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## **Chapter 4:**

### **Promoting interdisciplinary sustainable tourism**

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#### **Introduction**

The journey of understanding tourism sustainability outlined by other authors in this book (for example, Butler Chapter 6 and Weaver Chapter 2) has evolved independently but in tandem with different disciplines. These separate but parallel journeys have also confronted the same issues in terms of the tensions between sustainability as a *theory* and the reality of *practice*. That is, the contradictions outlined by Weaver (2014, 2015) are not entirely peculiar to tourism but are shared by most disciplines focussed on the theory and practice of human society and socio-economic development. While different disciplines have faced similar conundrums over time, there is a significant lack of inter-disciplinary sharing of this experience and knowledge, which might limit progress toward overcoming the conflict between ideas and practice.

Like sustainable tourism, environmental impact assessment (EIA) is a field that focusses on the nexus between specific types of human activity and the socio-economic and environmental setting within a given spatial and temporal context. In essence, EIA is a systematic process of evaluating the likely positive and negative environmental impacts of a proposed development. The overall purpose is to carefully plan and design proposed development activities so as to minimise and manage the potential adverse impacts on the environment that have been identified (Morgan 2012). As detailed later in this chapter in the

context of sustainable development, EIA seeks to direct decision-making toward sustainability (Hacking & Guthrie 2008). As with tourism, EIA has undergone changes from a narrow discipline-based focus to broader conceptualisations. For example, Downs (2008) argues for enhanced EIA processes that could contribute to sustainable development and poverty reduction which draws on interdisciplinary knowledge, mirroring similar calls in the tourism literature. However, as with tourism, the advances in EIA theory and practice develop alongside, rather than replace, the older practices. The journey of EIA directly reflects that of sustainable tourism and yet knowledge sharing between these fields appears to be very limited. There is scope for mutual learning and progress through breaking down the silo walls and harnessing an interdisciplinary approach.

This chapter shares learning from the environmental impact assessment field that might usefully inform sustainable tourism and vice versa, so that theory and practice are better harmonised. More particularly, it picks up on the challenge posed in the sustainable tourism literature to adopt an interdisciplinary perspective (Filep et al 2013). Interdisciplinary research is distinct from multidisciplinary research. Multi-disciplinarity occurs when different disciplines work in parallel on specific questions. This is exemplified in the parallel journey of the EIA and tourism fields of research on sustainable development. Interdisciplinarity occurs when a hypothesis is tested based on variables derived from the specialised knowledge of different disciplines (Lu & Nepal 2009). This requires true integration of different fields of knowledge and theoretical traditions. An interdisciplinary approach could enable the development and use of synergies between different disciplines to produce a more holistic synthesis (Filep et al 2013; Liu 2003). In this way it avoids the separate silos that all-too-often characterise different academic disciplines, contributing to the paradox described by Weaver (2014). This point was also made by Sheate (2009) specifically in relation to separate

development of a range of environmental assessment and management tools. It is proposed that a more holistic approach to sustainable tourism and EIA will overcome apparent paradoxes that undermine the integrity of these areas as fields of knowledge and practice.

### **Approach**

As a first step towards this longer-term goal, we provide some comparisons in the evolution of sustainability thinking within both EIA and tourism. Both fields have similar challenges in genuinely embracing the concept of sustainable development. Our framework for comparison and analysis consists of three parts:

- (i) The treatment of environmental, social and economic (ESE) issues and impacts over time
- (ii) Expanding scope and consideration of scale surrounding development
- (iii) Governance and management considerations that extend beyond tourism or EIA project operators

The treatment of environmental, social and economic (ESE) issues over time relates to the phenomenon where the initial focus of knowledge and practice in EIA was narrow, often with an exclusively biophysical focus, and has since broadened to embrace wider socio-economic considerations (e.g. Morgan 2012). This has occurred in two ways; firstly by understanding ESE issues in deeper and more nuanced ways, and secondly by expanding the understanding of sustainability beyond ESE considerations alone. The expanding/widening scope and scale around consideration of development recognises that a local area or specific project is prone to the influences of larger scale issues. That is, consequences of decisions and actions at the local scale are linked to dynamics at the wider regional, national and global scale as part of a complex, interrelated system and vice versa (Gunderson, Holling, Pritchard & Peterson

2002). Governance and management considerations that extend beyond project operators alone recognise the need to include a broader community of interest, and especially government (Jenkins et al 2003; Gibson 2011). This includes cumulative effects assessment and the need to account for the interrelated effects of development consistent with systems-thinking. Cumulative effects assessment requires identification of key values (social and environmental) in a given region, including human health and biodiversity values.

Monitoring and assessment then focus on determining whether those values remain within desired measurable thresholds when exposed to the combined effects of human activity over time. This moves away from focussing on specific impacts from particular sources and activities to an assessment of values in the wider context of a defined region. These issues reflect the similarities between the evolution of thinking in EIA and the development of sustainable tourism as a concept. However, while evolution of thinking adds new concepts, old concepts commonly persist in theory and practice due to lock-in effects.

Using this three-part framework, we first present the experience of EIA and then that of sustainable tourism. This is followed by a discussion that combines these two parallel experiences and highlights similarities and the potential for shared learning and progress.

### **The EIA Experience**

In the world of EIA, sustainability assessment can be broadly defined as a process that directs decision-making toward sustainability (Hacking & Guthrie 2008; State of art paper ref). This general definition can be applied to any human decision-making context, including tourism.

The question then arises as to what is to be sustained, for whom and over what time frame. In terms of 'what', this might include the natural environment, or a particular project or development. The question of 'for whom' includes intra- and inter-generational

considerations and issues of equity. Intra-generational equity in the context of EIA commonly refers to distributional justice or fairness (Hermans & Knippenberg 2006). This type of equity is particularly relevant in terms of experiencing the adverse effects of development versus realising the benefits of development. It is about addressing the question of beneficiaries. Inter-generational equity relates to the quality of the natural or biophysical environment that is passed on to future generations (George 1999). Current generations can make decisions, through EIA, around the residual quality of the environment that future generations will inherit. However, it is an unrealistic expectation that accurate forecasts or adequate planning for future quality of human life (e.g. happiness or well-being) are possible as these are mainly socially determined.

Finally, the temporal component is important as it might refer to short-term thinking and the current generation or might factor in future generations as part of a long-term strategy, relating back to issues of intergenerational equity and how these are managed or planned. Ultimately, what these questions require is an understanding of trade-offs and their management to achieve sustainable development. Understanding and managing trade-offs in sustainability thinking has been a recent focus in the EIA field (e.g. Gibson 2013; Morrison-Saunders & Pope 2013; Retief et al 2013), thereby indicating a link with the dialectical approach.

#### *The treatment of EIA ESE issues and impacts over time*

The conceptualisation of sustainability in EIA began in the 1970s and 1980s with a focus on minimising negative environmental impacts of proposals. The focus has subsequently included socio-economic impacts as well, probably in large measure as a consequence of the public participation component of EIA enabling social concerns to be raised and addressed.

In different jurisdictions the legal definition of 'environment' includes socio-economic considerations. An EIA that addresses environmental, social and economic impacts alike was considered by Pope et al (2004) to be the minimum position for a 'sustainability assessment' process. A recent example relates to published EIA documents on a significant Liquefied Natural Gas development in Western Australia. The documentation features a discrete environmental impact report, and a separate social impact report all focussed on minimising negative impacts (Beckwith 2012). Subsequent to this dominant position, EIA moved toward delivering positive social, environmental and economic outcomes. For example, Garcia-Melon et al (2012) state that the ultimate aim of sustainable development is to balance environmental, social and economic factors. This approach requires prioritisation and trade-offs between issues, as noted by Pope et al (2004) resulting in the potential for inequitable outcomes. In response Gibson (2013) argues that a focus on minimising negative effects is not enough in terms of achieving the ideal of sustainability. This is because the mitigation of significant adverse effects simply results in slowing the cumulative negative effects of development, so that mitigation simply prolongs the inevitable decline resulting from impacts of development (Gibson 2013).

This thinking leads to the paradox described by Weaver (2015) (see Ch 2), whereby good intentions and ideology are at odds with the consequences resulting from real world application of the ideas. To address these concerns, Gibson (2006; 2013) argues for a reversal in direction where a 'whole of systems' approach is adopted. A recent account of this evolution in thinking within the field of EIA is provided by Morrison-Saunders et al (2014) who demonstrate how initial sustainability thinking focused on specific negative impacts in individual ESE categories evolved into more holistic systems thinking including an emphasis on interventions that will enhance sustainability outcomes in mutually reinforcing ways.

Accompanying this broadening of focus is recognition of the complexities and the inherent interconnections within socio-ecological systems, and a need to consider system resilience and adaptive management based on a systems approach (Geneletti 2011; Ostrom 2009; Slootweg & Jones 2011). The more holistic approach is also aimed at reaching beyond just minimising adverse impacts or maximising individual ESE objectives and benefits to making a positive contribution to sustainability which can be tested during the planning and pre-approval decision stages of impact assessment (Gibson 2011).

*EIA Expanding scope and consideration of scale surrounding development,*

In line with its evolution in thinking about ESE issues and impacts, EIA has moved from a single project site-specific focus toward inclusion of the surrounding community and broader region. This approach is known as strategic environmental assessment and is recorded as a specific process in at least 60 countries worldwide (Fundingsland, Tetlow & Hanusch 2012). As the Greek roots of the word 'strategy' denote, taking a strategic approach to EIA means focusing on the art of the general and taking a broad-brush approach (Noble 2000). It has thus come to be associated with determining visions and alternatives and the setting of high-level objectives, targets or criteria (Therivel 2004) when assessing the consequences of proposed programs, plans and policies. In England, the strategic environmental assessment process has been co-badged as 'sustainability appraisal' (Therivel & Fischer 2012) to reflect the potential of the expanded scope and scale of this approach. In this vein, there is evidence that the practice of strategic environmental assessment has actively incorporated sustainability considerations worldwide (White and Noble 2013). Recent attention has also been given to the notion of regional strategic environmental assessment (Gunn & Noble 2009), including incorporation of cumulative impacts (Gunn & Noble 2011), further underscoring the expanded scope and scale of strategic forms of EIA.



*Governance and management considerations beyond EIA project operators*

Governance and management considerations that unite proponents, local communities and multiple tiers of government stakeholders relate to the systems-thinking approach referred to earlier in this chapter. In many cases, even where project-based EIA is applied, there has been a move beyond the project site and approval conditions imposed by government especially when a sustainability approach to EIA is being taken (Jenkins et al 2003). Traditional biophysically-oriented EIA made the proponent of development directly responsible for all mitigation and environmental management or monitoring requirements. The inclusion of socio-economic aspects associated with sustainability, such as equity (Lamorgese & Geneletti 2013), requires other stakeholders to participate. For example, to satisfy the ‘contribution to sustainability’ test for a major gas pipeline proposal spanning several provinces in Canada, the recommended approval conditions specified a significant role for government over and above the mitigation measures directed specifically at the proponent. Sadly, in this instance there was little appetite by government to implement these measures (Gibson 2011).

**The sustainable tourism experience**

Like EIA, sustainable tourism has been transformed over the past several decades. In this time, it appears that the policy notion of sustainable development has been a successful idea as demonstrated by its rhetorical uptake by, seemingly, most governments (Bond & Morrison-Saunders 2011). In addition, the concept of sustainable tourism has successfully diffused across industry and academia (Hall 2011), as demonstrated by the development and proliferation of the idea. In its initial stages in the mid-1980s, the idea of a more sustainable form of tourism was conceptualised as an alternative to mainstream or mass tourism (see Krippendorf et al 1984). Contemporary thinking has moved to the notion that all tourism

should be sustainable, leading to ideas such as sustainable or enlightened mass tourism (Weaver, 2014). However, while it has been a successful *idea*, sustainable tourism has arguably been a policy and management failure given the apparent continued growth in global tourism and the associated absolute increase in total impacts.

Growth in itself can theoretically be sustainable if it is offset by increased efficiency, but it is apparent that the rate of growth in global tourism outstrips efficiency gains. For example, the aviation sector has reduced its fuel consumption and emissions per passenger kilometre, suggesting a move toward greater efficiency and hence, sustainable practice. However, the growth in number of passengers and concomitant growth in emissions and fuel consumption far outstrips these efficiency gains (Scott & Becken 2010). Nevertheless, the UNWTO champions growth in global tourism as part of its mandate to promote sustainable tourism (UNWTO 2014). The gap between ideology and practice in tourism presents an apparently insurmountable paradox (Hall 2011; McCool et al 2013). Furthermore, many scholars note that tourism research as a means for progressing the field remains mostly fragmented and parochial, dominated by an impractical notion of achieving social, economic and environmental equilibrium as per the much-vaunted ‘triple bottom line’ (Farrell & Twining-Ward 2005; Filep et al 2013; Hall 2011; McCool et al 2013).

#### *The treatment of tourism ESE issues and impacts over time*

The initial focus for sustainable tourism published research appeared to be its socio-cultural effects before expanding to include economic and environmental effects (Hughes & Carlsen 2007). In this regard, Lu and Nepal (2009) note that sustainable tourism was initially viewed as a means for mitigating negative tourism impacts in these three domains. Interestingly, evidence indicates that this thinking still persists. For example, a call for papers by the 2013

International Conference on Tourism in Cyprus stated that sustainable or responsible tourism aims to minimise the negative impacts of tourism at a destination (Ziakas & Boukas 2013). While tourism thinking is moving beyond minimisation of negative impacts, Hall (2011) observes that a common approach in tourism now revolves around the notion of achieving a balance or equilibrium between negative and positive impacts in the social, environmental and economic domains. Balancing these domains and impacts leads to a requirement for trade-offs to address the inherent conflicts within a socio-ecological system, and subsequently feeds the paradoxes raised by Weaver in Chapter 2. Thus, Hall (2011) argues that sustainable tourism based on achieving balance or equilibrium is an impossible goal, especially given the current global dominant paradigm of economic growth at all costs.

As an indication of movement away from the idea of balance, Farrell and Twining-Ward (2005) suggest that a systems approach to tourism research and management is required. There is some evidence of this in tourism thinking. For example, Strickland-Munro et al (2010, p. 499) present ‘a novel approach’ to researching tourism impacts on communities that revolves around socio-ecological systems thinking and resilience assessment principles. This type of research can provide tools for a systems approach to management. Nevertheless, Farrell & Twining-Ward (2005), and more recently Hall (2011) and McCool et al (2013) note that tourism research remains mostly dominated by an impractical notion of achieving a state of social, economic and environmental balance that “...serve students and researchers poorly...” (Farrell & Twining-Ward 2005, p. 110).

#### *Expanding scope and consideration of scale in tourism development*

McCool et al (2013) and Hall (2011) note that research and development in sustainable tourism has often been (and still commonly is) insular in nature, examining tourism in

isolation to the world around it. That is, the bulk of tourism research and development has been strongly focussed on the destination or attraction level and associated stakeholders, adopting a project focus. This reductionist approach has commonly resulted in tourism policy and development that does not take into account broader implications of its actions, leading to unfavourable consequences (McCool et al 2013). The expanding scope and consideration of scale surrounding development relates to the idea that sustainable tourism thinking moves beyond a specific focus on the tourism attraction or destination or tourism activity in isolation (Calgaro et al 2014).

For example, Scott (2011) highlights the importance of accounting for impacts of tourism travel to and from the destination as part of a systems approach. While inclusion of travel impacts expands the traditional focus beyond the tourism destination, it still addresses tourism-specific activities and associated impacts in isolation. Presenting a broader view, Lew (2010) highlights the temporal nature of sustainability and the need to consider the longer term consequences of tourism development. Inclusion of time addresses the intergenerational equity aspects of sustainable development and consideration of consequences beyond the immediate impacts of a specific tourism activity or development. Regarding scale, McCool et al (2013) argue for tourism research that incorporates understanding of the broader system in which tourism exists. This is supported by Schianetz and Kavanagh (2008) who state that a system-based approach is necessary to understand the processes and impacts of tourism in its entirety. Strickland-Munro, Allison and Moore (2010) also advocate for a resilience and complex systems-based approach to tourism research and development. Tyrell and Johnston (2008, p. 22) similarly argue for a shift in understanding that ‘extends beyond narrow perspectives ... and incorporates critical relationships between various dimensions of sustainability and associated resiliency’.

Such views recognise the world as a large, complex and dynamic socio-ecological system in which tourism is one aspect of human activity that forms part of a larger integrated whole (McCool et al 2013). This represents a shift in focus from sustainable tourism based on maintaining stability toward enhancing resilience within an ever-changing system. In seeking to enhance resilience through building and retaining desirable characteristics of a system, tourism proponents are forced to consider, incorporate, and understand elements of the broader system in which tourism exists. Although this is gaining traction as a concept in tourism, with tools developed to measure how resilient a tourism product or destination is (see Ballesteros, 2011; Cochrane 2010; Schianetz & Kavanagh, 2008; Strickland-Munro et al 2010; Tyrell & Johnston 2008), in practice there are few examples of a broader systems approach to tourism planning and development.

One example of an attempt at a systems approach to tourism development relates to the Ningaloo Coast Regional Strategy. This strategy set out a development plan for tourism within the broader social, environmental and economic context of the Ningaloo Coast region in Western Australia. The intent was to allow for tourism development without compromising other values and development opportunities within the region (WAPC 2004). The Ningaloo Strategy came about due to a specific set of circumstances relating to community concerns and political pressures regarding development within a highly valued and ecologically unique coastal region. As a consequence, the local and broader Western Australian community were highly motivated to ensure that an inclusive and holistic approach to tourism development was adopted (Schianetz et al 2009).

*Governance and management considerations that extend beyond tourism operators alone*

As an indication of a need to expand the focus of tourism research and practice, Hall (2011) calls for consideration of new governance structures in tourism that move beyond site- or destination-specific boundaries. In this regard, Liu (2003) refers to the importance of considering the whole community, and especially the disadvantaged, in the context of sustainable tourism development to ensure equitable distribution of benefits and costs. There are examples of this approach, such as Dredge and Pforr (2008), Strickland-Munro et al (2010) and Wesley and Pforr (2010) that present governance in terms of diverse partnerships, networks and collaborative arrangements between government, industry and community.

Based on the systems resilience approach, Cochrane (2010, p. 182) proposed a model referred to as the 'Sphere of Tourism resilience'. In a governance context, the model emphasises the importance of stakeholder cohesion, strong and consistent leadership, and awareness of market forces and the ability to harness them. According to the author, this framework develops what she argues has been a largely theoretical discussion of resilience within tourism contexts into a more practical model applicable to real world settings. However, this framework has yet to be proactively applied in practice, although it has been used as a diagnostic tool to identify the nature and function of tourism governance in particular regions or operations. Similarly, Strickland-Munro et al (2010) proposed a stakeholder-driven framework for tourism development that incorporates community perspectives on the impacts of tourism development. However, in practice, the approach appears mainly focused on small-scale business development and changes to specific host communities as a result of tourism development, rather than using a broad, systems approach.

### **EIA and sustainable tourism: parallel journeys**

The parallels in development of thinking between EIA and sustainable tourism are

remarkable and perhaps reflect a trend in sustainability thinking more generally. However, both fields demonstrate that while thinking has evolved in new ways, the old ways still persist in many quarters. In terms of the treatment of ESE issues, both fields originated from a narrow focus on impacts, balance and project specific aspects of development. The problematic nature of this approach is expressed well by Gibson's (2013, p. 13) observation that mitigation of adverse effects 'can only slow our slide over the precipice'. As with the evolution of EIA, sustainable tourism thinking recognised this dilemma and subsequently moved toward the notion of balancing economic, social and environmental factors (Hall 2011). In response to this shift, Hall (2011) makes a tourism-oriented observation similar to Gibson's (2013) EIA-based comments, whereby seeking to achieve a balance is inherently impossible due to the complexities of tourism as a dynamic system. It must be remembered that the notion of balance as a means toward sustainability is a potentially dangerous approach because of the complex and dynamic character of interactions and the need for trade-offs that result in inequitable distribution of costs and benefits. Accordingly, Farrell and Twining-Ward (2005) call for a complex systems approach to sustainable tourism thinking. In EIA and tourism, the systems and resilience approach has precipitated shifts in focus of impact research from single sites and projects in isolation to broader communities or regional issues.

In terms of expanding the scope and scale of impact and governance considerations, the idea of resilience and systems thinking has been adopted across various disciplines (Cochrane 2010) and is evident in EIA and sustainable tourism as discussed. Calls for a systems approach recognise the multiple interactions between humans and their environment that function as complex adaptive systems at different, interacting scales. This idea parallels Gibson (2013) and the notion of multiple reinforcing gains within a complex system of

interactions. It also relates closely to resilience thinking in tourism. System resilience challenges the notion of balance and equilibrium and the paradoxes that inevitably arise in practice. It seems that although the 'old ways' still persist in EIA, the application of holistic ideas to practice is more prevalent when compared with the gap between tourism thinking and practice. The gap between theory and practice may be a function of the relatively more fragmented nature of tourism as a field of research, and the dominance of small business with few resources to adopt or apply strategic or systems thinking.

### **The way forward**

Both EIA and tourism contemporary scholarship generally recognise the need to place their particular fields of knowledge and practice into the broader context. As a field concerned with measuring human impacts, EIA is further advanced than tourism in applying ideas.

Tourism, as a human phenomenon that results in impacts, seemingly struggles more than EIA with its fragmented and siloed character. The adoption of systems thinking and the move from the paradigm of trade-offs and mitigation requires consideration of the broader socio-ecological context, opening up opportunities for interdisciplinary approaches to research. In this way, an interdisciplinary approach can draw on the strengths and alternative perspective offered by different disciplines as a means of resolving the apparent paradoxes in sustainable tourism. That is, an interdisciplinary approach enables a holistic synthesis that is more likely to progress tourism and EIA toward the achievement of sustainable development goals (Liu 2003).

As with tourism, EIA scholars have similarly diverse disciplinary backgrounds. However, there is some tension within the EIA field with regard to practitioners advocating new approaches to impact assessment on the basis of a specially identified issue or need.



However, rather than working with existing disciplines to broaden practice, there has been a tendency towards 'brand specialisation'. Sheate (2009) made this observation with respect to 16 discrete environmental assessment and management tools that he addressed; more recently Morrison-Saunders et al (2014) identified over 40 specific types of impact assessment but most importantly called upon the impact assessment community to unite in recognition of shared interests. We acknowledge that with silos already established within given fields like impact assessment, it will be challenging to achieve the interdisciplinary cooperation and collaboration that we advocate.

Similarly in tourism, Filep et al (2013) note that the multidisciplinary character of the tourism field combined with the multiple discipline background of individual tourism scholars creates excellent potential for interdisciplinary research. They also note that a multidisciplinary approach to tourism research in the past several decades has paradoxically resulted in a lack of cohesion and coordinated progress in the field. This is what Tribe (1997) and Echtner and Jamal (1997) refer to as the indiscipline of tourism. This is exacerbated as with EIA by researchers adopting a particular bias in their research approach, an issue that Tribe (2010) identified broadly as the business-oriented approach versus the social science-oriented approach. Filep et al. (2013) highlight the strengths of tourism's multi-disciplinarity as an opportunity for adopting the holistic approach called for by Twinning–Ward (2005) and Lu and Nepal (2009), among others. A multidisciplinary background means scholars are more open to methods and theories from diverse fields, rather than having a narrow, discipline-specific bias toward research and thinking. Regarding systems thinking and interdisciplinary approaches to sustainable tourism, the fragmented nature of tourism thus indicates strength as much as weakness. However, recognition of the complex and dynamic character of socio-ecological systems that EIA seeks to assess and that tourism represents, and the

multidisciplinary nature of researchers in both fields, affords a firm foundation for the interdisciplinary research needed to overcome the paradox and promote sustainable development.

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