



# Marine tourism in the face of global change: The resilience of enterprises to crises in Thailand and Australia



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## ABSTRACT

Marine-oriented nature-based tourism plays an important socio-economic role, and provides an incentive for conservation in many coastal regions. However, accelerating global change, and the associated socio-economic and political change may have severe consequences for marine tourism at the local level. Thus, understanding the ability of sectors within marine tourism to cope with, and adapt to, change is paramount. Private sector enterprises are key players in marine tourism and their capacity to adapt to change will vary across socio-economic and governance contexts. Thus, the resilience of these enterprises (their ability to adapt to, and continue to function under changing pressures and circumstances) is critical for the future of the marine tourism sector more broadly. This paper examines how socioeconomic and governance contexts influence the resilience of coral reef tourism enterprises in three settings: the formal and informal sector in Phuket, Thailand and enterprises on Australia's Great Barrier Reef. Although there are differences between the three groups of enterprises, lifestyle factors, human capital, perceived reef condition, and government support are associated with the resilience of enterprises across all three groups. These findings suggest that policy-makers should consider enterprise lifestyle benefits, and that a nuanced understanding of marine tourism enterprises is required.

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## 1. Introduction

Nature-based tourism contributes to the coastal economy of many tropical marine systems around the world (Orams and Lück, 2014). However, increasing uncertainty over the timing of major disturbances, and how the influence of disturbances may spread, is of particular concern to the tourism industry because of its dependence on the international flows of people, money, and resources (Biggs et al., 2011; Simpson et al., 2008). These global drivers of change can interact with local drivers, such as political crises and affect the tourism sector (Balint and Mashinya, 2006; Hall, 2010). Hence, because of its importance in many coastal

regions, there is a growing urgency to understand the factors that enable the marine tourism sector, and agents within it, to cope with and positively adapt to global change and associated crises (Hall et al., 2004). Although, at a global scale tourist numbers continue to grow (UNWTO, 2013), at a local destination scale, impacts associated with global and local drivers of change can have deleterious impacts on the tourism sector as a result of significant changes in tourist arrivals by number and/or by the type of visitor (Gosling and Hall, 2006; Prideaux et al., 2008; Lean and Smyth, 2009; Nassar, 2012).

Studies assessing the effects of crises and disturbances on the tourism industry tend to examine how demand for tourism has changed, or to a lesser extent, how the tourism industry responds and the ability of the tourism industry to adapt (Hall, 2010; Ritchie et al., 2014). Studies can be grouped into five broad overlapping categories. First, those that focus on the impact of a specific large crisis, such as a disease outbreak, on tourism arrivals at the national, regional, or global scale (Kuo et al., 2008). A second group uses modelling and scenario-based analyses to explore the impacts

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of a changing climate on tourism arrivals at a destination (Scott et al., 2012). Third, studies that empirically examine the effect of climate change on the tourism industry and the potential for adaptation (Gössling et al., 2009; Hoffmann et al., 2009). These studies have tended to focus on the ski industries' response to changing snow conditions (Scott et al., 2012). Fourth, studies that examine the response of tourists and to changing condition of coral reefs (Uyarra et al., 2009, 2005). Finally, a category, of mostly qualitative case studies, focuses on the response of tourism-dependent communities to disasters or shocks (Baker and Coulter, 2007; Becken, 2013; Smith and Henderson, 2008).

Only a small number of studies have focussed specifically on the ability of the marine tourism sector to cope with crises and global change. These studies, have either focussed on one country, one destination (Biggs, 2011; Biggs et al., 2012b; Dawson et al., 2007; Hillmer-Pegram, 2013; Marshall et al., 2010), or on the relationship between marine tourism operators and conservation (Biggs et al., 2012a). What is currently lacking is an empirical investigation of the factors that may enable marine tourism enterprises in different socio-economic and governance contexts to survive or adapt to crises and change. This paper builds on earlier work (e.g. Becken, 2013; Biggs, 2011; Biggs et al., 2012b; Hillmer-Pegram, 2013) and investigates both the commonalities and the unique factors associated with the resilience of marine tourism enterprises across three different socioeconomic and governance settings. An understanding of the commonalities and context specificity of response to environmental and socio-economic stresses is valuable as there is growing acceptance of the context specificity of human environment interactions (see Ostrom et al., 2007).

Coral reef tourism provides an excellent lens through which to explore the resilience of marine tourism because it is exposed to a range of environmental and socio-economic threats. The environmental threats to reef ecosystems are particularly acute; and include coral bleaching, ocean acidification, over-fishing, fertiliser and sediment runoff, coastal development, and poorly managed tourism activities (Hughes et al., 2010; Scott et al., 2012). In addition, socio-economic and political crises can affect reef tourism at both the destination and origin of tourist generating regions (Bischof, 2010; Nunn, 2009). Moreover, resilience theory (see Folke, 2006) has attracted increasing attention from tourism researchers as a way to understand the tourism sector's ability to cope with, and adapt to, perturbations and change (Becken, 2013; Calgaro et al., 2014; Farrell and Twining-Ward, 2004; Hall, 2008; Sausmarez, 2007; Simpson et al., 2008; Strickland-Munro et al., 2010).

Reef tourism generally requires the use of a boat to access offshore reefs. Therefore, enterprises that take tourists to enjoy reefs by boat are key players in the reef tourism industry. For the purpose of this study, an enterprise is an entity consisting of one or more individuals that generates an income by delivering services to tourists. Reef tourism is characterised by a continuum of enterprise structure and size. On one end of the continuum are the large commercial enterprises, that may employ hundreds of people, and have made substantial investments into boats, offices, marketing and equipment. On the other end of the continuum are the small, often informal, enterprises and individual or family-owned businesses that do not own their boats, but rent boats or space on boats when they have clients. In contrast to formal enterprises, informal enterprises consist of small-scale self-employed entrepreneurs that are lawful in nature but are typically not officially licensed or registered for taxation because they operate under specified thresholds of annual revenue (Aguilar and Campuzano, 2009) and are therefore fully or partially outside of formal government regulation and observation. Despite historically negative connotations of non-compliance and marginality, the informal sector in increasingly recognised as a substantial contributor to economic

life in developing and developed countries (Chen, 2012), that is characterised by flexible and innovative organisational forms (Godfrey, 2011; Williams and Nadin, 2010).

This paper empirically investigates the factors that are associated with perceived resilience in coral reef tourism enterprises in three different contexts. We define perceived resilience as the extent to which enterprise owners and senior managers feel that their enterprise will be able to maintain or grow its existing level of employment and income and stay operating in reef tourism in the face of crises and change (Biggs, 2011). Our study investigates commercial enterprises on Australia's Great Barrier Reef (GBR); commercial enterprises in the formal tourism sector in Phuket, Thailand; and informal enterprises in Phuket, Thailand. In particular, our study identifies: 1) The common and unique characteristics associated with the resilience of reef tourism enterprises in Australia, formal reef enterprises in Thailand, and informal enterprises in Thailand; 2) The differences in the levels of resilience between formal and informal sector enterprises in Thailand, and enterprises on Australia's GBR; 3) The theoretical and management implications of the commonalities and differences between the three reef tourism sectors for strengthening enterprise resilience.

## 2. Overview: resilience and marine tourism

### 2.1. Resilience theory

The resilience concept emerged from the ecological sciences and is a measure of the ability of a system to recover from and adapt to perturbations without fundamentally changing structure and function (Berkes and Folke, 2000; Gunderson and Holling, 2002; Holling, 1973). A resilience-based approach is useful in understanding tourism's response to crises because it considers the ability of a system to maintain and adapt its essential structure, identity, and functioning in the face of often unpredictable change (Adger, 2000; Cumming et al., 2005; Holling, 1973). Resilience theory recognises the inherent uncertainty in predicting the complex and dynamic ways in which individuals, organisations, and society may respond to disturbances and change (Gallopín, 2006; Marshall, 2010). Within the resilience literature there is a distinction between 'specified resilience' and 'general resilience' (Folke et al., 2010). General resilience refers to the resilience of any and all parts of a system to all kinds of disturbances, including novel ones. Specified resilience refers to the resilience of some particular part of a system, related to one or more particular disturbances.

The growing but limited literature on resilience in tourism to date consists mainly of conceptual pieces on the potential value of the resilience concept (e.g. Cochrane, 2010; Farrell and Twining-Ward, 2004) and qualitative applications to protected area and community-based tourism (Ruiz-Ballesteros, 2010; Strickland-Munro et al., 2010). Yet, to date, there has been no quantitative, empirical study investigating the determinants of different levels of actors' resilience in marine tourism enterprises, or tourism enterprises more broadly across different socio-economic and governance contexts. This paper is the first attempt to understand the context specificity, as well as the commonalities in the resilience of reef tourism enterprises to disturbances in different governance and socio-economic contexts.

Resilience is closely related to the overlapping concepts of adaptive capacity and vulnerability. Vulnerability is the susceptibility of a system to disturbances and is determined by exposure and sensitivity to perturbations and the capacity to adapt (Adger, 2006; Gallopín, 2006; Nelson et al., 2007). The adaptive capacity of social systems can be defined as the capacity of a system, from the individual to humankind, to increase (or at least maintain) the quality of life of its members (Kinzig et al., 2006; Smit and Wandel,

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