is also required to produce an updated Tourism Master Plan, with support from the national government through the Department of Tourism and its affiliated agency, the Tourism Investment and Enterprise Zone Authority (TIEZA), which is tasked with regulating tourism infrastructure projects. Even TIEZA, however, had no one heading the field office in Boracay at the time of fieldwork (TourismBiz&NGO_DS&PM, 2013).

There is a general observation among planning professionals in the Philippines that local governments face capacity challenges in terms of formulating the basic comprehensive land use plans (CLUP) and the more specific tourism, disaster risk reduction, and climate change adaptation plans. This is despite the fact the Philippines is considered to be one of the earliest adapters of local government decentralisation in Southeast Asia, through the legislation of the Local Government Code of 1991, and is now on its third decade of implementation (Gomez & Buenaventura, 2012).

Table 4: Degree of similarity between responses recorded between and among themes and source classifications/stakeholders relating to climate and climate change and related pairings (excerpt).

Node/Source A	Node/Source B	Pearson Correlation Coefficient
Climate change awareness	Climate change adaptation	0.915656
GOVERNMENT	Climate change adaptation	0.69343
GOVERNMENT	Climate change awareness	0.666593
Inter-agency coordination	Climate change adaptation	0.644456
Legal issues	Climate change adaptation	0.60695
Local awareness of place in climate terms	Climate change awareness	0.513703
Local awareness of place in climate terms	Indigenous beliefs on climate	0.509909
Local government staff qualifications	Climate change adaptation	0.402636
Local livelihoods	Climate change awareness	0.283162
Local livelihoods	Climate change adaptation	0.264363
National-municipal government relationship	Climate change adaptation	0.669718
National-municipal government relationship	Disasters, risk reduction, and management	0.633226
National-municipal government relationship	Climate change awareness	0.589536
NON-GOVERNMENTAL ORGANISATIONS	Climate change awareness	0.41717
NON-GOVERNMENTAL ORGANISATIONS	Climate change adaptation	0.392468
Perception of tourism change on the island	Local awareness of place in climate terms	0.504304
Perception of tourism change on the island	Climate change adaptation	0.441568
Political interference	Climate change adaptation	0.314891
Power relations	Climate change adaptation	0.344137
Power relations	Climate change awareness	0.31862
Provincial-municipal government relationship	Climate change adaptation	0.581588

Table 5: Degree of similarity between responses recorded between and among themes and stakeholders related to stakeholder interactions, relationships, and related themes (excerpt).

Node/Source A	Node/Source B	Pearson Correlation Coefficient
National-municipal government relationship	GOVERNMENT	0.864895
NON-GOVERNMENTAL ORGANISATIONS	GOVERNMENT	0.654488
NON-GOVERNMENTAL ORGANISATIONS	Inter-agency coordination	0.595451
NON-GOVERNMENTAL ORGANISATIONS	Inter-agency coordination	0.595451
Perceptions of governance	Local governance	0.888281
Perceptions of injustice and inequality	NON-GOVERNMENTAL ORGANISATIONS	0.546186
Perceptions of injustice and inequality	GOVERNMENT	0.535264
RESIDENTS	GOVERNMENT	0.818831
RESIDENTS	NON-GOVERNMENTAL ORGANISATIONS	0.726217
RESIDENTS	National-provincial government relationship	0.472716
TOURISM BUSINESS	RESIDENTS	0.95221
TOURISM BUSINESS	NON-GOVERNMENTAL ORGANISATIONS	0.674676
TOURISM BUSINESS	National-municipal government relationship	0.613966
TOURISM BUSINESS	Provincial-municipal government relationship	0.448283
TOURISM BUSINESS	National-provincial government relationship	0.395063
Tourism business operators' industry linkages	RESIDENTS	0.651687
Tourism business operators' industry linkages	TOURISM BUSINESS	0.637258
Tourism business operators' industry linkages	GOVERNMENT	0.444164
Tourism business operators' industry linkages	NON-GOVERNMENTAL ORGANISATIONS	0.421259

5. Stakeholder group relationships and interactions: Feelings of distrust and helplessness?

The Philippines is currently considered as having instituted multi-stakeholder participation in its planning processes, ancestral domains, conservation of protected areas, and legislation (Bryant, 2000). This is well documented among members of the various stakeholder groups. Although stakeholder participation events are rife with dissent and boisterous objections, as

can be expected in a free-wheeling democracy like that of the Philippines, it is important to note that these stakeholder consultations do take place on Boracay. This can be considered an important step toward enhancing the stakeholder capacities, not only in building confidence but also in building trust between these groups. Trust among stakeholders is vital for “the effective implementation of climate change adaptation and mitigation measures” on small islands (Petzold, 2015).

Local government autonomy and delineation of authority, especially between the Aklan provincial government and the Malay municipal government, under which Boracay is governed, can be described as a fine line between ‘respectful distance among various governance levels’ and ‘an urgent push to implement reforms’. An environment officer in the provincial government mentions that although there exists a national-to-provincial multilevel agency for discussing environment and tourism issues on the island, the ultimate decision on implementing any policy recommendation remains with the Malay municipal authorities:

We’ve also set up Bantay Boracay, which is a multi-government agency to discuss sectoral issues that are related to Boracay. The outputs of these discussions are made with the view of forming policies, and possibly resolutions. The one-entry, one-exit policy was a result of this coordination, where boats will no longer dock in front of the main White Beach but instead at the jetty ports. This is only a resolution but would have to be implemented by the Malay local government as the provincial government doesn't want to infringe on the autonomy of the local government of Malay (Govt_JKA, 2013).

Other government agencies at the national level are even more critical, saying that local governments have made no progress since 1991 in assuming the roles that the national government have delegated to municipal and provincial governments in tourism business accreditation and standards, land titling, environmental management, and urban planning. The regional tourism office has commented on municipal tourism management:

In 1991, when the Local Government Code was enforced, the local government naturally took over. We used to issue licenses and regulations until that point. Now we only do accreditation, and the business licenses are given by the local government. Until that point, everything went haywire since everything is now devolved to the local government. The island was previously managed by the Philippine Tourism Authority, now reorganised as the Tourism Investment and Economic Zones Authority since it is the infrastructure arm of the DOT (Govt_RC, 2013).

Another major resort manager has given insight into current land titling, land-grabbing, and indigenous resident affairs:

Most of those who have developed resorts, approximately 80-90% here, only have tax declarations, not land titles. The land titling process here is going to be very messy and contentious due to overlapping claims, and most of them will fight for their land rights since they have already developed the land with their resorts and properties (TourismBiz_JC, 2013).

When then asked how this particular observation on local governance could affect efforts to mainstream climate change adaptation in tourism on the island, this resort manager adds:

Climate change adaptation should really be implemented by the local government with sectoral representation from the national government, depending on the sector - DOT

for tourism, DENR for environment, DA for agriculture, *etc.* We just couldn't implement anything without any coordination with the local governments, like requests for training, capacity building, *etc.* (Govt_RC, 2013).

The gridlocked dynamics and the keen observance of turf between the various levels of local governance are not lost on members of the tourism business community and could partly explain why governance has become a burden for their operations. With very specific mandates to implement their official charters, a hotel operations manager observes that “each government office has its own ideas on how to manage and improve Boracay, but there seems to be no structure in how organisations coordinate their efforts” (TourismBiz_RA, 2013; *cf.* Andexlinger, 2015).

Land acquisition, registration, and the relationships between the government, tourism businesses, and the indigenous residents are among the most contentious issues and have even occasionally resulted in violence. Land disputes on the island regularly make it to national headline news. There is the existing conflict over Friday's Resort between relatives of the incumbent mayor and the Manila-based property company Boulevard Holdings, where half of the resort was closed and the other half of the property remained in operation but was effectively paralysed because of the dispute, despite the case having been resolved in the courts in 2009 (Dumlao, 2014).

The intertwined influence of tourism businesses, the regulatory weakness of the municipal government, and slow legal processes for resolving disputes lead to further erosion of trust and confidence by other stakeholders in the local government's capability to undertake the necessary measures to confront Boracay's numerous environmental, political, and social challenges. The provincial government, for its part, emphasises that the root cause is the island's rapid and unmanageable urbanisation, as manifested in perceptions of overcrowding:

The problem really is that private sector development has overtaken the local government regulation, and oversight is now very difficult. Government has fallen so far behind the regulation process that, even if the national and local government agencies acted, it is now difficult to change current development. The private business sector has the resources and money to go to court and secure temporary restraining orders [TROs] and injunctions to block government initiatives. We also resort to going to court to settle issues with some stakeholders, like road right-of-way, as this is sometimes the only way to settle disputes. The provincial government only serves as support as the municipality of Malay is on the frontline when it comes to regulatory oversight functions for the island of Boracay (Govt_RE, 2013).

In the absence of an updated comprehensive land use plan (CLUP) for the municipality and a useable tourism master plan, the private tourism business sector has become the *de facto* ‘urban designer’ for the island, with the municipal processes simply becoming rubber stamps for the required planning permissions, which will be granted regardless since planning and development controls are very feeble. This has, it is felt, led to haphazard and unintegrated development (*cf.* Pigou-Dennis & Grydehøj, 2014). This is the opinion of the provincial government, which approves all municipal CLUPS and the plethora of other planning documents required by national laws (disaster risk reduction and management, tourism, strategic agro-fisheries development zones, *etc.*). This opinion is very much aligned with the

findings of Gavin Shatkin (2008), who notes that the urbanisation that has taken place in Metro Manila is unprecedented in terms of the extent of “privatization in urban and regional planning,” with large property companies leading the charge for urban development. This also fits perfectly into the general lack of local government capacity for undertaking planning activities with the support of civil society, thereby shielding decision making from powerful economic interests (Shatkin, 2000). This forces the need to revisit the linkages and power relationships between and among various tourism stakeholders (Maguigad, 2013).



Figure 4: Boracay struggles with the pace of urbanisation fuelled by uncontrolled tourism development and complicated by governance gridlocks at the local, provincial, and national levels (Fieldwork Photographs, August 2013).

Representatives of a non-governmental organisation advocating for the island’s indigenous Ati population are scathing about the local government. Their views during the researcher’s July 2013 interviews border on verbal hostility and exasperation. This is understandable since the main spokesperson for the Boracay Ati Tribal Organisation (BATO), Dexter Condez, was fatally shot by a security guard for one of the island’s big resorts in February 2013. Many believe the shooting to be related to the 2.1 hectare prime piece of beachfront property that was awarded to BATO by the national government in a writ of possession through a Certificate of Ancestral Domain Title in April 2012 (2013). Dexter Condez was among the few Ati who were able to integrate into mainstream Aklanon society and was engaged in the indigenous arts. He was thus able to communicate with ease with various other stakeholders (Angan, 2013). His killing was portrayed in the media as the “ugly face of Boracay development that is rooted in artifice, lack of cultural rootedness that has oppressed the Ati indigenous people because of their black skin and lack of formal education” (Alegre, 2013).

The interviewed BATO representative was aware of the existing 25+5 meter beach setback rule but was quick to mention that Mayor John P. Yap was in violation of the local government-imposed ordinance:

Our land here has also been affected by the 25+5 meter rule of beachfront setback. It's the reason why this is how our village looks since we are sandwiched by the road and the beachfront. However, the mayor has a business establishment named Summer Place that also violates the imposed regulations. I will applaud the mayor if he will initiate the demolition against his own establishment as well as all those businesses in violation of the rules (NGO_LT, 2013).

The BATO representative even highlighted the glaring disparity between the relationship BATO has with the national government through the National Commission for Indigenous Peoples (NCIP) and BATO's relationship with the local government:

We don't have a good relationship with the Malay local government, but we have an excellent relationship with the national government through the National Commission for Indigenous Peoples. We're not involved and were disregarded by the local government in the local planning of the island. It's only the national government that continues to care for us through the NCIP (NGO_LT, 2013).

When prompted to answer questions regarding climate change adaptation, her tone was mixed:

I have to be silent on legal matters. You have to ask the government about climate change since they're the ones who will be managing that. If they won't do anything about it, we'll have to depend on ourselves. Our world is interconnected, so we have to cooperate with whatever initiatives they will be doing. But even if they're that bad to us, we still love them since what they do will eventually get back to them. We have about 32 families with about 200 people living in the village. Dexter has been the only one killed so far in our village. If they need a representative for consultations, they usually contact Delsa Justo, our chieftain. If there are seminars related to education, I also usually attend (NGO_LT, 2013).

The self-reliant tone ("we will have to rely on ourselves") reflects the fatalist dimension of Cultural Theory's 'Five Ways of Being', which is typically expected from disempowered and marginalised sections of society, which take comfort in the "rationality of their powerlessness" (Forsyth, 2003). It is interesting to note, however, that this respondent uses the words "we still love them" and the concept of karma (or the Golden Rule), further indicating that her organisation will participate in public consultations with the government when its presence is requested. According to the Ati interviewee, this conciliatory tone, despite the scathing criticism, is a reflection of the religious teaching that the Ati community receives from the Catholic Church through the Daughters of Charity of St. Vincent de Paul, which provides education, training, and food (NGO_LT, 2013).

These governance gridlocks as well as the strained stakeholder relations do not augur well for a concerted effort to mainstream climate change adaptation. Cross-cutting interaction from all stakeholders is needed to create critical momentum to go a step further from the broad adaptation plans towards a plan attuned to an island focused on tourism.

6. Conclusion

Tourism development has transformed and driven Boracay from a sleepy tropical island to the Philippines' top small island tourist destination over a span of more than three decades,

supporting the development of Malay municipality and the remainder of Aklan province. The urbanisation that resulted from this development has created a political ecology that is extremely problematic in the terms of strained relationships between the various tourism stakeholders, pitting the strong tourism business groups against a politically weak local government hobbled by conflicts of interest in fulfilling national legal and comprehensive land use planning guidelines. The local government is weighed and found wanting in communicating to the various stakeholders the need for unity on single-issue debates. It would be difficult for an adaptation plan for tourism and climate change to be pursued as the stakeholders are united primarily in distrust and helplessness. More local independence in fiscal and governance terms by converting the municipality into Aklan's province's first city may provide some hope for improving planning and adaptation capacities. However, the success of such a conversion to cityhood would still ultimately be dependent on the relationships built over the years among the stakeholders, which could prove much more difficult to mend than preparing an actual island tourism climate change adaptation plan. The cornerstone for achieving adaptation success is therefore for the local government to lead an effort to bridge gaps between stakeholders (especially between the tourism businesses, indigenous peoples, and resident population) to ensure proper ownership of any planning and climate change adaptation plans.

The planning process to mainstream climate change adaptation into the island's tourism sector is challenged by various factors aside from the existing quality of the stakeholders' relationship, their political ecology. First, the comprehensive land use plan (CLUP) for Malay has not passed the muster of evaluation by the Aklan Provincial Land Use Committee. CLUPs are the core plans upon which all sectoral plans (including tourism, climate change adaptation, and disaster risk reduction plans) are ultimately based. This is the most vital process that must be accomplished and requires an honest engagement with the stakeholders, not just the kind of tokenistic public consultation that many stakeholders report having experienced (*cf.* Pugh, 2013; Grove & Pugh, 2015). Climate change and climate-related disasters will impact the livelihoods of many who are dependent on the tourism industry. Beach erosion is already occurring on parts of the island and is expected to become more pronounced with the effects of sea-level rises, compounded by seasonal typhoon and monsoon seasons. These and other manifestations of climate change will bring challenges and opportunities that can only be adequately addressed when the existing political ecology is integrated into the planning process.

This research has demonstrated the novel use of political ecology in tourism and climate change adaptation as a means of improving planning processes in the Philippines. The use of this approach considers a very important aspect of environmental planning – that planning processes are not only inherently the domain of technical experts working in an apolitical environment but also that they are inherently political. This is not hard to implement as existing local government codes require intensive, if not honest, stakeholder participation. This approach will ensure proper responses, which will benefit not only islands with tourism industries but also other local government units with similar tourism potentials.

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