Policy-makers' perceptions of the tourism–climate change nexus: Policy needs and constraints in Botswana

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Tourism is a key sector for most southern African economies endowed with unique natural capital, and the industry is increasingly being used for socio-economic development and diversification of national economies in the region. However, it has become clearly evident that the natural capital upon which the sector depends is highly vulnerable to climate change. This has created urgent governmental needs to take action through policy formulation and implementation. The paper uses in-depth interviews to determine Botswana policy-makers' perceptions of climate change and tourism with the aim of determining policy needs and constraints. The results reveal that the policy-makers do see climate change as a concern requiring urgent establishment of relevant policy. However, they foresee inadequate information as well as uncertainties surrounding the impacts of climate change on the natural capital. This may hamper the formulation and effective implementation of such a policy.

Keywords: climate change; policy; adaptation; nature-based tourism; development; Botswana

1. Introduction

Owing to pristine natural areas and abundant wildlife, many countries in the Global South enjoy comparative advantage in nature-based tourism and ecotourism development (Nyaupane & Chhetri, 2009). The comparative advantage enables the countries to participate in international tourism and, according to Hall et al. (2013), international tourism is portrayed by governments as an important contributor to sustainable development strategies. However, this natural environment that is an important resource for tourism as well as a potential engine for socio-economic growth is vulnerable to global climate change (see Smith & Lenhart, 1996; Preston-White & Watson, 2005; Scott et al., 2012a), especially in countries such as Botswana (Omari, 2010). Evidence of climate change is most pronounced in natural systems (IPCC, 2014), and hence Forsyth et al. (2007:2) posit that 'as a consequence of climate change, the natural capital of tourism will be altered and most likely be reduced or devalued'. According to IPCC (2013), some of the natural systems that have already been affected include quality and quality of water resources, migration patterns, abundance of species and their interactions, altered hydrological systems and changes in precipitation. Clearly these natural systems are pivotal to nature-based tourism, and hence Scott et al. (2012b) reiterate that the impacts of climate change will have significant impacts on the tourism system and destinations.

The potential costs and benefits associated with climate change in tourism include: loss of attractions, leading to lower visitations by domestic and international tourists; loss of quality of attractions, leading to similar effects to those of loss of attractions; high costs of adaptation for attractions whose appeal will be feasible to preserve by adaptation; high costs of replacing tourism capital in instances whereby it is feasible to retain an attraction by shifting its location; and new or better attractions in cases where climate change improves some attractions and where some attractions that were not viable before become viable (Wall, 1998; Lise & Tol, 2002; Becken, 2005; Buzinde et al., 2010). It should be noted, however, that the risks and potential benefits are perceived differently due to diverse values and goals that exist in societies (IPCC, 2014). As a result, there is a growing interest and awareness of the importance of climate change for tourism and related policy needs (Becken & Hay, 2012). In general, climate change policy can be defined as 'any policy that specifically addresses the need to reduce (i.e. mitigate) greenhouse gas (GHG) emissions or to reduce vulnerability and adapt to climatic changes in the future' (Becken & Clapcott, 2011:2).

Although the climate change policies are seen as increasingly urgent, many developing countries have not yet enacted national climate change policies. This most probably indicates that sectoral policies with specific attention to the tourism industry are even more far-fetched (Becken, 2013) since they are normally informed by the national climate change policy. More daunting is the fact that although research in this field has grown considerably over the past two decades, it mostly covers the Global North contexts and views. Thus, there are potential major gaps in information regarding climate change impacts, adaptation and policy responses (Saarinen et al., 2012), for example with respect to tourism development and management in the Global South. In addition, where such information is available, incorporating it into policy has been noted to be a challenge (Jones et al., 2009) but a crucial step to take. Indeed, in the quest for sustainable development, countries in the Global South are faced with the daunting task of accelerating economic growth and at the same time maintaining environmental integrity for the overall well-being of the society. However, most environmental issues become evident only in the long run while action has to be taken proactively (see Gössling et al., 2012, 2013). This may put political decision-makers and other officials in a compromising situation of attending to issues that are urgent and evident 'now' rather than securing future development prospects. Thus, the development of environmental policy required to secure economic growth is confronted by the dilemma presented by the clash between long-term aspirations of societies and their short-term benefits or needs.

As climate change policy dialogue continues in developing countries, this paper endeavours to determine the main challenges facing climate change policy development in Botswana with special reference to the tourism industry as informed by the perceptions of policy-makers; while tourists' (see Gössling et al., 2006; Tervo-Kankare et al., 2013) and tourism operators' (see Tervo, 2008; Saarinen et al., 2012) perceptions have been relatively widely analysed, the policy-makers' views are much less studied, especially in the African context. The study is based on a qualitative approach with in-depth policy-maker interviews. The paper is structured as follows: climate change policy options; climate change policy in the context of Botswana; methods; results analysis; discussion; and, lastly, conclusions.

2. Policy options: Adaptation and mitigation

Careful thinking about what climate change policies should achieve is a crucial first step in helping governments to make wise policy choices (Keeney & MacDaniels, 2001). That is, decision-makers need to know and understand the problems and the response options available to them, because in the end it should be the duty of the government to plan and organise for climate change adaptation and mitigation to reduce vulnerability of people, infrastructure and other national assets (Faling et al., 2012). In general, the following are policy options that countries could adopt: command and control regulations; market-based regulations; and subsidy programmes (Stavins, 1997; Bushnell et al., 2008) – which can also be termed technical, business management and behavioural adaptation types (Jopp et al., 2010).

The United Nations Framework Convention on Climate Change (UNFCCC) identifies mitigation and adaptation as the two integrated responses to the global climate change (Klein et al., 2007). Mitigation is defined by the IPCC (2007) as an anthropogenic intervention to reduce the sources of or to enhance the sinks of greenhouse gases. As such, climate change mitigation policies are geared towards reducing greenhouse gas emissions (Kelly & Agder, 2000; Forsyth et al., 2007). In contrast to this, adaptation is viewed as the appropriate response measures taken to reduce a system's (e.g. the tourism industry's) vulnerability in relation to climate change (Pielke, 1998; Patterson et al., 2006; Smit & Wandel, 2006). These responses can also include elements referring to various mitigation measures (see Pelling, 2011).

While both mitigation and adaptation are urgent issues in climate change policy-making, the role of adaptation has been highlighted in the Global South, especially in Africa (Omari, 2010), which contributes relatively little to global warming but suffers 'fully' from its effects. In general, countries in the Global South are mostly vulnerable and there is a need for integration of climate change adaptation principles into developing country policy processes (Jones & Alony, 2011). However, climate change policy decisions are complex, involving conflicting objectives, uncertainties, an array of alternatives and fragmented institutional structure (Keeney & MacDaniels, 2001). Furthermore, in the context of tourism, especially nature-based tourism, there is a lot still to be known about the vulnerability issues (Hall, 2009; Hambira, 2011; Kaján, 2013). For example, the likely impacts on the resource base (natural capital) upon which the industry is dependent; instances where the impacts will be negative or positive; suitable coping strategies (adaptation); whether mitigation is really unnecessary for low net greenhouse gas emitters; and so forth. These aspects are crucial as they form a pertinent knowledge base that informs sound climate change policy.

3. Climate change policy: Botswana's national context

Botswana is committed to sustainable growth, environmental conservation and prudent natural resource utilisation as enshrined in the National Vision pillar of 'A prosperous, productive and innovative nation'. Under this pillar, it is envisioned among other things that by the year 2016 there will be a fully integrated approach towards conservation and development (Presidential Task Group for Long Term Vision for Botswana, 1997). However, the country's commitment to sound environmental governance did not start with the formulation of a National Vision. Prior to this, Botswana had signed and ratified a number of multilateral environmental agreements,

and of particular importance to this paper is the UNFCCC. The convention commits parties to develop national programmes, plans and strategies to respond to global warming and climate change. Consequently, Botswana undertook the following studies and reports: an inventory of greenhouse gases in Botswana, vulnerability and adaptation to climate change of livestock (rangeland), crop agriculture, forest, health and water resource sectors, mitigation options for energy and non-energy sectors (land use and forestry, agriculture, waste and industry), and the first and second national communication reports to the UNFCCC. Furthermore, the country has established a National Climate Change Committee made up of representatives from government line ministries, non-governmental organisations and the private sector (Adaptation and Learning Mechanism, 2009).

Even though there is no dedicated policy to respond to climate change in Botswana, climate change issues are addressed in a combination of various policies aimed at sustainable growth. Some of the policies that exist for prudent stewardship of the environment and natural resources prescribe mitigation and adaptation measures that indirectly respond to climate change and tourism. For example, the water sector has developed a water policy which promotes, among other things, water-loss reductions, water recycling, rainwater harvesting, water pricing and water restrictions. These actions are in line with what adaptation policies should address. The draft energy policy, on the other hand, promotes mitigation measures that have greenhouse gas abatement effects such as: use of energy-efficiency bulbs, service sector and industry energy-efficient buildings, and promotion of renewable energy (MEWT, 2011). Nevertheless, a national climate change policy is inevitable if climate change is to be effectively addressed.

4. Methods and research materials

This research is based on a qualitative approach in which in-depth interviews were conducted on policy-makers to seek their perceptions of the tourism–climate change nexus. The specific aim was to determine the perceived policy needs and constraints with respect to the tourism sector in Botswana. The policy-makers were selected, using purposive sampling, from departments and organisations known to be directly or indirectly involved in tourism and related natural resource management. The aim was to approach public policy-makers with the power to influence or determine a policy arena and institutional arrangements (see Hall, 2008) at the government level.

Initially, 18 public policy departments were approached for an interview with follow-up made by telephone. In the end, nine departments' representatives agreed to participate in the research: Department of Tourism, Department of Meteorological Services, Department of Energy Affairs, Department of Water Affairs, Department of Wildlife and National Parks, Department of Waste Management and Pollution Control, Department of Animal Production, Department of Crop Production and the Ministry of Environment Wildlife and Tourism. Those interviewed were mostly in senior management positions, with a few represented by officers in middle management. Their responses produced relatively common feedback patterns already in the early interview stages. This can be seen as positive since it is usually recommended that qualitative research should be performed until the so-called saturation point; that is, the same types of responses are recorded with no substantially new information (see Hardon et al., 2004).

The individual in-depth interviews covered the following thematic areas: background of the organisation; tourism spatiality and economic issues in Botswana; views on environmental changes in Botswana, including climate change and what it means for the tourism sector; and, lastly, necessary policy actions. The interviews lasted about 45 minutes. Recording was by means of note-taking, and grounded theorising analysis was applied to the research material in the following steps: close reading of the data in order to identify significant aspects and categories; pulling together some segments of data that are relevant to these aspects and categories; and comparing and contrasting the items of data assigned to the same category in order to bring out the meanings of the different categories and how they are related to one another (Boulton & Hammersley, 2006; Jones & Alony, 2011).

5. Perceptions of the climate change–tourism nexus and policy needs

5.1 Policy-makers' perceptions of the climate change–tourism nexus

Key aspects that came from the interviewees were related to the perceived reality of climate change, lack of information and what must be done in response to climate change. Most interviewees were of the view that climate change is a 'reality' as it is beginning to be reflected in weather-related events. They alluded to erratic rainfalls, low water levels in dams and changing seasons as evidence of climate change. The interviewee from the Department of Waste Management and Pollution Control's opinion was that even though documentary evidence pertaining to climate change takes a long time to show trends, the effects are real and, thus, the country needs to take action now.

Only two interviewees were of the view that climate change is not a cause for concern currently in Botswana. The representative from the Department of Water Affairs indicated there have not been any observed changes that can be attributed to climate change in the country's key tourism attraction sites, such as the Okavango Delta. The representative stated:

> I don't think it will happen in 1000 years. Climate change would not have much impact on the Delta because the vegetation in rich and carbon dioxide is used up. Unless we undertake industrial operations in the Delta but no one would approve them.

This seems to indicate some level of denial on the part of the interviewee. The perceived situation that most changes associated with climate change may occur in the future (see Gössling et al., 2012) or geographically elsewhere (see Saarinen et al., 2012) may have influenced this kind of climate change denial attitude.

Whether climate change was seen as a challenge or not, all interviewees lamented that effective response to the estimated/assumed changes will be restricted by lack of information on the phenomenon and how it will affect the country. The representative from the Department of Meteorological Services said:

> There is no concrete information, thus more research is needed. Nobody really knows where we are going. For instance, for the first time in 50 years, rivers in the north are flowing. What else should we expect?

Furthermore, the representative from the Department of Water Affairs said climate change impacts are not uniform and affect 'pockets' such that the same country will

not be affected uniformly. This makes it difficult to know what to put in place in response to the impacts, since the responses depend on knowing the areas that will become drier and those that will experience increased precipitation, for example.

Despite the widely perceived uncertainty that surrounds climate change and its impact on the tourism sector, a clear majority of the interviewees believed that the estimated change could have negative effects on the tourism industry. Key tourism attractions that were frequently mentioned were wildlife, wetlands and vegetation/forest (e.g. savanna). The argument was that weather (and climate) affects wildlife through drought and floods. If the weather becomes drier, rangelands will not be able to sustain animals and their numbers will dwindle as they migrate or die. On the other hand, the interviewees anticipate forests to be replaced by shrubs, leading to the extinction and displacement of some species. Reduced precipitation would also affect activities such as boat riding and bird watching. In the case of too much rain, river fronts would be affected and the Department of Tourism representative actually said 'this is risky since crocodiles would be everywhere thus endangering tourist's lives'. Increased malaria prevalence was also anticipated if there would be more precipitation. Consequently, whether it becomes drier or precipitation increases, most interviewees anticipated tourist patterns and seasonality to change as it would not be worthwhile to travel in such circumstances. While Botswana is investing in tourism in order to diversify the national economy and provide well-being for rural communities (see UNWTO, 2008), the assumed decrease in tourist visits would result in reduced revenue leading to socio-economic challenges and widespread poverty (see Gössling et al., 2008). For example, in the Ngamiland District where the Okavango Delta is located, approximately 70% of the employment is dependent on tourism-related activities (WTTC, 2007).

5.2 Policy-makers' perceptions of climate change policy needs in tourism

In terms of what must be done in response to climate change in Botswana's tourism sector, the interviewees suggested policy responses ranging from adaptation and mitigation measures (energy-efficient and water-efficient technology). In addition, they also called for more research to provide information and data. Concerning adaptation, the most common response given by the interviewees was with regards to product diversification away from products that are vulnerable to climate change. Examples cited ranged from development of old mining sites into tourist attractions; cultural tourism; urban tourism; and sports tourism. The annual Toyota 1000 Desert Race was seen as a potential niche for sports tourism, especially in the Kgalagadi south district where there are sand dunes. They were ambitious enough to associate it with the world famous Dakar Rally.

With regards to mitigation, investment in technology and infrastructure in the energy and water sector was mostly pointed out. Examples included the use of solar energy for air-conditioning and sinking boreholes to water wildlife in areas that are likely to have decreased rainfall attributed to climate change.

Notwithstanding, most of the interviewees who believed that global climate change is a reality and happening were of the belief that nothing can be done to cushion the tourism industry from the probable impacts of climate change in the country. Also those few 'climate change sceptics' did not see a realistic adaptation avenue for the tourism industry if the environment is going to change. The Department of Water Affairs'

interviewee, for example, said human involvement would not have any effect since the foundation of tourism businesses in Botswana is environmental:

> Human beings cannot do anything, for example interventions on forest fires have not produced any fruit, what more of climate change? Furthermore, I'm confident that all will be well even by the year 2050. Climate change applies to Asia and parts of Europe, not southern Africa. It is false in the end.

Again, this kind of perception indicates a denial or some sense of fatalism and believes that nature will manage itself in the end. For example, the Department of Crop Production representative argued that 'God works in mysterious ways' and, thus, the wildlife will adapt gradually and naturally as do crops in similar conditions. Furthermore, the Department of Energy Affairs interviewee said 'Nature has a way of correcting itself so you never know', while at the same time he argued that Africa is on the receiving end and thus its contribution to climate change is negligible and therefore the 'polluter pays' principle must be applied to developed countries in the Global North, whose emissions are higher. This implies that instead of mitigation, the role of adaptation was seen more urgent in the countries such as Botswana.

Regarding information and awareness, interviewees echoed the need for more research, public education and awareness-raising. The reasons given were that generally there was lack of knowledge as to what climate change is all about and how everyday life and the tourism sector will be affected. There was concern that the little information that is available is technical and should be portrayed in a language that ordinary people would understand. This included a need to use also the native language (Setswana) in awareness-building. Furthermore, the existing information mostly covered southern Africa and should be scaled down to Botswana. The other concern raised was that some communities or key community members regard climate change as a myth. Hence, there is a need for rigorous public education and awareness-raising, especially on how local communities' everyday lives are bound to be affected in future.

6. Discussion

Nature-based tourism has been identified as one of the economic sectors that are vulnerable to climate change, particularly for developing countries. Weather variability can bring, among other things, droughts and floods, while climate change is expected to increase seasonal variability and changes in precipitation (Tompkins, 2005; IPCC, 2007). These views were in support of the observations by the policy-maker interviewees and their perceptions can be supported by existing scenarios (see MEWT, 2011).

Based on their perceptions, most interviewees were of the opinion that Botswana needs a climate change policy urgently in order to guide the different role-players in the government agencies and industry to cope or deal with the probable impacts of climate change. They identified policy needs in response to climate change pertaining to adaptation and mitigation strategies. However, they lamented that the tourism–climate change nexus was still clouded by uncertainty, knowledge gaps, inadequate data availability and accessibility, all of which may constrain effective policy formulation and implementation. Indeed, as mentioned earlier, creating national climate change policy is challenging as it contends with long time frames, scientific uncertainty about impacts, and social and economic futures (Tompkins & Adger, 2005).

Arguments put forth by those few who did not agree that climate change policy development was a priority were that Botswana already has sectoral policies that cover issues related to climate change, although indirectly**.** This is a logical justification since Article 4(f) of the UNFCCC states that member countries should commit to take climate change considerations in relevant social, economic and environmental policies and actions to the extent feasible (United Nations, 1992). Some interviewees argued that Botswana does not contribute significantly to climate change, hence mitigation-focused policy, especially, was not a priority. However, both Global North and Global South countries are faced with the same challenge with regards to their welfare being threatened by climate change. Therefore, both groups of countries should participate in international mitigation efforts in order to prevent the risks attached (Ipsen et al., 2001; Rübbelke, 2011). For example, with Botswana intending to expand its electric power generation by utilising its coal deposits, it is yet to be established whether Botswana would remain a net sink or would eventually transform into a net emitter. It is therefore imperative for Botswana to consider both mitigation and adaptation in terms of its climate change policy.

Most of the interviewed policy-makers actually suggested both adaptation and mitigation actions as responses to climate change in the tourism sector. Mitigation measures are befitting considering the high use of energy, water and food in the tourism sector. Some of the adaptation measures suggested, such as product diversification through sports tourism, have already proven viable – such as the Toyota 1000 Desert Race, which is championed by the Four Wheel Drive of southern Africa and currently takes place annually in Botswana. It is very popular and affectionately known as *Mantshwabisi* after the village used as a stopover by the participants when the race was first introduced in southeast Botswana. It already has support of the Botswana tourism authorities, as it is believed to have spin-offs for tourism development. The road-car and quad-bike racing has since been extended to the Kgalagadi South District where there are beautiful sand dunes as tourism attractions. However, it should be noted that motorised tourism activities may conflict with conservation aims as well as mitigation efforts as they contribute to gaseous emissions. Thus, this form of tourism needs to be reviewed critically in the face of climate change and nature conservation. Therefore, one of the challenges of tourism development as a development strategy in the face of climate change is the fact that the industry actually contributes to the emissions leading to climate change (Hall et al., 2013).

In view of the above, it is very difficult to separate the two approaches to climate policy: adaptation and mitigation. As Tompkins & Adger (2005) posit, mitigation and adaptation are interdependent since both are often driven by new technology and the ability of society to change. For example, mitigation is usually the priority of industries, government and consumers interested in securing energy, while adaptation is dealt with by spatial planners and non-energy sectors of the economy. This means that the two fundamental elements of both mitigation and adaptation should be the focus of policy formulation: technological innovation and building societal response capacity (Tompkins & Adger, 2005). The UNFCCC guiding principles in Article 3(4), however, state that the policies and measures aimed at protecting the climate system against human-induced change should be commensurate with specific conditions of each member country (United Nations, 1992).

The interviewees, like several scholars, agree with the perception of the uncertainty that surrounds climate change, in general. For example, there is uncertainty about the scale

and significance of environmental change processes in specific socio-spatial contexts, which causes problems for society in terms of decisions about how to respond accordingly to the threats associated with it (Belle & Bramwell, 2005). Furthermore, scales of change, scientific uncertainties, impacts complexities and the global nature of the problem are some of the factors that may hamper effective adaptation (see Adger & Baenett, 2009). These factors should not, however, discourage the Global South countries from adaption to or mitigation against climate change, since taking precaution is always better and less costly than reacting to the problem in future.

With respect to information gaps, inadequate knowledge and poor public awareness, a data capture and harmonisation by concerned institutions is a major challenge. Perceptions of the ability to respond to climate change are likely to change overtime with information and understanding of issues pertaining to climate change science and policies (Tompkins & Adger, 2005). Therefore, improving our knowledge base on the tourism–climate change nexus is crucial. Poor knowledge may be the reason for myths and doubts surrounding the existence or estimated reality of climate change as expressed by some interviewees. This may explain why the interviewee from the Department of Water Affairs was adamant that the Okavango Delta, which is a major tourist hotspot in southern Africa, has not been affected by climate change and that the status quo is bound to remain for a long time, whereas some studies suggest otherwise. Scenario simulations projected for the Okavango Delta have revealed the following potential impacts attributed to climate change: reduced inflow into the Delta from both upstream and rainfall; and increasing temperature and rate of evapo-transpiration in the long term (DEA, 2008). Consequently, it can be concluded that the Delta and its tourism resources are vulnerable to climate change (see Hambira, 2011).

7. Conclusion

Effective climate change policy is informed by impacts of climate change, clear messages in the climate change projections, simple prioritised implementable actions, moving climate change from being a 'contained science matter' to a people-centred issue, climate information, and infrastructure development (Belle & Bramwell, 2005). However, many countries in the Global South do not have the capacity (e.g. financial or technological) to address climate change (Brechet et al., 2013) and, thus, they have tended to be reactive rather than proactive in dealing with the change. However, the cost of inaction is bound to be high in the long run, and the longer the action is delayed the higher the cost will most probably be. Sustainable economies and societies can be ensured by developing new policies and structural changes that align, among other things, climate change goals in low-emission climate-resilient strategies (UNDP, 2013). Such an enabling environment is strengthened by integrating climate-related policies and plans into the wider development agendas (Becken & Hay, 2012).

Climate change policy is important in guiding response actions in curbing the effects of climate change. Many developing countries are at a stage of formulating general climate change policies and are yet to make them sector specific. The tourism sector in particular is lagging behind compared with other sectors, such as agriculture, energy and water, which have received more attention. Climate change policies in tourism may be in the form of mitigation and adaptation depending on the conditions that prevail in each country and region, but generally the tourism sector cannot escape the adoption of

both strategies since it contributes to climate change in as much as it is affected by climate change (see Simpson et al., 2008).

This study, based on the perceptions of public policy-makers, has demonstrated that the tourism sector should be looked closely into responding to climate change since it is important to most economies in developing countries. The results largely show that the interviewees perceive climate change to be a reality as they have observed some changes in local precipitation and temperatures. The climate change policy is seen as urgent since various tourism development strategies and plans are heavily based on wilderness and wildlife viewing products aimed at economic diversification. Therefore, there is a need to either mainstream climate change issues in existing legislation or develop some adaptation and mitigation measures to be adopted in coping with climate change or reducing greenhouse gas emissions respectively. Such an integrated approach to climate change policy formulation and implementation emphasising both adaptation and mitigation would be critical (see Becken & Hay, 2012). The study has, however, revealed that the effectiveness of policy will be constrained by inadequate information and data pertaining to climate change, its impacts and consequences as most information on Botswana is deduced from wider regional studies. There is thus need for more research that will answer the following kind of questions: which ecosystems or natural capital are crucial to Botswana's tourism sector and how are they likely to be affected (negatively or positively) by climate change; how can the probable negative and positive impacts be avoided or enhanced respectively; what kind of mitigation and adaptation policies will be most suitable for a developing country such as Botswana; what are the cost implications; does Botswana's tourism sector have the required adaptive capacity; how will tourist flows in the country most likely be affected; how will the tourism sector's contribution to the country's gross national product be affected; and how can scientific information related to climate change and tourism be made simple for communities and tourism business operators? Notwithstanding, climate change policies need to be developed regardless of the uncertainty surrounding not only the future path of climate change but also the impacts on natural and social systems as well as the economic estimates of damages and costs (Boko et al., 2007). This helps in taking a proactive stance rather than being reactionary.

Lastly, this study confined itself to the public policy-makers' perceptions, but there is a need to extend focus and research to other categories of policy-makers, such as development policy-makers (i.e. organisations overseeing tourism operators from the private operators' perspective) and policy advocacy groups, such as non-governmental organisations and community-based organisations, which can play a crucial role in policy-making. Obviously, the private sector plays an important role in tourism since it is in the forefront of tourism businesses. They and the development policy-makers are also well placed in informing policy on business operations responses to climate change issues. Studies carried out in Botswana so far have revealed that most tourism businesses in Botswana have not yet taken on board climate change adaptation strategies, while some are not convinced that climate change should be a concern (Saarinen et al., 2012; Hambira et al., 2013). Therefore, the role of tourism business operators in issues of tourism and climate change policy needs to be intensified. For example, aspects of climate change mitigation and adaptation may be factored into codes of conducts for the operators, but in order to do so they need to recognise the likely impacts of tourism on their businesses and vice versa.

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