

Innovation for Sustainable Tourism: International Case Studies



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Preface

Innovation is the key to responding to the future challenges that confront all sectors of society and the economy, and especially in tourism. Within tourism, there are numerous corporations and destinations around the world that are responding to the ecological, social and economic challenges and making the transformation toward sustainability through innovation. This book assembles ten case studies of large and small enterprises and destinations in developed and developing nations that are pursuing innovative practices that will enhance the sustainability of their operations.

The chapters in this volume are based on primary and secondary research by the contributing authors and each chapter has been peer reviewed prior to publication. Cross-case analysis (Patton 1990) was also used to provide a framework for comparing and contrasting the different types and contexts of innovation and provide for an integrated overview of the drivers, barriers, processes and networks for innovation.

The cases have been prepared for use in research and teaching of innovation, and the analysis and case notes are both designed to facilitate discussion and further investigation of innovation, not only in tourism, but in other economic sectors as well.

Being an online publication, it is expected that updates in successive editions of this first book will add further to the description and analysis of innovation for sustainable tourism and hence provide a resource for those seeking to enhance the teaching, research and practice of innovation.

Jack Carlsen, Janne Liburd, Deborah Edwards and Paddy Forde, Editors.

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Nico Schulenkorf has been engaged since 2002 with the event management activities of the Asian German Sports Exchange Programme (A.G.S.E.P.). Nico studied “International Business and Management” in Germany and Italy, before moving to Australia in 2004. He graduated with a “Master of Management in Sport Management” from the University of Technology, Sydney (UTS) in 2005, and has since been conducting his PhD thesis on the social utility of sport events in Sri Lanka. At UTS, Nico teaches in the areas of sport, event and tourism management. For his long term peace projects in Sri Lanka, Nico was awarded the “Elizabeth Hastings Memorial Award for Community Contribution” in 2005.

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Chapter 1 Overview of Innovation for Sustainable Tourism

Jack Carlsen, Janne Liburd, Deborah Edwards and Paddy Forde

Introduction

The case studies and analysis in this publication describe the different forms of innovation that have been adopted in tourism as part of the transformation toward sustainability (Liburd and Carlsen 2006). The overall objective is to provide a deeper understanding of the systems of innovation in sustainable tourism by describing, discussing and analysing the drivers, barriers, processes and networks in ten cases. It is apparent that no agreed definition or categorisation system for innovation in sustainable tourism exists, nor is there consensus on the underlying factors that drive innovation. Hjalager (1997) has proposed a typology based on patterns of innovation in tourism products, processes, management, logistics and institutions and has more recently identified driving forces for innovation in Nordic tourism (Hjalager *et al* 2008). Innovation is a catalytic development process that activates a number of processes and is disseminated among individuals who take up new practices or adjust them according to the new situation. According to Trott (1998:11) innovation is *social* as "not a single action but a total process of interrelated sub processes. It is not just the conception of a new idea, nor the invention of a new device, nor the development of a new market". Innovation is indeed a "broad concept that has been defined using many approaches" (Breen *et al* 2006:6). What some classify as innovation, others may dismiss as imitation or adaptation of existing knowledge or ideas. True innovation in tourism businesses is nebulous and often inspired by external forces such as changing customer needs, demographics, technology, government policy, environmental conditions or social imperatives. It can take the form of product, process, management, logistics or institutional innovations (Hjalager 1996) and may be a disruptive or an incremental process (Schaper and Volery 2007).

Innovation in tourism can be a product of incrementalism, serendipity or a one-time inspiration (Getz *et al* 2004). Sometimes, what is described as innovation is merely acquisition of a new business or new investment in existing businesses. As Russell (1996:116) found, based on tourism-industry research in Ireland 'the pursuit of innovation was not an integral part of most enterprises surveyed and where innovations were claimed these happened to be essential business investment'. Nor is innovation in tourism always about pursuit of profit or increasing professionalism. Many innovations are about artistic and design innovation that will improve the quality of service and visitor experience and as such could be described as value innovations (Nankervis *et al* 2005).

Case Study Method

Cases typically start with an introduction that sets the scene of the particular dilemma or opportunity situation that was faced by an individual, group or organisation. This is normally followed by a description of the business environment and relevant circumstances that enveloped the case. A discussion of associated management decisions and processes that were relevant to the dilemma or opportunity would be highlighted next. Finally, a summary/conclusion would invite the reader to suggest how they would tackle the dilemma/opportunity if they were in a position to influence the necessary decisions. To assist teaching staff, chapter 13 presents case notes that provide a brief description of what was the case writer's perception of the 'real' dilemma/opportunity and notes on how the actual individual, group or organisation addressed the dilemma/opportunity. All of the subsequent case studies address the following key questions:

1. Why do organisations innovate?
2. What are the key features and drivers of innovation within organisations?
3. What are the internal and external barriers to innovation that organisations face?
4. How do organisations innovate? What processes are associated with innovation?
5. Which networks shape innovation?

As the topic of innovation in tourism attracts increased attention, there is a need for descriptions of actual practice to be available to scholars, practitioners and students. The generation of descriptive case studies began at the BEST EN Think Tank at Northern Arizona University in 2007 and with the ongoing support of BEST EN and sponsorship of the Curtin Business School ten international cases studies were produced.

Contributors were sourced from BEST Education Network members and associates, who were encouraged to offer descriptions of innovation that would be of interest to an international audience. The resulting case studies could be considered as a convenience sample, that is, a sample design based on information gathered from members of a population who are conveniently accessible to the researcher (Jennings 2001). Based on the results of a review process ten cases were selected (four from USA, two from Europe, and one each from Australia, Ghana, Sri Lanka and China).

Contributors were asked to consider: why innovation was undertaken; what barriers were faced; how innovation was realised; and whether networks were important. Given the disparate range of contributions it will not be possible to generalise these experiences, however indicative themes on the topic of innovation have emerged from the literature and cases. Four themes were identified with reference to the drivers, barriers, processes and networks associated with each case and were analysed using a cross-case analysis approach. Cross-case analysis is a means of grouping together common responses to interviews as well as analysing different perspectives on central issues (Patton 1990, Carlsen and Getz 2001, Getz, Carlsen and Morrison 2004). Cross-case analysis begins with writing a descriptive case for each unit studied then grouping responses together according to questions, themes or central issues. In this way the issues that emerge in the case studies are integrated within the descriptive analytical framework that provides the basis for comparison and contrast. This approach bears some similarity to the framework used by Hjalager *et al* (2008), as

they also considered actors, relationships and drivers in their comprehensive analysis of innovation systems in Nordic tourism. In their search to propose improvement to tourism policy, these authors applied a systemic view of innovation and used an analytic framework that focused on structure, actors, relations, driving forces and outcomes.

The framework used for this study and analysis is presented in Table 1.1. This framework differs from Hjalager *et al* (2008) in that it provides an outline of the internal practices of innovation in each case, and a basis for cross-case comparison, whereas Hjalager *et al* focus on the internal processes and external policies that lead to innovative outcomes. Both frameworks provide insights into the drivers of innovation, but this set of cases examines the role of management and customers as drivers, whilst Hjalager *et al* consider the role of the public sector and tourism policy and extend their framework to include wider societal and synergetic forces and other policies and institutions that drive tourism innovation. Both recognise the importance of values as drivers of innovation and have identified altruistic-ego, trust, family, and in one case, conservation values, as underpinnings of innovation in tourism. The role of networks in innovation is deemed critical, and indeed Hjalager *et al* (2008:33) consider innovation to be about "new combinations, best fostered by dense networks of a variety of linkages". In their model however, networks of actors with new ways of mobilizing are seen as outcomes of the process, whereas they can also be considered as important inputs to the innovation process. For the purposes of this framework, networks that serve to both formulate as well as disseminate innovation in organisations and destinations have been identified and analysed. This set of case studies do not provide insights into the structures, actors and relations in the respective networks but acknowledge that innovation networks have within them relational forces between actors that have "quite different composition" (Hjalager *et al* 2008:29), which has direct implications for how innovation should be studied over time.

Table 1.1: Framework for Cross-Case Analysis

Drivers of Innovation	Barriers to Innovation - Internal	Barriers to Innovation - External	Innovation Processes	Innovation Networks
Competent and Committed Management	Knowledge	Legislative/ Political	Steady improvement	Social/Cultural support network
External Relationship Management	Financial	Environmental	Based on cultural routines and norms	Knowledge/ learning network
Management of Information	Human Resources	Social	Rapid implementation	Customer/ supplier network
Recognition of Employees	Business	Technological	Produce immediate gains	Diffusion network
Acknowledgement of Customer Relations			Produce customer loyalty	
Implementation of a New Systematic Product Development Process			Adaptation of existing technology	
Awareness of Barriers				
Values held by Management				
Management Commitment to Innovation				

The Case Studies

In chapter two, Bohdanowicz conducts a study of innovation in the Scandic hotel chain, one of the largest hotel chains in Scandinavia. The managerial decision to engage in sustainability was undertaken in the early 1990s in an attempt to distinguish the company from main competitors. Nowadays, Scandic enjoys a unique position of being a pioneer of many successful actions. These range from responsible construction, management and operation of hotels, educating team members in various sustainability related issues, taking part in local community events, to banning jumbo prawns from all its kitchens because of unsustainable farming practices. Swedish Scandic was the first in Scandinavia to serve fair trade coffee in all its hotels, to have a Disability Coordinator, as well as to eco-certify all hotels in a country with the Nordic Swan label. A decade of comprehensive work has allowed Scandic team members and management to learn a number of valuable lessons which – when shared with others in the sector – could greatly contribute to the greening of this industry. All these actions had no negative effect on the bottom line, on the contrary, they considerably contributed to the profitability of the company which is now actively pursuing opportunities to expand their network activities.

In chapter three, Hughes studies Ecocean, a not-for-profit association registered in Australia. Its primary aim is to generate public awareness for marine conservation issues. Ecocean's primary current interests include increased protection for the threatened Whale Shark. Whale Sharks are a rare species that inhabit warm temperate and tropical ocean regions and are exposed to significant fishing pressure. They appear to be highly migratory, but congregate where seasonal 'food pulses' occur such as the annual aggregation at Ningaloo Marine Park. Lucrative ecotourism business operations revolving around these regular annual appearances are well established at Ningaloo and several other locations worldwide. Despite their rarity and tourism popularity, very little is known about the Whale Shark, which has little protection internationally. To address this, Ecocean developed an innovative system

enabling Whale Shark identification using photos taken by tourists swimming with the sharks. Tourists upload their own photos to the Ecocean website. The system uses NASA star mapping technology to map Whale Shark skin spot patterns. Mapping unique natural skin patterning enables individuals to be identified along with their sex, age, size et cetera. This information is used to gain greater understanding of Whale Shark ecology and behaviour contributing to more effective conservation and sustainable whale shark tourism operations. Use of tourist photos and an internet interface that is customised to track sightings of specific Whale Shark individuals helps build public support for their conservation. The Ecocean case study is a story of innovation through lateral thinking and making seemingly unrelated connections.

Chapters four to six by Carlsen and Edwards emerged from the BEST EN Think Tank VII in 2007 which was also the genesis of this volume of case studies. Chapter four is a case study of Xanterra L.L.C. which operates as the USA's largest National Park concessionaire, with about 8000 employees operating hotels, lodges, restaurants, retail, campgrounds and transportation systems in more than 20 locations across the USA. This case study describes the innovative Environmental Management System developed in recent years by Xanterra L.L.C. Innovation by Xanterra is reviewed across the full range of their operations, including accommodation, transportation, food and beverage, tour operations, energy, water and waste management. This case study provides insights into a successful and innovative company that is leading the way to sustainable practices and serves as an example to other organisations seeking to improve their environmental management and performance.

Chapter five is a study of the Diablo Trust and Rural Planning Area, a Northern Arizona, collaborative grassroots land management group with an innovative approach to land protection in the Diablo Canyon Rural Planning Area. Through networking with a range of stakeholders, including local, state and federal agencies, community and conservation groups, the two long-time farming families that live next to the Diablo

Canyon have taken considerable steps to improve land management practices, conserve habitat for wildlife, maintain their farming traditions and ensure that the land remains representative of all of the values associated with America's West for future generations to experience.

Chapter six is a case study of Tasting Arizona, a consortium of tourism, non-governmental, indigenous, farming, educational, community, festival and food organizations that aim to provide 'local flavour' in Arizona. Their belief is that consumers and visitors want local flavour and they have identified a range of food products that represent the taste and feel of Arizona. Wild foods such as flour made from the Mesquite bean and pure varieties of fruit and vegetables are just two examples of traditional local foods that have been revived. The benefits of this revival extend well beyond providing visitors with local flavours, as these foods are linked with preserving traditional farming practices, conserving areas for wildlife, educating youth, keeping food pure and free from genetic modification, maintaining biodiversity and protecting cultural traditions.

Chapter seven by Hergesell, Liburd and Hansen studies the Experience Development of Danish Attractions (EDDA), a project which aims to sustain the socio-economic well-being of built attractions in Denmark by capitalizing on the trend toward a user-oriented, experience-driven economy. Encouraging product and management innovations through joint competence development, 38 built attractions of varying size, thematic focus, and ownership structure took part in the four-year initiative. Facing several economic and knowledge related challenges a practical approach to innovation was adopted. All personnel were involved in courses, study trips and experiential discussion groups in order to facilitate implementation of newly acquired knowledge and tools for innovation.

Chapter eight by Commeh and Schulenkorf comes from Ghana, where small and medium ecotourism businesses have been established either in isolation, around large cooperate hotels, close to the beach, game reserves or recreational parks. These businesses are either community-based or individually owned. This case study looks at the underlying narratives that influence the innovative approaches applied in the planning, organisation and managing of an environmentally linked business in Ghana. The research investigates the underlying reasons, motivations and barriers related to the establishment of these tourism businesses and their influence on local entrepreneurs' innovative ideas. This case study features a female entrepreneur who has tried to realise her innovative ecotourism ideas over the past five years against the background of marital problems, social status disadvantages and interferences from local government authorities.

In Chapter nine Schulenkorf considers sustainable tourism in the war-affected Sri Lanka, where social sport events have been used to combine people's travel experiences with the emotional factor of contributing to the advancement of intercultural understanding and peace in the ethnically divided country. This innovative move by the *Asian German Sports Exchange Programme (A.G.S.E.P.)*, an NGO, which has been conducting sport events and international exchanges between Sri Lankan and European sport teams since 1989, has resulted in positive economic, social and cultural development for the participating communities, local tourism operators, and the event organiser. The international and interethnic networks created over the years are key factors, which have assisted stakeholders to overcome internal and external barriers to innovation.

Chapter ten by Quick draws on the application of innovation and resilience to tourism in a relatively conservative community setting in the Blackstone Valley in Rhode Island, USA. The Blackstone Valley Tourism Commission created the Sustainable Tourism Laboratory (STL) to innovate new ways to empower tourism to play a

significant role in creating resilient communities – communities that are able to meet, flow with and prosper from today’s immediate and emergent social, economic and ecological challenges. While at the edge of innovation itself and still in its infancy, the STL is starting to apply complex adaptive system methods through resilience thinking and a resilient community process as a basis for its theory and practice.

Chapter eleven by Smith and Du is a case study of Wenhai Ecolodge, a community-operated retreat run by 56 local households with support from the U.S.-based Nature Conservancy. Every household purchased shares and contributed start-up financing through a loan to the Ecolodge. This Ecolodge uses sustainable energy systems to decrease the impact on the surrounding resources. Ten percent of the lodge’s profits go to a conservation and community development fund that supports projects around Wenhai. In 2003, Wenhai Ecolodge was named one of the World’s Ten Best Ecolodges by *Outside Magazine*. The purpose of this case study is to provide recommendations proposed through telephone interviews with the local residents of Wenhai Ecolodge in support of environmental restoration. Moreover, it is an attempt to provide a framework of analysis illuminating some of the issues inherent in sustainable tourism destination management in today’s complex world.

Summary

The ten case studies in the following chapters are drawn from diverse settings and situations and the context within which innovation is occurring is different in almost every case. Despite their diversity in setting and context it is possible to glean the lessons and exemplars from each case in terms of the drivers of, barriers to, processes and networks for innovation which were encountered in each case through the cross-case analysis in the final chapter. A review of the relevant literature provides a basis for analysing the four key themes and sub-themes of innovation as well as identifying new and emergent themes, in particular the values and context that underpins innovation. In this way, validation of existing classifications and themes is

possible and generalisation of the lessons learnt from both the study and the praxis of innovation is offered to scholars and practitioners.

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Chapter 2 Scandic Hotels, Scandinavia

Paulina Bohdanowicz

Introduction

With more than 140 hotels, Scandic is one of the largest hotel operators in Scandinavia. It is well-established and widely recognized in most strategic tourist and business destinations in the Nordic region. Following a six year "marriage" with Hilton, Scandic returned to Nordic ownership with its acquisition by the equity fund EQT in April 2007. Now, as an independent company with a strong owner behind it, Scandic is actively pursuing opportunities to expand its network in Europe. With ten years of experience in environmental and social engagement, Scandic is a business frequently mentioned when the subject of sustainability is raised in the travel and tourism industry (Dodson, 2007; J.D. Power & Associates, 2007; Nilsson, 2007; Hotels, 2008).

Scandic's history dates back to 1963 and the first Esso Motor Hotel that opened in Närke, Sweden. The uniqueness of the concept and high standard offered led to an immediate success, and in the early 1990s Scandic had over 100 hotels in Scandinavia and in Europe. From initial locations along motorways, the hotel network expanded to city locations. When the 1991 Kuwait crisis occurred, impacts were felt in the distant Nordic countries causing Scandic's management to urgently come up with a new development and business policy in order to enhance the operation and increase bookings.

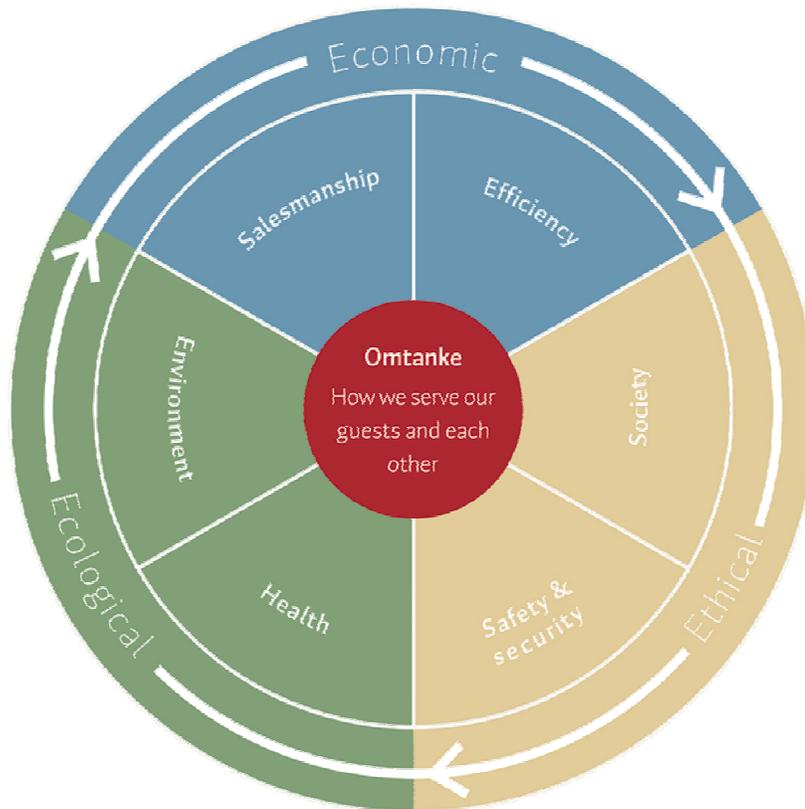
Drivers of/Reasons for Innovation

The company needed a strategy that would not only provide short-term operational gains, but also help create "a strong brand that the employees could be proud of and guests could identify with" (Bergkvist, Vice President Sustainable Businesses at Scandic, personal communication, November 22, 2007). Following the publication of

the Brundtland Report in 1987, environmental awareness was slowly reaching wider social and political agendas in Europe and Scandinavia. Consequently, in 1993 Scandic management decided to accentuate environmental engagement, according to the Natural Step principles, as the core value of the "New Scandic". It announced its policy "to lead the way and work continuously to promote both a reduction in our environmental impacts and a better environment" (Nattrass & Altomare, 1999; Scandic, 2003). Scandic aims at achieving this "whilst retaining or increasing comfort and customer benefit" (Nattrass & Altomare, 1999; Scandic, 2003; Scandic, 2004a).

Soon the company saw the tangible effects of responsible operation in the form of reduced energy and water consumption and costs (Scandic, 2000), as well as external recognition through environmental awards (1995 "Environmental Stand Award" and 1996 "Greening the Business" Tourism Award) and a range of future opportunities. With growing understanding of the need for sustainable development, the initial goal of environmental profiling was expanded to holistically cover all aspects of sustainability with the introduction of *The Compass* and the concept of *Omtanke* in 1998. At Scandic, *Omtanke* means "caring for our guests and each other while caring for the environment and the society around us" (Scandic, 2007), and *The Compass* shows the aspects of sustainability covered in the Scandic business model (Figure 2.1). Scandic believes "in everybody's right to be treated equally, feel safe and be well taken care of [so called Nordic common sense]" and aims to "offer easy and accessible travel for all (Scandic, 2007).

Figure 2.1: Compass of Scandic’s core business values (Scandic, 2007)



Barriers to Innovation

Pioneers frequently encounter legislative, political, technological, business, environmental, or social obstacles while implementing new ideas. Scandic also faced several difficulties during the implementation of its sustainability program.

At the beginning, the company had to address the varying levels of knowledge and environmental awareness among its team members. To achieve this, environmental training courses were arranged, initially as classroom workshops, but with time developed into an e-learning program, available on the Scandic intranet platform. Today, the environmental training pack is included in the “Get on Board” section for all new employees. In addition, courses on sustainability are now organized within the framework of the internal university, *Scandic Business School*, while environmental coordinators meet annually.

Equipped with knowledge on more responsible operation schemes, such as energy and water efficiency and conservation practices, Scandic was ready to implement these in practice. Certain difficulties occurred when external companies needed to be included in the process, especially in cases of improvements in building installations, i.e. change in heating system, or building thermo-modernisation. Scandic typically rents the building from an owner, which frequently makes it difficult to find a compromise between the goals of both stakeholders in respect to resource utilization and necessary investments in modernisation of the building systems. Scandic thus decided to first focus on improvements that could be achieved by altering team members' behaviour, such as switching off unused equipment, water conservation during housekeeping, and replacing light bulbs. Once the benefits of such actions were documented, the next step involved communication with building owners on possible cooperation in implementing technical solutions, including change of boilers, installation of heat exchangers, etc. The dialogue continues and many successful compromises have already been achieved.

Many of the initiatives decided by Scandic required the cooperation of suppliers, who needed to provide products with lowered environmental impact. Few such products were available on the market, but in many instances Scandic initiated the demand for these (Bohdanowicz, Simanic & Martinac, 2005). As part of this endeavour the company developed *Scandic Supplier Declaration*, and asked all suppliers to document their corporate environmental policies and sign the declaration (Wilhelm Hardt, Environmental Coordinator at Scandic Sweden, personal communication, March 17, 2004).

At times, local or national legislation or existing contracts with utilities and service providers inhibited the implementation of certain initiatives, such as donation of food to charity, or recycling particular types of waste. While the regulations must be followed, individual Scandic hotels have managed to renegotiate contracts or

implement alternative solutions.

Last, but certainly not least, of the existing barriers is funding. It has been widely documented that acting responsibly is profitable (Enz & Siguaw, 1999; Martinac et al., 2001; SSCC, 2003; most published best practice case studies). However, in the case of technical improvements it is a process which typically requires an upfront investment and may have a long payback time (but the benefits would be long term too). This investment needs to be justified against actions in other departments, such as marketing, which may bring profits in a much shorter time. Thus, a common practice is to implement major improvements in building systems during refurbishment.

Processes for Innovation

After the decision to engage in environmental issues was made, many actions followed. The first steps included the establishment of the corporate environmental policy and program based on the Natural Step principles, education and training of the team members, as well as action plans for individual hotels (see Bohdanowicz *et al.*, 2005 for more information).

The target of increasing the use efficiency and conserving natural resources was tackled within the framework of the so-called "*Resource Hunt*" program, with a special online database, the *Scandic Utility System*, developed for the monitoring of resource consumption. Currently, the upgraded version of the database, the *Scandic Sustainability Indicator Reporting (ScandicSIR)* is used. Next, the *Best in the Class system (BINC, now Balance Score Card - BSC)* based on *SUS* was developed to measure key performance indicators. Nowadays, the "*Resource Hunt*" program includes an employee reward system based on results from *ScandicSIR* and *BSC*, where monetary rewards are transferred to a special fund at the hotel and allocated for social activities of the team members.

In the next stage, committed to purchasing products with a low (lifecycle) environmental impact, Scandic decided to involve their suppliers in the environmental program, and developed the *Scandic Supplier Declaration*. As part of the company's attempt to reduce fossil carbon emissions to zero *by 2025* all Norwegian and Swedish Scandic facilities have since 2004 been supplied with "green/non-fossil" electricity (SIR, 2007), and the management is looking into negotiating similar contracts in other locations.

Continuous retrofitting of facilities was recognized as an excellent opportunity of further reducing environmental impacts, subsequently the *Scandic Environmental Construction Standard* was developed to facilitate the process of responsible decision making. The document lists materials, which may not be used in the facilities, and specifies acceptable alternatives (Scandic, 2004b). To further minimize the amount of waste generated on site the company incorporated comprehensive waste sorting and recycling programs, and eliminated the use of single packaged items, where possible.

At the onset of the millennium corporate management decided to eco-certify facilities with the Nordic Swan eco-label. All Swedish Scandic hotels were Nordic Swan labelled by the end of 2004, while by the end of 2007, 19 out of 20 Danish and 14 out of 15 Norwegian hotels were carrying the Swan logo (Mattsson, Sustainability Coordinator at Scandic Sweden, personal communication, April 3, 2008). A network of environmental coordinators was created to facilitate participation of individual hotels in various activities, and feedback on facility performance is continuously provided to the team members.

As part of its sustainability commitment Scandic launched a "*Scandic in Society*" program aiming to contribute to the well-being of societies in which the company operates. Following the dialogue with the team members, community programs were created in each hotel, with particular focus on those activities that are based on

personal involvement. Furthermore, having recognized the growing number of people with various disabilities who want to lead a normal life and be accommodated in hotels, Scandic was among the first companies to appoint a Disability Coordinator (2003), and to create a checklist, *Scandic Accessibility Standard*, to make hotels accessible to all customers. By the end of 2006, all Swedish Scandic hotels complied with the *Accessibility Standard*, while facilities in other countries are in the process of implementation (Berglund, Disability Coordinator at Scandic Sweden, personal communication, November 1, 2007).

The environmental commitment and performance of the company has for many years been communicated to guests and the general public through a number of channels, such as the "Environmental Corner", hotel TV, notices displayed in various parts of hotel rooms, the company web page, as well as annual reports. But 2007 saw a campaign solely dedicated to documenting a decade of the company's sustainability engagement, "*Scandic Better World*". There were posters and notices displayed in all hotels, and the information on Scandic's environmental performance was included on the back side of the hotel bill (Figure 2.2). In addition, an "*Omtanke*" book presenting 24 hours in the life of a hotel from a sustainability perspective was published, and a special web page was designed, not only documenting the achievements of the company but also providing tips and ideas for people to apply in their own homes (www.scandichotels.com/betterworld).

Currently, Scandic is actively pursuing opportunities to expand the network. To ensure that responsible and sustainable operation remains on top of the agenda a position of Vice President Sustainable Businesses was created as part of the Scandic Executive Team. Scandic is among very few companies that have a Vice President position dedicated to sustainability.

Figure 2.2: The back side of the hotel room bill (Scandic, April 2007)

Tio sätt att göra ditt hem lite mer likt Scandic:

- 1) Lys upp med lågenergilampor.
- 2) Köp ekologiska, KRAV-märkta varor. Välj storpack.
- 3) Handla smartare. Återanvänd. Återvinn.
- 4) Byt till förnybar el hemma.
- 5) Använd energieffektiva apparater, stäng av helt när de inte används.
- 6) Dra ner på rengöringsmedel och använd bara miljömärkta. Spara på vattnet.
- 7) Engagera dig i samhället runt omkring dig.
- 8) Kör biogas-, etanol- eller hybridbil. Cykla och åk kommunalt.
- 9) Minimera dina koldioxidutsläpp, till exempel genom att spara energi.
- 10) Köp textilier, golv och möbler i naturmaterial, helst miljömärkta.

10 things to make your home a little more like a Scandic:

- 1) Change to compact fluorescent light bulbs.
- 2) Buy organic, eco-labelled products. Buy in bulk.
- 3) Reduce. Reuse. Recycle.
- 4) Use renewable energy for your home.
- 5) Use high-efficiency appliances, shut off completely when not in use.
- 6) Reduce and replace cleaners with eco-labelled ones. Reduce water use.
- 7) Become more involved in your community.
- 8) Replace fossil fuel vehicles with bicycles, mass transit, hybrid or flexi-fuel.
- 9) Minimise your carbon emissions.
- 10) Buy all-natural, preferably eco-labelled textiles, wood flooring and furniture.

Tack vare dig blir världen mer hållbar.

Thanks to you, the world is becoming more sustainable.

Kategori	1996	2006
Energi (KWH)	54,14	44,96
Koldioxid (KG CO2)	5,14	3,57
Vatten (L)	253,22	217,53
Osorterat avfall (KG)	1,5	0,5
Engångsförpackningar (KG)	1,5	0

Networks for Innovation

Scandic specializes in offering hospitality services to customers, and not in sustainability or environmental protection. It is enough that management acknowledges its limited knowledge in certain areas and seeks external expertise. To access this knowledge, Scandic, in 1994, entered into a partnership with Dr Karl-Henrik Robèrt, and developed Scandic's environmental program "*The Environmental Dialogue*", based on The Natural Step principles (Nattrass & Altomare, 1999; Scandic, 2003; Bohdanowicz *et al*, 2005). Dr Robèrt continues to assist Scandic in its sustainability endeavours, supporting it with knowledge, and innovative concepts and solutions.

Throughout the years, there were a few consulting companies and individuals assisting to shape the sustainability programs at Scandic. Some of these entities, such as Acona Ltd., advise on the best directions for innovation, and ensure the reliability of results and statements presented by Scandic. Eco-certification of facilities with ISO Type I label (*Nordic Swan*), and purchase of *KRAV* labelled food (the entire breakfast buffet in Sweden is *KRAV* labelled) and fair trade coffee can also be viewed as networks, helping the company implement innovative solutions and further ensuring the validity of end-results. Other partnerships, such as membership in the *International Business Leaders Forum (IBLF) International Tourism Partnership*, are based on mutual exchange of know-how. Others focus on implementing innovative solutions in areas outside of Scandic's business (funder of the *Stockholm Water Prize*, and support for *Pink Ribbon International* campaigns).

Within the "*Scandic in Society*" program individual hotels frequently enter into partnerships with local authorities and Non-Governmental Organizations (NGOs) to find innovative solutions for local community problems. Cooperation with schools and universities is also common, where students suggest more sustainable alternatives to current modes of hotel operation.

Many awards presented to Scandic may also be considered a network for innovation as recognition in a particular area of activity promotes the initiative and may help other companies implement better practices. The awards include the 1999 *“European Design and Development Award”* for the eco-room concept, the 2002 *“IH&RA Environmental Award”*, the 2006 *St. Julian Prize for accessibility*, and the most recent, the 2007 *SLEEP “Sustainability Award”* and the 2007 *MKG Hospitality “Best CSR Programme Award”*.

Yet another network for innovation took form when Scandic was a part of the Hilton Group Plc (later Hilton Hotels Corporation). Scandic served as a role model in the area of environmental initiatives, and a number of ideas originating from Scandic were incorporated into Hilton International’s environmental program, following modifications of various degrees. Among the solutions adopted by Hilton was the *“eco-learning”* program, an interactive environmental training based on the Four Steps, and the *Hilton Environmental Reporting* database developed from the *Scandic Utility System*. It may be concluded that Scandic had a positive influence on the environmental management of the Hilton International Europe and triggered some permanent pro-environmental behavioural changes within the company.

Scandic continues to enter into partnerships and create networks for innovation. However, after a decade of comprehensive sustainability work, Scandic team members and management are in the position to share the expertise they gained with others in the hotel sector, which could greatly contribute to the greening of this industry.

Conclusion

The activities undertaken by Scandic over the years represent a comprehensive approach to the issue of sustainability. As a pioneer, Scandic faced a number of obstacles but the common belief held by management and team members that the direction was correct, allowed the process to continue. Corporate determination and

collective efforts paid off, not only in monetary terms, but also in a long-term perspective, in the creation of a widely recognized brand. The Scandic brand is associated with social and environmental values by the team members and the customers alike. The economic savings are also important, and since the implementation of the "Resource Hunt" program the "avoided costs" from reductions in resource consumption add up to millions of dollars. In environmental terms, the average per guest-night energy and water consumption at Scandic Nordic was reduced by 21 percent and 16 percent respectively, between 1996 and 2007, carbon dioxide emissions dropped by 34 percent and unsorted waste by 66 percent.

Although currently many companies tend to profile themselves as "green", in the early 1990s the decision taken by Scandic was both innovative and brave. The implementation of the concept of "Omtanke - caring for each other" highlighted as the focal point of the company development policy and strongly supported by the management and the team members proved to be timely and successful from a marketing as well as an economic point of view.

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Chapter 3 Ecocean, Western Australia

Michael Hughes

Introduction

Ecocean is a not-for-profit organisation established and managed by Brad Norman and registered in Australia. Brad Norman has postgraduate qualifications in Marine Biology and began studying whale sharks at Ningaloo Marine Park in Western Australia in 1994. He set up Ecocean in 1999. It is focused on facilitating marine ecosystem research and generating public awareness for marine conservation issues. After encountering the whale shark in the Ningaloo Reef region of Western Australia, Brad Norman developed a passion for conserving the apparently rare and threatened species.

Despite its threatened status, very little is known about the whale shark even though it is the focus for significant 'swim with the whale shark' tourism operations. This in part was due to difficulties in gathering data on whale shark biology and behaviour without lethal means. Ecocean recognized a need to establish a non-invasive method for generating sound scientific data for identification and tracking of whale sharks. This would facilitate greater understanding and awareness of the species and contribute to better conservation and management. Ecocean actively lobbies for the development of international conservation management measures and identification of areas of ecological significance for whale sharks (Ecocean, no date). This case study looks at how Ecocean innovated to provide a practical means for non-invasive research into whale shark habits, biology and ecology. The knowledge gained through such innovation makes a vital contribution toward the conservation of whale sharks and the sustainability of the tourism businesses that rely on them.

Ecocean's primary current interests include increased protection for the threatened whale shark. The approach revolves around gathering data on whale shark behaviour and biology. Whale sharks are a rare species that inhabit warm temperate and tropical ocean regions. They can grow to up to 18 metres in length but are more commonly sighted at between eight and ten metres in length. Whale sharks filter feed on small marine organisms such as krill, jellyfish and marine animal larvae. They appear to be highly migratory, moving across regions and can inhabit deep ocean and shallow coastal areas. Whale sharks tend to congregate where seasonal 'food pulses' occur. For example, the predictable whale shark aggregation at Ningaloo Marine Park in Western Australia is closely linked with an increase in productivity in the region associated with mass coral spawning. Lucrative ecotourism operations, providing swim with whale shark experiences, revolving around these annual appearances are well established at Ningaloo Marine Park and several other locations worldwide (Arzoumanian et al, 2005).

Despite their rarity and popularity as a tourism attraction, the whale shark has very little protection internationally. Very few of the 100 countries where this species is known to visit have conservation management measures in place. There are no local or international programs to protect habitat and no immediate plans to identify and protect areas of significance such as breeding grounds. Such conservation practices are common. International treaties, such as the RAMSAR Convention on Wetlands and the U.N. World Heritage Area program provide a framework for international cooperation for conservation of particular unique or significant natural phenomena. In the absence of such a treaty, the whale shark is exposed to considerable pressure from hunting and other human activities that may disturb habitat. There is evidence that hunting of whale sharks is resulting in a decline in the population. The evidence is based on an apparent decrease in numbers of sighted juveniles. This has provided added impetus toward gathering data on whale sharks to enable appropriate measures to be taken for their conservation (Rolex Awards, 2006).

Research by Brad Norman demonstrated that whale sharks have individually unique spot patterns on their skin. Thus, taking images of whale sharks at known locations and times should, in theory, allow tracking of individual sharks geographically and over time by comparing spot patterns. Use of photographic images in this way would provide a practical and non-invasive method for identifying sharks and gathering data. The use of skin patterns to identify individual animals is a common practice. However, the method that Ecocean devised for such analysis is highly innovative.

Figure 3.1: Whale shark photography



Drivers of Innovation

In this case, innovation was driven by a need to comparatively analyze large quantities of photographic data efficiently and accurately, which led Ecocean to the NASA collaboration. Having identified the unique skin spot patterns of whale sharks as a possible means for identifying individuals, Ecocean commenced gathering images of

whale sharks for analysis. As a means for gathering visual recordings of whale shark sightings from around the world, an online library of images accessible to whale shark tourists was created. This was one of the first applications of the Shepherd Project.

The Shepherd Project aimed to support wildlife researcher data collection and centralization. Its main goal was the creation of a Web-based catalogue framework for the management of mark-recapture data accumulated by a global research community (Arzoumanian, 2005). When applied by Ecocean, the system enabled individuals around the globe to upload their photographs of whale sharks to the online library, resulting in the accumulation of a very large number of whale shark images. The objective was to gather images of whale sharks over time and across geographical areas. Identifying repeated sightings of the same animal was an essential step in mapping movements of individuals and understanding their characteristics over time.

The common method for matching photos of individual animals using skin patterns was a manual exercise. This involved comparing images using measurements and judgment. However, the rapidly growing number of uploaded images created difficulties in matching individual sharks and keeping track of repeat sightings manually (Rolex Awards, 2006).

... we used to ... try to match them up by eye but as you're getting thousands and thousands of photos into the library it's just, it's impossible.
(Brad Norman, catalyst transcript, ABC TV November 8, 2007)

A system was required for processing the thousands of images efficiently and reliably in order to analyse the visual data and generate meaningful and useful knowledge about whale shark's behaviour and biology. The ability to identify repeated sightings of individual sharks over time and in different geographical places provides knowledge regarding migration patterns, age, growth rates and differences between males and

females. Such information may be used to inform effective conservation management plans and the establishment of marine reserves to protect breeding grounds and food sources for the whale shark. Such action could contribute significantly to halting the decline in whale shark numbers.

Barriers to Innovation

Barriers faced by Brad Norman and Ecocean initially related to gaining recognition for the importance of whale sharks and their conservation and obtaining adequate funding for conservation and promotion activities. Building interest in whale shark research was necessary in order to access funds to develop the project. Initially, Brad Norman carried out his work using sporadic funding from research grants coupled with his own financial backing. Marine research is costly owing to the reliance on expensive technical equipment coupled with operational costs of running a research vessel in a remote region of Western Australia. National and international campaigns for the whale shark's conservation were launched with eventual success in terms of gaining support and recognition (Rolex Awards, 2006). Two cash awards for innovation (Rolex Award and Duke's Choice Award) have enabled Norman to devote more time to the project.

Once established as a recognised whale shark expert and conservationist, the development of an online whale shark image library presented new challenges in the processing of data. The enthusiastic response from whale shark tourists resulted in about 1500 images being uploaded to the library by 2007. The large quantity of images gathered rendered traditional manual methods of analysis as largely ineffective. The established manual method for matching sightings of animals with spot patterns was not a viable approach for the huge quantity of whale shark images submitted to the Ecocean library. A method was required to enable large scale analysis that provided reliable results. Initially, developing such a method was beyond the expertise and resources of Ecocean.

Processes for Innovation

The innovative approach to image analysis evolved from a combination of need and fortuitous circumstance. The seeds of innovation came from the establishment of the online image library and the enthusiastic response from tourists. The website was very successful in terms of collecting a large number of images. However, the quantity and varying quality of images presented difficulties in terms of efficient matching and identification of repeat sightings of individual sharks.

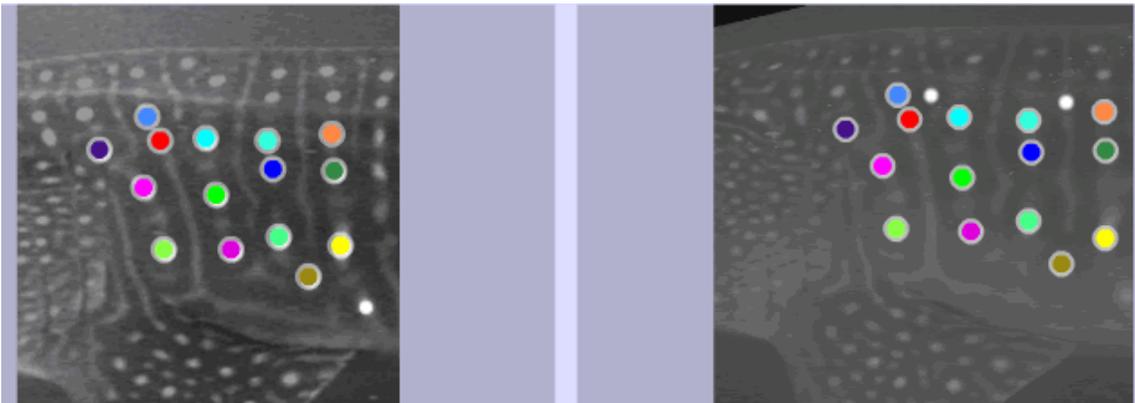
The next step towards the innovative analysis technique came through a chance meeting and a subsequent international professional network. In 2002, American computer engineer Jason Holmberg contacted Brad Norman and agreed to help organize and automate the Ecocean image database. Holmberg became interested in whale sharks after an encounter during a dive and eventually made contact with Brad Norman (as a recognized whale shark expert) seeking more information. Faced with the problem of comparing and matching a large number of photographic images, Holmberg explained the image matching problem to a NASA-affiliated astronomer, Zaven Arzoumanian. A colleague of Arzoumanian, Gijs Nelemans, identified a technique used by Hubble Space Telescope scientists for mapping star patterns, known as the Groth algorithm, as having potential to solve the problem. After considerable work refining the algorithm for use on a living creature, a reliable way to identify individuals in virtually any spotted animal population was developed (Rolex Awards, 2006).

...we highlight the different spots behind the gills, and it's actually the angles between all those spots, we use. We triangulate. As the shark grows, the spots will move also but the angle between each spot doesn't change and that's the system we use and that's what's so unique about our project. ... It scans against thousands of other photos and it comes up with the top

possibilities... (Brad Norman, Catalyst interview transcript, ABC TV November 8, 2007)

The adaptation of the algorithm attracted an award from the software manufacturer, sun systems, which cited it as "A very unique use of servlet-applet communication..." (Java.com. 2005). This innovation came from the ability to think laterally, accessing knowledge and skills from contacts from apparently unrelated fields of expertise and applying them to a practical problem.

Figure 3.2: Computer image analysis of whale shark skin spots



Networks for Innovation

Ecocean's efforts to establish a greater understanding of the global marine environment has received acknowledgement and support from local, national and international groups, generating a national and international support network. Winning several awards raised awareness of the project and created interest and opportunities for a further international involvement in photographing the sharks. Increased recognition also resulted in increased backing for the project through financial awards and grants. This effectively created an international network of data gathering tourists and support and interest from various government and non-government groups.

Anybody in the world that might happen to see a whale shark whether it be diving or on an Eco-Tour or even fishing they can take a photo and actually help with our understanding of whale sharks on an international scale.
(Catalyst interview transcript, ABC TV November 8, 2007)

The professional network established through the previously described meeting of Brad Norman and Jason Holmberg was the key to developing the image analysis innovation. It is reported that Holmberg was reminded of star patterns when viewing the whale shark skin spots and so he contacted a friend and astrophysicist working at NASA, Zaven Arzoumanian. Arzoumanian was reticent about the possibility of spot pattern matching using software. However, a colleague of his, Gijs Nelemans, assured him that star pattern matching algorithms existed and could be adapted for use on animals. Holmberg and Arzoumanian were able to obtain and modify an algorithm that had been developed in 1986 for star mapping. Skin pattern matching had normally been done manually (e.g. for cheetahs, giraffes and zebras) but required many hours of comparisons and measurements by wildlife experts of images of varying quality. The modification of the 1986 algorithm required considerable effort but eventually enabled rapid matching of whale shark skin pattern images. This greatly facilitated the ability to identify repeat sightings of individual animals from a large database of images (Bazilchuk, 2006). The system has great potential for adaptation to other animal image databases that rely on identification by skin spot patterns. The development of this innovation was a combination of a chance meeting, development of international interest in whale shark research, recruitment of tourists as neo research assistants, and the ability to make use of contacts with interested individuals working in NASA.

Conclusion

The Ecocean case study is a story of innovation through lateral thinking and making seemingly unrelated connections. Ecocean is an organisation highly motivated to raise awareness, research and work to preserve whale sharks, a rare marine animal. This has been operationalised through building personal, public, non-governmental organisation and government agency support. Lobbying to establish national and international conservation measures for whale sharks has engaged governments. Accessing tourists as whale shark researchers built public support and awareness. The approach also functioned as an efficient cost effective means of collecting information on a global scale. The development of the whale shark online image library was a core component of the success of this approach, enabling tourists encountering whale sharks to contribute their images for research. The image analysis approach was made viable by adapting and applying software originally designed for the Hubble Space Telescope.

The development of the innovative photographic image analysis tool was the result of both full commitment to a plan based on hard work and fortuitous circumstance. While the meeting of Brad Norman and Jason Holmberg may be a chance occurrence, the ability to recognise the opportunity for application of seemingly unconnected resources demonstrates the power of lateral thinking. Ultimately, the image analysis software that enabled the whale shark image library to viably perform its function resulted from the key players recognising opportunities and applying lateral thinking to make connections between apparently unrelated things to solve a problem.

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Chapter 4 Xanterra LLC, Denver, Colorado, USA

Jack Carlsen and Deborah Edwards

Introduction

Xanterra is the USA's largest national park concessionaire that operates a range of parks and resorts with approximately 8,000 employees in more than 20 locations (See Table 4.1). Xanterra is headquartered in Denver Colorado.

Table 4.1: Xanterra LLC Parks and Resorts

- Grand Canyon - North and South Rims
- Rocky Mountain National Park
- Yellowstone National Park
- Bryce Canyon National Park
- Zion National Park
- Crater Lake National Park
- Death Valley National Park
- Petrified Forest National Park
- Everglades National Park
- Mount Rushmore National Memorial
- Silverado Resort in Napa, CA
- Gideon Putnam Resort
- Furnace Creek Inn & Ranch
- Grand Canyon Railway
- Salt Fork State Park
- Maumee Bay State Park
- Shawnee State Park
- Burr Oak State Park
- Punderson Manor State Park
- Hueston Woods State Park

Their concession operations include hotels, lodges, restaurants, retail, campgrounds, transportation systems, buses, shuttles, snowcoaches, snowmobiles and boats. Behind the scenes, they operate vehicle maintenance facilities, building maintenance facilities, paint shops, carpentry shops, print shops, upholstery shops, kitchens, warehouses, fleet vehicles, employee dormitories and facilities, and administrative facilities. In Yellowstone National Park alone they have over 900 buildings.

Xanterra's Environmental Management System (EMS) Ecologix is the source of a range of innovations that are the focus of this case study. Ecologix is a logical integration of ecology and business. According to Gina McIlwraith, Environment, Health & Safety Director, Ecologix ensures:

- continual improvement of our environmental performance;
- compliance with all environmental regulations;
- incorporation of best management practices; and
- flexibility to respond to property environmental priorities.

Drivers of Innovation

The most succinct reason for pursuing innovation in all of Xanterra's operations through the Ecologix EMS is captured in the Mission Statement, as follows:

Our business decisions balance economic viability with ecological responsibility.

We reduce and recycle waste, conserve energy and water, and educate our guests and employees on environmental stewardship.

*We believe that increasing the sustainability of natural systems is not just good business. **It is the right thing to do.***

There is a belief within the organisation that sustaining natural systems through continuous innovation and improvement is not only good for the environments in which they operate, but also good business. Employees are asked to hold management account for all operational decisions that relate to environmental performance. Thus, they have both a top-down mission and a bottom-up monitoring mechanism to ensure continuous improvement in environmental performance, compliance with environmental regulations and responsiveness to environmental priorities.

Processes for Innovation

Xanterra's Ecologix EMS involves a continuous improvement process, based on achieving a truly sustainable business by the year 2015 with the following characteristics:

- Use zero fossil fuels
- Use zero persistent toxic chemicals
- Generate zero waste to the landfill
- Generate zero hazardous waste
- Consume water to extent no species are negatively impacted
- Employ sustainable design, construction and maintenance practices in all operations
- Serve 100 percent local organic food
- Sell 100 percent fair trade products
- No flora, fauna species impact from development

In order to achieve this, they have set the following ten-year targets for all areas of operation:

Transportation: Achieve companywide CAFÉ standard of 35 mpg (EPA rated combined city/highway mileage) for all vehicles purchased by 2015.

Emissions: Decrease greenhouse gas (CO₂) emissions by 30 percent (baseline year 2000).

Solid Waste: Divert from landfill 50 percent of all solid waste generated.

Hazardous Waste: Generate zero hazardous waste.

Water: Decrease water usage by 25 percent (baseline year 2000).

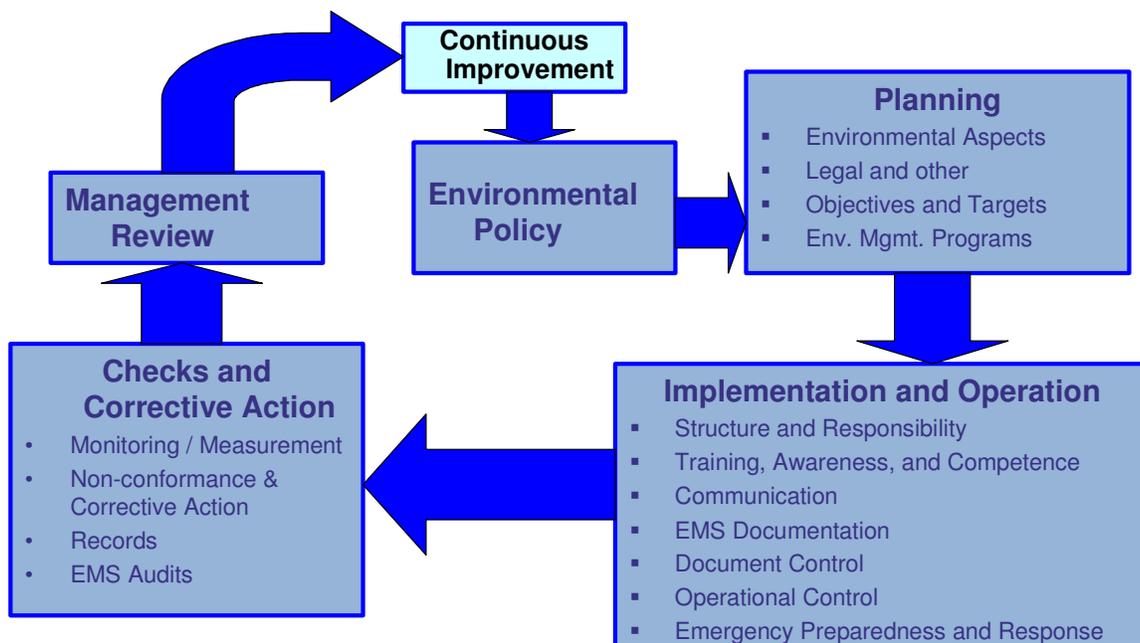
Energy: Decrease fossil fuel usage by 30 percent (baseline year 2000); increase renewable energy to 7 percent of total electricity usage.

Ecologix is described as a hybrid EMS as it includes aspects of compliance, sustainability and accountability. It is based on the ISO 14001 Certification and the

National Environment Performance [NEPT] Track programs and began with top management setting an environmental policy expressing commitment to compliance and continual improvement.

Planning for Ecologix was done by forming a cross-functional team to complete a comprehensive review of a facility’s environmental activities that have potential to interact with the environment. The structure of the EMS is indicated in Figure 4.1.

Figure 4.1: Structure of Xanterra’s Ecologix EMS



Significant environmental aspects are addressed by setting objectives and measurable targets which can include such activities as controlling the aspect (e.g. inspecting a chemical storage area to ensure zero spills), implementing strategies to achieve objectives, taking corrective actions when required, continuous improvement (e.g. reducing energy use by 10 percent each year) and inputting knowledge learned back into the EMS.

Thus, Xanterra has a management structure that incorporates these objectives and targets into its programs and procedures. These translate into work instructions to

train employees in the EMS and ensure competence to carry out their responsibilities. In terms of monitoring, everything is documented so that progress toward goals is continually checked and corrective action is taken when necessary. There are procedures to monitor and measure activities and for handling non-conformance. Periodic auditing and annual management review of the efficacy of the whole system is completed.

Xanterra's environmental performance is also subject to significant public and employee scrutiny, described as operating in national parks "under a microscope". In order to improve transparency and public accountability, Xanterra produces web-based reports that include:

- Corrective Action Database.
- Ecometrix – measures of total resource usage, greenhouse gas emissions and solid waste generation.
- Sustainability Reporting on the web as well as hard copies available in all guest rooms operated by Xanterra, with an opportunity for guests to comment on environmental performance.

They also have third-party certification and complete external audits through programs such as:

- ISO 14001 – ANSI – RAB;
- FDEQ;
- Clean Marina;
- Environment Protection Agency [EPA] Performance Track;
- US Green Building Council LEED;
- Marine Stewardship Council;
- Organic Fair Trade; and
- WasteWise / Energy Star.

Barriers to Innovation

Introduction of Xanterra's innovative EMS system Ecologix was an extensive and costly exercise for the organisation. It also remains to be seen what will translate into actual improvements in environmental performance. So not only was it costly 'but' it was also risky.

The ISO 14001 standard upon which it is based is not prescriptive. ISO is a basic process framework, initially intended for the manufacturing/industrial sector. While it requires EMS, regular audits and commitment to continuous improvement, it does not require environmental performance levels to be met. It is one thing to have an EMS in place (on the shelf) but it is another thing to actually achieve changes – such as reductions in resource consumption. The effectiveness of ISO depends upon the will and intention of each company employing it.

Hence, Xanterra has had to first of all gain top management support for the EMS program and then set about designing the program and implementing it with the support of all staff members. This whole process was scrutinized by public and private agencies with an interest in US parks.

It has also taken place within the highly competitive environment for concession contracts in US parks. Concessionaires not only have to be cost competitive, but must also demonstrate strong environmental performance. It has been far from easy, yet they have made significant innovations in all aspects of their business and environmental performance.

Networks for Innovation

In addition to the certification and external collaborations that support innovation, Xanterra has engaged its extensive procurement and supplier organisations in the process of improving environmental performance.

Xanterra procures almost \$40 million annually of foodstuffs to meet the needs of its guests (see Table 4.2).

Table 4.2: Xanterra LLC Annual Food Procurement

Value (US Dollars)	Quantities
• \$30 mil in food	• 250,000 lbs. fish
• \$1 mil vehicles	• 16,000 gal. of ketchup
• \$1 mil chemicals	• 110,000 gal. of ice cream
• \$1 mil seafood	• 380,000 rolls of toilet paper
• \$2 mil produce	• 380,000 lbs. of french fries
• \$3.5 mil meat	• 32,000 cases soda
• \$500,000 in sheets/towels	• 65,000 gal fountain syrup
	• 70,000 lbs. coffee
	• 4.5 million hot and cold cups

By introducing an innovative, environmentally focused procurement policy, Xanterra has been able to develop:

- An EPP policy with quantifiable goals and targets;
- A formal assessment protocol to determine if a product or service is environmentally preferable;
- An inventory of environmentally preferable products;
- An environmentally preferable capital expenditures protocol to assist in weighing the attributes and impacts of capital items prior to purchase;

- A letter to contractors explaining environmental goals and contractor responsibilities;
- A letter to vendors and a policy on product packaging that explains environmental goals and vendor responsibilities;
- A guide for properties on how to purchase fuel-efficient vehicles;
- A sustainable cuisine program to purchase more organic, local, sustainable food products; and
- A formal companywide policy banning certain species of fish from menus and recommending others.

Xanterra's applies its EPP to all products and all areas of operation by guiding staff members in making purchases that use less energy, cost less to transport, generate less waste, are more recyclable, are more durable, require less packaging and are less toxic without compromising service quality. Every item from office supplies to food and beverages, cleaning products to new buildings are subject to formal process to determine whether it meets stringent EPP criteria based on U.S. Environmental Protection Agency (EPA) standards. Xanterra South Rim has a Green Purchasing Gold Achievement Award from the U.S. EPA for its use of items with a recycled content including paper, clothing and plastic. Use of recycled materials also saved the company \$55,000 in disposal costs in 2005.

Xanterra's Sustainable Cuisine Program promotes foods that are produced, processed, packaged and delivered with the minimum impact on the environment. This requires food and beverage managers, chefs and purchasing agents to consider the procurement of organic and locally produced foods. These foods are now a growing part of cuisine purchase, with their value increasing to \$3.1 million between 2004 and 2006, across every product category. Sustainable products include beer and wine, seafood, tea and coffee, meat and dairy products.

Accommodation buildings represent the core business activity of Xanterra and consequently account for most of the environmental impacts, including:

- 65% of total electricity consumption;
- 30% of total greenhouse gas emissions;
- 136 million tons of Construction, Demolition and Land-clearing [CDL] waste (approx. 2.8 lbs/person/day); and
- 12% of potable water use.

Xanterra's Guidelines for Environmentally Sustainable Design define Xanterra's expectations for all contractors, subcontractors, architects, engineers, consultants, and vendors working with Xanterra on the design, construction, or rehabilitation of buildings in national parks. Through an extensive program of retrofitting and replacement in the areas of waste management, energy, buildings and transportation considerable reductions in the energy footprint have been achieved. In particular, buildings which account for the highest energy and resource use and generate the most solid, liquid and gaseous waste have been the focus of the Ecologix program. New designs and technologies have been incorporated into all "green" buildings and suites, producing the following benefits:

- Ecological benefits;
- Decreased operating costs;
- Increased worker productivity;
- Raising the bar for market competitors;
- Shorter return on investment (RoI) periods;
- Recognition by US GBC and local media; and
- Becoming the industry standard and guide for environmentally sustainable design and construction.

Summary

Introduction of Xanterra's innovative EMS system Ecologix was an extensive and costly exercise for the organisation. It also remains to be seen as to what will translate into actual improvements in environmental performance. So not only was it costly, but it may also prove to be risky. However, by monitoring progress towards measurable and achievable goals on an annual basis as it moves towards its 2015 targets and using the year 2000 as a baseline it is able to report improved environmental performance across all areas of its operations, including energy efficiency, diversion of waste and sustainable cuisine purchases.

Xanterra's EMS and environmentally referable procurement programs have yielded significant benefits for the company, its employees and customers and the environment in which it operates. For a company that operates in some of America's most iconic and fragile environments the need for environmental integrity is critical, not only for economic, but also for ecological reasons. Above all, they believe that balancing economic viability with ecological responsibility is not only good business, but ethically the right thing to do. The environmentally preferable procurement program is a cornerstone of Xanterra's corporate mission and vision and has been embraced by all employees within the organisation. They have set ambitious and measurable 2015 targets for environmental performance, have implemented the program across all areas of operations, and monitor and report their progress annually to all employees, suppliers and customers. This has positioned the company in a place of leadership in environmental compliance, and provided a distinct competitive advantage in operating concessions in U.S. National and State Parks. It has also proved to be a good business strategy as it has reduced costs and liabilities in the short term and may lead to increased profitability in the longer term.

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For further information on Xanterra go to <http://www.xanterra.com/Environmental-Action-364.html>

Chapter 5 Tasting Arizona, Arizona, USA

Jack Carlsen and Deborah Edwards

Introduction

Tasting Arizona is a consortium of tourism, non-government, indigenous, farming, education, community, festival and food organizations that aims to provide 'local flavor' to customers in Arizona. Its belief is that consumers want local flavor and it has identified a range of food products that represent the taste and feel of Arizona. Tasting Arizona represents an innovative approach to reviving local foods and traditional farming activities and countering the decline in small farming communities taking place in the USA.

The benefits of this revival extend well beyond providing visitors with local flavors, as these foods are linked with preserving traditional farming practices, conserving areas for wildlife, educating youth, keeping food pure and free from genetic modification, maintaining agricultural diversity and biodiversity and protecting cultural traditions. Wild foods such as flour made from the Mesquite bean and pure varieties of fruit and vegetables are just two examples of traditional local foods that have been revived.

Tasting Arizona began as a series of workshops held by the Center for Sustainable Environments [CSE] at Northern Arizona University [NAU]. CSE is a leading university-based sustainability science group with a focus on reducing the impacts of food production, transport and processing on biodiversity, food security, and water and energy consumption. It undertakes educational, research and outreach activities in partnership with university, non-profit, federal and community groups (See Table 5.1) with the aim of adopting more sustainable practices.

Table 5.1: Center for Sustainable Environments Collaborators

University	Non-Profit	Federal	Community
Bilby Research Centre	Arizona Environmental Leadership through Mentoring	Colorado Plateau Cooperative Ecosystems Studies Unit	Diablo Trust (see chapter 6)
Centennial Forest	Grand Canyon Trust	Environmental Protection Authority	Slow Food USA
Center for Environmental Sciences and Education	Grand Canyon Wild lands Council	Environmental Technology Consortium	Trust for Public Land
Earthnotes on KNAU - Arizona Public Radio	Indigenous Community Enterprises	National Park Service	Friends of Flagstaff's Future
Ecological Restoration institute	Second Nature	Southwest Biological Science Center/Colorado Plateau Field Station	Greater Flagstaff Forest Partnership
Environmental Communication Resource Center	Terralingua: Partnerships in Linguistic and Biological Diversity		
Forest ERA	Wild Farm		

	Alliance		
Institute for Tribal Environmental Professionals			
Land-use history of Colorado Plateau			
Master of Liberal Studies: Good and Sustainable Communities			
Meriam-Powell Center for Environmental Research			
Navajo Nation Archaeology Department at NAU			
Program in Community Culture and Environment			
Quaternary Sciences at NAU			
Watershed Research and Education Program			

Source: <http://home.nau.edu/environment/default.asp> (accessed 31/3/08)

Partners in Tasting Arizona include:

- Tourism providers
- Farmers markets
- Non-profit organizations
- Tribes
- Schools
- Hospitals
- National and State Parks (Slide Rock)
- Festival organizers
- Local growers (farmers and ranchers)
- Foragers of wild foods
- Restaurants
- Food enthusiasts
- University researchers
- Plant and seed sellers
- Heritage food growers
- Youth gardens
- Community gardens

Drivers of Innovation

The food systems of the Canyon County, also known as the Colorado Plateau or Four Corners Region are amongst the oldest and most culturally diverse in North America. Traditional agriculture has been in practice for at least 4,200 years and some of the oldest breeds of sheep, the Navajo Churro and cattle, the Corriente of Spanish Criollo ancestry persist in Canyon County. Prior to agriculture, wild foraging for the pinion nuts, greens, acorns and fruits that are native to the area had been going on for over 10,000 years. These wild and traditional food systems have been recognised and revitalized.

Tasting Arizona believes that wild and traditional foods are good for everybody – producers, consumers and visitors. In addition to the community benefits there are indications that wild foods have previously unknown health benefits. Certain foods such as white corn are central to traditional cultural ceremonies yet these pure varieties are under threat from cross-pollination with genetically modified varieties of corn.

Increased recognition and concern about greenhouse gas emissions, global warming and environmental degradation, the use of fossil fuels in food production have been captured in the concept of food miles. Food miles refer to the distance food travels from the place of production to the place of final consumption, which in the USA is estimated at 1,500 miles. Consuming locally grown food not only supports local farming communities but also reduces the carbon footprint of food production as well as reducing the cost of transportation, thereby addressing the broader issues of social, environmental and economic sustainability.

Food production and distribution can take place in urban as well as rural areas, with farmers' markets, harvest festivals and youth gardens providing venues where food producers and consumers can meet. Farmer's markets are flourishing in the US, where there are over 3,500 operating nationwide. Harvest festivals not only celebrate the farming traditions of rural areas, but also act as a catalyst for tourism and community celebration. Involvement of youth in community food gardens is also a good way to revitalize interest and demand for fresh, local foods and has the added social benefit of increasing interaction between youth and elders in the community. These initiatives have not only increased the quantity of local food produced and consumed, but also the variety of food. They have also re-connected food with the seasons and sense of place in which it is produced.

Hence, the drivers of innovation for Tasting Arizona relate to the growing cultural and

ecological awareness of people and partner agencies within the Colorado Plateau and federally across the US about the importance of maintaining the health, security and sustainability of food systems and local communities. Ultimately, the customer is the driver of demand for local produce and there is a range of initiatives in place in order to both grow and meet that growing demand.

Processes for Innovation

The first step in reviving the traditional and wild foods was to create a food network to maintain and strengthen local food systems. Community-supported agriculture (CSA) programs provide a means for residents to make a commitment to support local agriculture and share the inherent risks and benefits of seasonal farming. CSA models are flexible and can be run as non-profit organisations, voluntary groups or by farmers themselves. The Flagstaff CSA was established by Crooked Sky Farms in 2002 in partnership with 70 members and has grown to over 290 members since. It operates three twelve-week seasons in fall, winter and spring, with a break in the summer season so that members can support the Flagstaff Community Farmers' Market. Each member becomes a share holder in a season of production, on the understanding that there are neither refunds nor guarantees of a specific amount of produce. Each share provides for vegetables on a weekly basis that must be picked up from the Bilby Research Center at NAU. Information on other local products is also made available to CSA members. In this way, the CSA is creating a sustainable food system, supporting the local economy and fostering stewardship and connection with the land.

Bringing back local farmers' markets provides a place for celebration of local foods and interaction between producers, restaurants and consumers. Supporting local farms involves identifying traditional food varieties, orchard restoration, sponsorship of festivals and food events, inviting chefs to prepare local produce and creating food and wine trails. Helping visitors to discover local foods in this way will increase demand and encourage more producers to get involved.

Engaging with youth in creating and farming community gardens that have local varieties is also effective in both increasing demand and strengthening supply. In addition, introducing wild foods to visitors and residents in familiar ways, such as cookies made from Mesquite flour, which is naturally sweet, has proven successful. Wild food walks provide opportunities for linking wild foods to wildlife and preserving natural areas. Declaration of themed National Heritage Areas provides an opportunity to access one million dollars per year in funding for the development of tours and the production of maps of farming and wild food areas in Arizona and neighbouring states. In this way, tourists can be engaged in discovering new foods and support local producers.

One of the more innovative programs is the preservation of heirloom apple orchards adjacent to the Slide Rock State Parks, in the popular tourism destination of Sedona. Only four of the ten varieties of apples first planted in 1912 remain in the orchard, and none of these are available commercially. In partnership with State Parks and NAU, the historic fruit and nut orchards are being mapped and restored through a process of replanting and water systems evaluations that should protect the orchards against the further ravages of fire, drought and aging.

The process of engagement of residents and visitors in the revival of local food networks is taking place through a variety of small-scale initiatives. Some, such as CSA are part of a much broader movement, which began in Japan in the 1970s, spread to Europe and then the USA and Canada in the 1980s, where there are now 1,500 CSAs. Local farmers' markets are also growing in popularity and they provide an excellent venue for small-scale producers to meet residents and visitors and celebrate the seasonal harvest. Discovery and revival of traditional and historic foods is engaging local communities and visitors in a growing network that supports sustainable food systems.

Barriers to Innovation

The challenges are many as natural and farming lands are under increasing pressure from larger producers, customers have become used to buying out-of-season and non-local produce, and the distribution system does not favor small producers.

In addition to these market barriers, there are limitations of the scale of production that prevent traditional and wild food producers from achieving continuity of supply. Small farmers are also subject to seasonal variations and under threat from fire and drought, which could wipe out a season's production. Most farmers, ranchers and producers do not use pesticides, herbicides or chemicals so their crops are more exposed to plant disease and insect infestation.

Family farms and ranches are rapidly declining as urban expansion and large-scale farming takes place across rural areas of the USA. Locally produced food has been declining as water has been diverted for other economic activities. There is also a lack of place-based agriculture and agricultural diversity as the trend to source mass-produced foods from outside of the local area continues.

Networks for Innovation

Collaboration is the key to food production and distribution; it is not possible to develop food systems without linking with community, non-profit, tourism, education and land management agencies. Community and youth groups that grow traditional foods in community gardens are bringing people into the local food network. Non-profit organizations such as the Native Movement, Native Seed Search and Slow Food USA are important partners in providing knowledge and advice on production of traditional foods. Schools, hospitals and universities also play a role in researching and educating the public about local food, while National and State Park agencies have a vested interest in conserving the environment where wild food and animals exist. Finally, tour operators, festival organizers, restaurants and food enthusiasts engage

and support local producers and wild food foragers.

Hence, food networks are extensive and interact with a wide cross-section of people in government, the community and business. Indeed, growing these networks could be considered just as important as growing the food that provides the focus of their efforts and the 'local flavor' of Arizona.

Summary

The long-term vision is to have local foods linked to tourism and made available to visitors. This will only be achieved when the numerous benefits of local food production are clearly identified and articulated. The process of strengthening local food systems involves many innovative initiatives. Reviving local food production involves many barriers, not the least of which is reversing consumer trends towards mass produced food and protecting farming and natural areas from invasion. A strong network is critical to this process and to overcoming the barriers.

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Chapter 6 The Diablo Trust, Northern Arizona, USA

Jack Carlsen and Deborah Edwards

Introduction

Two Arizona ranch families, the Prossers of the Bar T Bar Ranch and the Metzgers of the Flying M Ranch, both located in Northern Arizona, initiated the Diablo Trust in 1993. The Trust was named after the Diablo Canyon that separates the two ranches, and was formed to promote the social, biological and economic sustainability of federal, state and private lands by engaging in a collaborative stewardship process in harmony with the natural environment and broader community. Their mission involves *Learning from the land and sharing our knowledge so there will always be a West* and captures a commitment to education, collaboration and sustainability.

Membership of the Trust is diverse and includes ranchers, environmentalists, land managers, scientists and researchers. Their goal statement is to create a range of economic opportunities in support of private landholders and traditional uses while preserving open spaces for future generations. Related to this are the following sub-goals:

- Sustaining open space
- Living in balance with biodiversity
- Producing high quality food
- Restoring watersheds
- Creating stable, living soils; and
- Achieving community collaboration.

The Trust undertakes a range of projects designed to enhance collaboration and learning about the land and the effects of management, recreation, climate, fire and time. Projects include educational programs for local schools, wildlife protection, ranch

management, community outreach, and land and watershed improvements.

The Diablo Canyon Rural Planning Area project arose out of an innovative approach to rural planning in Arizona between 1998 and 2000, called the “Growing Smarter Legislation”. Landowners were encouraged to petition for the establishment of Land Trusts that would effectively assume planning responsibility for rural farming lands and adjacent tenures within Arizona. A planning meeting held at the Flying M Ranch in the fall 2003 led to the formation of the Diablo Canyon Rural Planning Area (RPA). It was the first Trust of its kind in Northern Arizona and effectively transferred control of the planning and permitting process for the Diablo Canyon Area to the Diablo Trust.

According to its Vision Statement, the Diablo Canyon RPA serves as a model approach for the continuation of traditional working ranches as long-term, economically-viable enterprises while maintaining unfragmented landscapes and restoring native ecosystems. The RPA successfully integrates economy, ecology, and community by pursuing a range of economic opportunities necessary to support and maintain the viability of ranching while recognizing the fundamental importance of the health of the land and the support of the broader community.

Drivers of Innovation

The key driver for the formation of the Diablo Canyon RPA was necessity, and fear that the traditional cattle ranches and the families that run them would not survive. They aimed to protect traditional agriculture by preserving farmlands and developing options for value-adding products, tourism and alternative land-uses. The two families, the Metzgers and the Prossers both recognized the need to join forces to preserve their land and the traditions connected to those lands that were under increasing environmental and economic pressure.

They also recognized the need to communicate with the local community and conservation groups regarding their efforts to preserve grasslands not only for cattle, but also for the wildlife that inhabits the area. Antelope, pronghorn, elk and deer co-habit with cattle on their properties and they have made considerable effort to protect wildlife habitat by working with the National Resource Conservation Service.

Besides these practical measures such as fencing cattle out of wetlands and using rest-rotation grazing during drought periods, they have also taken some innovative steps to aid wildlife through provision of water sources and monitoring of wildlife populations.

Finally, there was a desire to pass on a viable business operation to future generations of family ranchers, which in itself is a key dimension of economic, cultural and social sustainability. The cyclical nature of ranching operations and the high cost of improvements combined with the pressure to make public land available for residential development drove the desire to create alternative economic opportunities to supplement ranch operations.

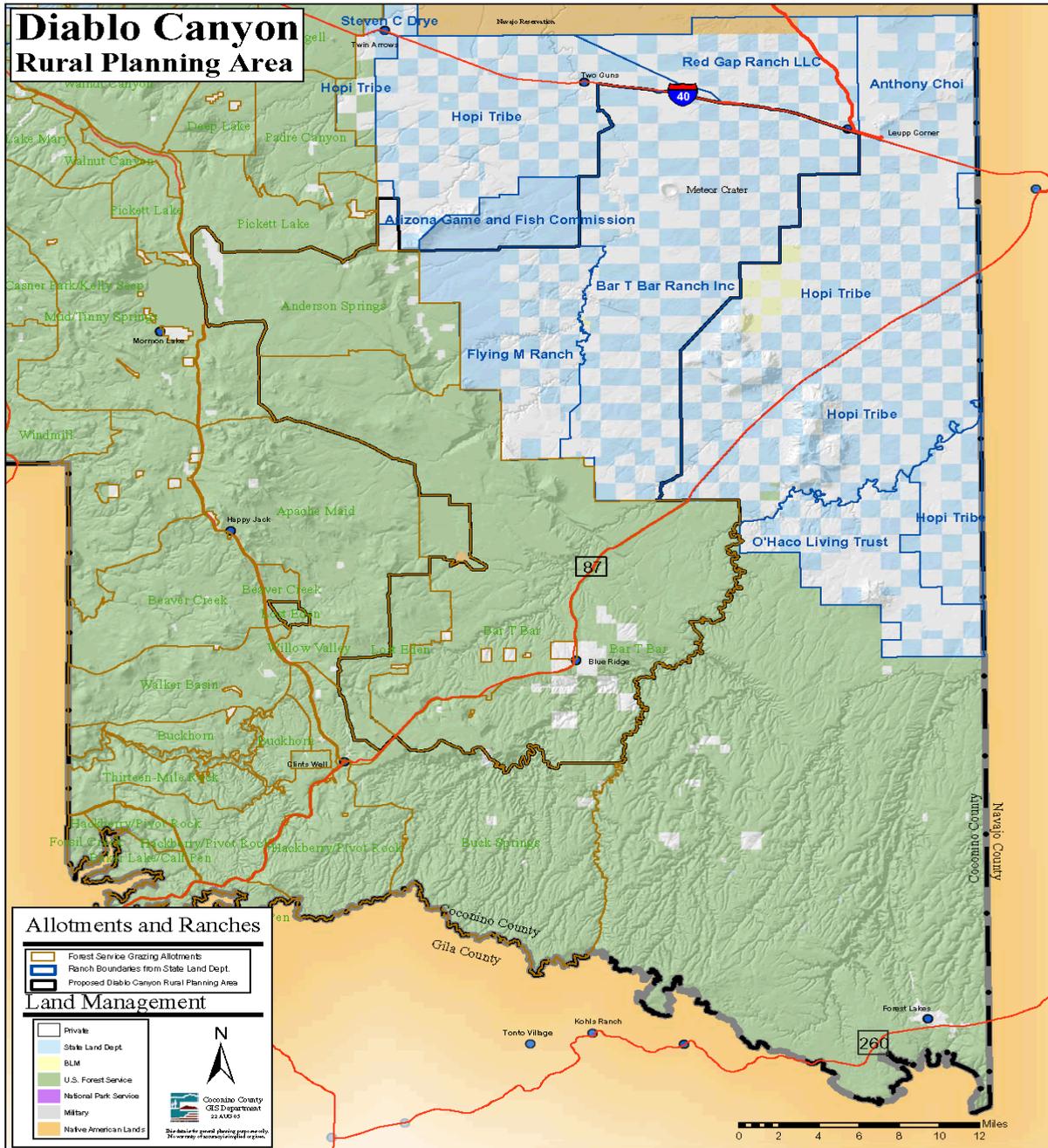
Processes for Innovation

There were two steps involved in this innovative approach to saving and sustaining land and traditions in the area. First was establishing the Diablo Trust as the entity that would assume planning responsibility for the area. This was undertaken by the Metzger and Prosser families, owners of the two long-time ranches in the area, the Flying M and the Bar T Bar Ranches. They began a process of petitioning the County Board for approval to form a rural planning area.

The second step was to develop the Diablo Regional Planning Area that would guide new economic development opportunities within this area of approximately 20 by 40 miles (426,000 acres). The area was a “checkerboard” of different land uses and

private, state and federal tenures, and ranged from forests to high desert country (see figure 6.1).

Figure 6.1: The Diablo Canyon Planning Area



Source: http://www.diablotrust.org/about_where.htm (accessed 31/3/08)

This area in northeast Arizona is the heartlands of the American West, characterized by the ranchers and cowboys that were the stuff of legends and the source of images portrayed through books and movies of the “wild west”. Now, there are many competing land uses and the process of planning and managing the land involves many stakeholders, as well as the integration with the County Comprehensive Plan. There was a need to educate the public about the importance of public land ranching and the environmental stewardship practices that ranchers had in place. A weekend workshop was the venue for the ranches to recruit new members to the trust, such as the Sierra Club, which was not aware of the Ranchers efforts with regard to land management and preservation.

With regard to commercial operations, all land use options identified in the plan, although tried before in other parts of the West with limited success, were considered worthy for inclusion. These options were all commercially focused although some had environmental benefits also, and included:

- Value Added Beef
- Tourism, Recreation and Education
- Wood Products
- Energy Development
- Housing

Value-added beef would be a niche-market product for consumers seeking more natural grass-fed and organic meat products. Products could be sold locally through direct-marketing at farmers’ markets, community-supported agriculture (see also Chapter 5), food co-operatives/clubs, local restaurants and other more flexible arrangements, such as on-site sales.

Tourism, recreation and education opportunities were also considered to have great potential for ranchers that could provide domestic and foreign visitors with first-hand

experience of life in the West on a working cattle ranch. Activities could include horse-riding, guided tours, lodging, themed festivals/special events and facilities could include cultural centers, educational museums, historical museums, shooting ranges and off-road vehicle facilities. The ranches are located close to the famous Route 66 and the Grand Canyon; areas that are rich in Native American Culture and natural history and attract millions of visitors annually.

Wood production had been a minor part of ranch operations and was largely a by-product of grassland restoration and clearing of Pinyon and Juniper trees. Commercial wood-products could include those that require minimal processing such as firewood and roundwood to manufactured wood products such as fireplace logs, lumber, laminated beams made from Ponderosa Pine and composite materials. Again, the need for coordinated supply and a production facility were recognised in the RPA before any commercial wood production could take place on ranches.

Energy Development in the form of alternative energy sources has been driven by rising fossil fuel costs and the associated environmental consequences. Regulations of the power generation industry and state tax incentives have focused attention on two alternative energy options in Arizona, biomass and wind. Wind mapping has taken place on both ranches, and meteorological 'test' towers have improved the viability of a number of sites. Wind energy production provides an opportunity for ranchers to generate lease and royalty incomes and avoid sale or sub-division of ranchlands.

Finally, housing development is the most common economic alternative for Ranchers in Arizona, with sub-division into 40 acre land parcels known as ranchettes resulting in fragmentation of wildlife habitats and loss of open spaces. Notwithstanding the undesirability of housing in the RPA, there is provision for a form of "protected development" where a limited amount of land can be sold off while still preserving the integrity of the ranchlands.

Details of each of these options are cited in the RPA and include fresh or frozen beef products, “dude ranches” and other ecotourism, recreation and education opportunities, firewood products, wind power generation and housing development. It is important to recognize that all of these options will impact on the sustainability of the ranch operations and may or may not be compatible with sustainable tourism development.

Barriers to Innovation

There were many barriers for these farming families, not the least of which was the global trend toward intensive farming of beef in feedlots leading to the failure of traditional farming methods such as cattle ranching. Another less tangible barrier was the capacity of the members of the Diablo Trust who imagined that “they could do anything” on their lands, which turned out not to be the case. Whilst a number of options were identified in the RPA, they each present their own challenges and barriers that limit their economic viability and/or cultural desirability. These will be discussed below.

The production of high quality, natural or organic beef for niche markets had been done in other parts of the West, and three examples — Babbitt Ranches, Oregon Country Beef and Ervin’s Natural Beef — were cited. A key decision is whether to provide the beef product in fresh or frozen form and the viability of accessing meat processing facilities. Getting these products into production and then to market would require considerable investment in infrastructure and distribution systems and this presented a major financial barrier.

Tourism, recreation and education also presented many barriers. Hosting visitors would require a huge effort by the ranchers, who are already busy with their activities. Other on-farm activities involving recreation and education programs were also considered, but their small scale meant that they may not be commercially viable. The

cost associated with public liability insurance is also a major barrier to entry into this form of tourism, especially if an authentic experience of ranching and all of the hazards associated with it are to be offered. Finally, the presentation and communication skills of the local workers who would work in tourism may also be a constraint.

Wood product production was considered as an innovation that would address two issues. Firstly, it would reduce the area of Juniper and Pinyon trees, making more land available for grazing. Juniper was an invasive species that was destroying grasslands and a program of reduction was already in place. Secondly, it provides a source of commercial firewood production to meet demand in the cold Northern Arizona winters. However, tree-clearing and firewood collection is highly labour-intensive and there are many other sources of fuel for home log-fires, including packaged, manufactured logs with guaranteed three-hour burn times and even with crackling that imitates the sound of real, burning wood!

Commercial banks of wind turbines that generate power for the grid can be found on many farming lands, and the rent that these sites generate for land owners is substantial. However, they have a tendency to ruin the rural vistas and aesthetics and as such meet with considerable resistance whenever they are proposed in open landscapes. View sheds in Northern Arizona can extend for 60 miles or more and in themselves provide a great sense of space for the millions of tourists that view the area on the way to world-class attractions such as the Grand Canyon and Monument Valley. Locating Wind Turbines on farms requires consideration of not only engineering factors such as proximity to the grid, but also aesthetic considerations and effects on vistas and view sheds and any impact on wildlife habitat and birdlife.

Finally, housing development perhaps presents the biggest issue for farmers, as land sold off for housing will be lost to farming forever. All farmers, no matter where they

live, want to retain or indeed expand their land holdings in order to attain economies of scale and more economically viable farm production. Partial sale of farmlands would however enable farmers to keep their ranch houses and the majority of their lands, so a careful plan for developing land has to be put in place.

Networks for Innovation

The Diablo Trust arose for a single purpose, to protect traditional farming families, so it was not really involved with other groups. In fact, it was described as an “accidental organization” that had to embrace all land management issues in the area, taking it well beyond its original task. Having established the Trust, the members then began the process of engagement with other groups such as tourism, whom they originally viewed with caution. Developers too were viewed with suspicion, but bringing these groups together around the table was critical to developing the regional plan. Rather than “supping with the devil” this engagement with all other land users was considered as “embracing thine enemy” and openly considering all options for protecting and preserving the farming lands. The Metzger and Prosser Family members of the Trust consider that this engagement with land developers was one of the most constructive outcomes of the planning process.

Pursuit of the economic opportunities identified in the RPA would also require engagement with production and marketing agencies. Beef production would require access to approved production facilities and direct-marketing channels in order to get a high quality product to consumers. Tourism, recreation and education would require engagement with the tourism authorities and business consultants that have expertise in the business of ecotourism and cultural tourism. Wood production and wind energy would require considerable investment by public and private entities, as would housing development.

Summary

Innovation can be both necessary and practical and will not always require extensive research and new technology, especially when it comes to dealing with the universal problems of rural land management. By working with local, state and federal agencies, community and conservation groups and each other, these two long-time farming families have taken considerable steps to improve land management practices, conserve habitat for wildlife, maintain their farming traditions and ensure that the land remains representative of all of the values associated with the West.

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Chapter 7 EDDA, Denmark

Anja Hergesell, Janne Liburd and Jane Hansen

Introduction

In Denmark, the built attraction market is characterized by increasing professionalism and cooperation among suppliers who are also competitors in the global tourism and experience industry (Danish Ministry of Economic and Business Affairs 2004). Attempting to capitalize on the current trend toward a user-oriented, experience-driven economy that embraces “soft” aspects like identity, feelings, values, meanings, and aesthetics for which customers are willing to pay more, a four-year project entitled “Experience Development of Danish Attractions” (EDDA) was created. The EDDA (or ODA in Danish) consists of 38 built attractions of varying size, theme and ownership structure that have joined forces to meet new challenges and opportunities through shared competence development and incremental innovation. During the four-year project, they have demonstrated their readiness to innovate by involving all personnel in the development of competences in addition to product innovation in the form of altered or new tourism commodities and services. Primarily reflected in the demand by visitors for a wider variety of quality experiences and more customized services, innovativeness extends from mere product development to aspects of management structures.

Drivers of Innovation

Recognizing the economic opportunities associated with customers demanding unique, memorable and individualized experiences in the so-called experience economy (Pine II and Gilmore 1999), the Danish Government (2003) has been encouraging the development of new products and services as part of a national growth strategy. Generally requiring a limited up front investment, if any at all, the experience economy has become of pivotal importance in driving the agenda for built attractions

and tourism in Denmark at large. Moreover, the limited growth potential of the Danish attraction market (Danish Ministry of Economic and Business Affairs 2004) and an increasing amount of highly professional experience providers direct the need for competence development and innovation. These issues present a number of challenges for the built attractions, of which two are key:

- Competition becomes increasingly fierce among man made attractions and with other types of experience providers, including theatres, cinemas, game manufacturers and retailers;
- Customer expectations are increasingly complex and multifaceted, which makes it difficult to categorize the experience consumer.

Although performing at a satisfactory level at the present, the EDDA initiative aims to support the attractions' ongoing development as strong and innovative businesses by creating opportunities for competence development and experience exchange. Acknowledging learning as a necessity for skills development and prerequisite for innovation, attractions work together as colleagues while simultaneously respecting each other's originality, unique needs and opportunities. A "down to earth" development approach was adopted i.e. project activities had to be inspirational and practicable to the EDDA participants. Moreover, embedded in a formulated framework of strategies, products and business plans, the critical importance of employees to facilitate memorable experiences is a key factor, which is reflected in a priority of developing skills through a creative approach. Creativity and experience provision in the tourism industry are linked to individuals, but also result from interaction among individuals. Capitalizing on both of these angles, the EDDA project was designed to explore innovation through the creativity of individuals and groups as well as internal and external partnerships. In short, acknowledging the complexities of learning EDDA also sought to extend project benefits to the widest possible range of stakeholders thus adopting the principles of "socially inclusive wealth creation" (European

University Association 2007:21) towards enhancing the quality of life for all.

Barriers to Innovation

The EDDA project has encountered a number of challenges, of which some are directly attributable to a lack of financial and human resources in the participating attractions. Limited human resources impeded the participation of staff in courses, study trips, experiential discussion groups and mentor-mentee relationships, which overall inhibited learning by individuals and hence uptake of innovation by the businesses. Due to the great variations in course attendance, a limitation on the number of participants per attraction was introduced to ensure equitable relationships, which is also a key principle in sustainable tourism development (Liburd 2007). In some instances, lack of funding constrained the implementation of newly acquired knowledge and tools, especially in the smaller attractions, which further had a negative impact on staff motivation.

Other barriers were overcome by the effective use of communication, including:

- Initial reluctance and scepticism by several employees and managers about the usefulness of the project and the proposed changes. One attraction left the EDDA after a change of management;
- Lack of understanding regarding the adopted approach, which was occasionally considered irrelevant to the built attractions' context;
- Lack of active contribution and commitment, which resulted in the exclusion of a second participant;
- Inability of some external lecturers to adapt their course content to reflect the needs of the built attractions.

Finally, the geographic dimension of the project involving participants from all over

Denmark (see Map 7.1) constituted an organizational obstacle. This was handled by arranging activities in various regions of the country and making effective use of electronic communication, especially the project website www.odaweb.dk.

Map 7.1: Location of the 38 participating attractions



Source: Adapted from EDDA Secretariat

Processes for Innovation

Before the EDDA project materialized, four attraction managers who had previously worked together on competence development sought financial support from the Danish Labour Market Holiday Fund. They received a sizeable sum of 36 million Danish Kroner (approx. 5 million Euros). Participating attractions co-financed an additional 10 million Danish Kroner, totalling the budget at 46 million Danish Kroner (or 6.1 million Euros). Next, forty built attractions were selected based on location, size, theme and ownership structure. Two all-day seminars marked the starting point of the EDDA where each participating attraction presented their expectations for project content and outcome. Based on the findings a learning programme was created, which incorporated four key elements:

1. Knowledge and tools – Optimization of knowledge and tools to support the implementation of innovations in products, services and management processes
2. Professional courses - Tailor-made modules, including case studies and study trips, designed and executed on the basis of initial interview findings and anticipated knowledge gaps
3. Experiential discussion groups – Thematic networks for employees and managers to exchange experiences and enhance group learning
4. Support for implementation – funding allocated for professional, individual consultancy.

Over the course of four years and three months, the EDDA project was divided into three main stages:

1. Phase (January 2004 - July 2005) on the design of strategies towards creating competitive attractions through the development of key competences,
2. Phase (August 2005 - July 2006) on the development of experiences, and

3. Phase (August 2006 - July 2008) on project consolidation and the implementation of changes in participating attractions.

In order to secure a satisfactory project outcome, participant evaluations were conducted at the end of each course and each phase. If necessary, adjustments were made to meet expectations and business needs.

Based on the three-tiered project structure, numerous activities were undertaken. Tangible outputs include a customer survey manual and several books on selected aspects of development in attractions such as strategy design, storytelling and experience development. More than 2,000 participants have attended 25 different courses in areas of strategy formulation, business acumen, service management, development of experiences, communication and marketing. Site visits have been conducted over several days to attractions in Denmark, Germany, the United Kingdom, the Netherlands, France and the USA. The EDDA has successfully engaged other tourism professionals in Denmark in a number of open meetings and conferences on experience development thus broadening the scope of knowledge dissemination. One of the most significant strengths of the project is its focus on creativity and consequential inclusion of all personnel from participating attractions in the competence development process. Individual employees are encouraged to get involved outside of the classroom, for instance, by joining one of the experiential discussion groups or participating in a study trip. In addition, by "training the trainers" the project strives to ensure that knowledge is distributed to all personnel and that innovations are implemented. This approach has been particularly effective in combination with professional advice from tourism consultants, who were selected on an individual basis by the participating attractions. Another strong point of the EDDA is an integrated monitoring system that is conducted by external auditors. The Danish Institute of Technology periodically evaluates project outcomes and ongoing learning processes, including participants' satisfaction rate, which exceeds an impressive 90%.

Networks for Innovation

Networks lay at the core of EDDA, as the underlying principle of the project is that innovativeness is encouraged by intra- and inter-organizational learning. The thirty-eight participating attractions vary not only in geographical location but also in size, ownership structure and thematic focus that ranges from cultural heritage and art, flora and fauna, to amusement and *edutainment*, i.e. experiences that combine education with elements of entertainment. Project activities like the experiential discussion groups, courses, conferences, study trips and the mentor-mentee programme have promoted both intra- and inter-organizational relationships. While being competitors, the benefits of sharing and disseminating knowledge are clearly recognized by participants. This may be attributed to the emphasis, which has been placed on respecting the needs and opportunities of individual participants. The dialectic relationship between the attractions and the power of a formal project structure has in turn enhanced the creation of creative employee networks. In other words, creativity and learning are supported by management innovation in the participating attractions.

Initially established by four Danish built attractions to encourage innovativeness in the sector, the leading organization behind the EDDA project is the Development Fund for Tourist Attractions, which is financially backed by the Labour Market Holiday Fund. While the organization's board is responsible for the overall project implementation, the daily management is assigned to the Experience Development Centre. Consisting of representatives from various public and private tourism development and marketing entities, the Experience Development Centre functions as a secretariat-type network, which is headed by one of this chapter's co-authors, Jane Hansen. Additional external networks for innovation have been established through the implementation of activities related to the learning programme. Both academics and practitioners were involved in the design and delivery of courses. Outside of the classroom, participants can select individual advisors to help bridge the gap between theory and practice,

where necessary. All consultants are listed in a shared database to which the participating attractions have access. As intended, study trips to non-participating tourism attractions in Denmark and abroad have resulted in new national and international networks that can further inspire inter-organizational learning. To support these processes, the project website, newsletters, conferences and book sales continue to be of key importance.

Conclusion

The EDDA is driven by a mission to develop competences in a comprehensive and innovative manner among all personnel at the built attractions, whose core offer is good experiences, in order to meet future demands and thereby to sustain their businesses. Next to the actively involved participants, the EDDA project has established links to other national and international attractions. New knowledge, tools and experiential aspects are disseminated through courses, discussion groups and by use of electronic and print media. Knowledge transfer and creativity by individuals and in groups have been key to successful innovation in products, services and management processes in the built attractions, thus following the principles of socially inclusive wealth creation by taking due account of the complexities of learning and society at large. In due course, EDDA has been looking towards the future in the majority of activities, rather than being grounded in the past or the complacency of the present. Establishing creative networks that can help drive innovation, EDDA envisions a follow up project in which the current participants share their expertise and engage in dialogue with a larger group of actors. At the time of submission the EDDA entered negotiations with the national association of Danish Attractions to spread the project benefits and simultaneously secure complementary human resources in areas where none or only limited expertise is internally available to further sustain the socio-economic development of the Danish built attractions. While initially limited to a group of 38 individual tourist attractions, the lessons learned are not restricted to this group but may be of inspiration to many similar tourism

enterprises in localities that may also be challenged by global competition and changing consumer demands.

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Chapter 8 Brenu Beach Resort, Ghana

Michael Kweku Commeh and Nico Schulenkorf

Introduction

At the time of this case study project in August 2001, the National People Party (NPP) had just come to power in Ghana. One of the reasons for the NPP's success was the promise to invest in and develop the local economy under the slogan 'Golden Age of Business'. The change towards a new democratic government resulted in wide-ranging goodwill from the local people, who were expecting a new level of personal and professional freedom in Ghana. The business sector was longing for positive change, as for almost 30 years private businesses had not received significant support from the preceding governments. People in the tourism industry were finally encouraged to invest into their innovative business ideas, and motivated to start up small enterprises to increase their quality of life.

Originality, creativity and appropriateness are generally described as key elements for innovation. While innovation is associated with the introduction of new ideas or concepts, geographers use the expression "coping strategies" when describing innovation in social mechanisms (Yaro 2004). In Ghana, for most entrepreneurs in the tourism sector the term innovation is part of daily life's "coping", or a constant survival process. People practise innovation to survive in their business environment, and they alter and adapt according to the resources available – a process the Japanese term "arumono". The definition of innovation given by the female entrepreneur featuring this case study is "creating something meaningful out of nothing for a specific purpose or aim, using available and appropriate resources".

The small ecotourism business "Brenu Beach Resort" established by the local female entrepreneur Auntie Aggie is investigated in this case study. The Brenu Beach Resort

features an authentic Ghanaian restaurant and camp site, which is located on a basic beach area at the Komenda Eguafo Edina Abirim coast. Auntie Aggie's ecotourism business is an innovative contribution to tourism in Ghana, as she decided against the trend of providing all-inclusive services to tourists, to establish an open air do-it-yourself chop bar and restaurant, where tourists can have something to eat when they come to spend their time at the beach. A chop bar can be described as a traditional local restaurant where food is prepared and served in less than a minute. Typical Ghanaian dishes are cooked in such restaurants and are generally eaten with the hands. The tourists are encouraged to contribute to the meals and do their own cooking by using the basic cooking utensils provided, and enjoy the authentic style of dining. For accommodation, visitors are encouraged to set up a camp site on the beach area or build huts from coconut branches.

Drivers of Innovation

From the seven informal interviews conducted with Auntie Aggie, three outstanding features are eminent which drive innovation in her case: the survival instinct of human beings; the balance between demand and supply; and the trustful interrelationships among all the stakeholders in the tourism industry. First, considering the need to look after her five children and provide a place for them to stay, Auntie Aggie followed her survival instinct. It was her strong will to first finance her children's education and be financially independent, which encouraged her to creatively use the few natural resources she had available. With a supportive family and a local beach area to count on, ecotourism appeared to be a promising opportunity for professional success. Auntie Aggie had observed a rising demand for authentic Ghanaian tourism when an increasing number of local and foreign visitors complained about inadequate food and accommodation in the area. Particularly the international tourists were longing for authentic, traditional and yet convenient overnight shelters, which would add to their cultural experiences.

Second, the balance between supply and demand is a crucial driver for innovation. The tourists represent the demand side, while the supply side consists of service providers that offer accommodation, food, artefacts, tour guides and other tourism functions. To maximize performance, the tourists should be at least satisfied with their experience, while the entrepreneurs realise a satisfactory return on investment through the products and services they provide (Comme 1999). For example, if the tourist seeks to enjoy an unspoiled clean beach or has first hand experience of authentic cooking, and if the provider can deliver to his standards, then satisfaction is likely. In our case, if tourists are happy with the services Auntie Aggie provides and if they value her performance, then they will leave satisfied, may come again and/or encourage others to visit the beach resort.

Third, a key factor for innovative co-operations is the trustful relationships between players in the tourism arena, which result from good business contacts and supportive local networks. Letting stakeholders know about their importance and rewarding achievers and performers is crucial, and may eventually result in further innovative practises. At the same time, co-operation with important stakeholders in the community will guarantee support among the local people, other tourism providers and the local government. In Ghana, local community networks and co-operations between key players in the industry are still developing, which at times made life difficult for Auntie Aggie.

Barriers to Innovation

From a micro-economic perspective, the family owned beach area provided Auntie Aggie with the basic physical resources needed to start her ecotourism business; however, there were no financial means to establish appropriate guesthouse facilities. While a beautiful coastline, a two and a half kilometres long beach, marine life, and a large tract of undeveloped land was available, the essential means and structures needed to develop a small resort were missing. All Auntie Aggie had available when

opening the chop bar and restaurant was basic cooking utensils such as charcoal pots and three traditional cooking stones. The lack of financial and material assets proved to be an initial barrier to innovation, yet it encouraged her to be creative and to identify alternative opportunities, such as the do-it-yourself chop bar.

From a macro-economic perspective, a lack of support and staggering interventions of the previous Ghanaian governments presented one of the greatest barriers to innovations in the overall tourism business field. In the 1980s and early 1990s, the tourism sector only grew at a rate of 3.5 to 5 percent but began to accelerate in the late 1990s. Under the current proactive and business-orientated government, the macro-economic performance has improved significantly. According to the latest Ghana Tourist Board report, tourism is currently growing at a rate of 16 percent per annum (Ghanaian Times, April 2, 2007). This shows that a change in politics and policies can impact strongly on the overall wellbeing of the tourism industry and may contribute to overcome barriers to innovation.

Socio-cultural barriers to innovation can occur if the host communities, government and local authorities do not adequately support tourism (Kiss 2004). For instance, in some cases the chief of a community can decide to intervene destructively - as was the case with Auntie Aggie's business. When her business became popular with both local and foreign tourists, the Central Regional Development Commission intruded by building a tourist centre and a guesthouse right next to her chop bar. So, instead of receiving support for her own business, the entrepreneur found herself struggling with newly introduced social and financial barriers. The community chief did not approve the expansion of her business to a larger guest house or motel. Auntie Aggie believed that the main reasons for these restrictions were (a) her unwillingness to pay money (and bribes) for land titles to the chiefs, and (b) the opinion leaders' personal frustration in seeing a woman establish a successful business. The restrictions experienced caused a drastic reduction in her potential income, which again set new

barriers to further innovation and sustainable socio-economic development.

Processes for Innovation

There are four main processes, which contribute to a continuously innovative social and economic tourism business environment. These are a) the provision of adequate education that encourages creative thinking, b) the use of up-to-date technology, c) the rule of law, and d) financial incentives. First, education is considered the foundation of a sustainable society and it will be the most influential determinant of the success or failure of tourism businesses (Greenspan 2007). Allan Greenspan, former chair of the US Federal Reserve Bank, once said "The solution to some of our gravest problems lies in reforming the way we educate our children". He explained that education can also help businesses to "creatively destroy" and revitalize themselves from within by scrapping old and failing projects and then reallocating resources to newer, more productive ones. By helping people understand the dynamics of the field in which they operate, resources can be more efficiently and creatively allocated in order to meet the new market dynamics.

Second, technology in today's world is changing at light speed and direction of change is unpredictable. As a developing country, Ghana is not an exception and it is crucial for the country to be proactive with new and innovative infrastructural development projects. Communication technology, for example, mobile phones, the Internet, cable TV, etc. has arguably turned the Global Village into a small ghetto. In rural Ghana, the development of information technology and infrastructure has recently allowed larger enterprises to increase direct communication and virtual presence via Internet sites, emails and mobile phones. However, for small tourism businesses without IT access, opportunities for attracting and targeting customers remain low, which results in an increasing competitive disadvantage. Government support for investments into technology is therefore seen as a crucial driver for socio-economic prosperity.

Third, applying the rule of law and order will ensure the safety and trustworthiness of a sustainable business environment. For example, once prevailing issues and uncertainty regarding land ownership and property rights in Ghana are resolved, the tourism industry can operate freely and under just circumstances. Such macro factors are crucial for attracting and securing tourist providers and business people who are interested in investing in the local economy. A functioning, reliable and non-corrupt government will secure law and order for the benefit of the local people and contractors. If all misbehaviour is dealt with fairly and just, trust within the business sectors and communities can be created and opportunities for investments will grow.

Fourth, financial incentives and support by the local and federal governments are considered vital measures for advancing innovation, particularly in a developing country such as Ghana. Often, the local entrepreneurs do not possess the initial resources necessary to establish a business or company, and individuals with creative and innovative ideas are often limited in their power to realize and implement their business plans due to associated expenses. Here, the government is encouraged to provide a support frame for small businesses facilitating investments, which should encourage and benefit newly established local entrepreneurs and their workforce. Initial subsidies, incentives and support would encourage small entrepreneurship.

Networks for Innovation

The creation of integrative tourism networks is fundamental for the effective exchange and advancement of information, ideas and projects among players in the tourism industry. Networks can be both the source and beneficiary of the different processes needed to establish an innovative socio-economic environment in Ghana. On the one hand, existing contacts and networks can open doors and propel the growth of the tourism industry, on the other hand the togetherness of people, the exchange of ideas and the cooperation in projects can lead to new friendships and networks being created for future tasks (Bortei-Doku Aryeetey 1998). Currently, networking in Ghana

is not appropriately understood as a form of effective exchange of information for the advancement of developmental goals. For example, rather than receiving help and advice from other players in the tourism industry, the benefits Auntie Aggie obtains from networking come from the good rapport and regular exchange she has with her customers. The tourists often give her ideas and support on how to run her business effectively, what and how to change, or innovate. For example, tourists have mentioned the importance of creating an Internet site and an email contact to market and promote her business on a larger scale.

On a macro scale, it remains to be seen how the government, financial institutions, tourism researchers and entrepreneurs share innovative ideas amongst each other. If these tourism stakeholders see the value of cooperating, supporting and linking to each other in innovative ways, then socio-economic development will be the consequence (Bortei-Doku Aryeetey 1998). People can learn from each other, avoid common problems, or cooperate to overcome barriers, trouble or hardships. At the same time, networking can help to improve or strengthen rules and regulations that support effective innovations. This could, for example, encourage financial institutions to support the industry, once a certain macro-framework is provided and a strong intra-industrial network is established.

If networks in the Ghanaian tourism industry had been well coordinated and well functioning, Auntie Aggie would not have experienced the same level of mishaps and problems along the way. For example, land title registration problems and miscommunication between her and the local chiefs could have been avoided if an intra-community network had been available to support her. Local businesses could have exchanged experiences and helped each other out during the registration processes and in dealing with Government officials. Employing an effective and culturally acceptable local network promises to be a convincing strategy towards solving complex community issues and overcoming socio-cultural differences.

Conclusion

This case study discussed the underlying narratives that influence innovation in tourism in the context of Ghana's evolving young democracy. The study featured a female entrepreneur, whose innovative eco-tourism business managed to overcome financial, social and cultural barriers. Co-operation and networking of individuals, communities, tourism operators and government officials promises to be beneficial for small-scale tourism developments in the country. While the relationships between stakeholders in the industry are currently loose or non-existent, the establishment of local networks can help to effectively promote information flows, share knowledge, and establish contact and trust between all tourism stakeholders. The Government is encouraged to contribute to innovative developments by establishing a macro frame for the community including the provision of education, technology and financial incentives. The effective exchange of information among all stakeholders in the tourism industry would allow contacts and networks to be established and trends to be anticipated and addressed.

In conclusion, factors that promote or hinder innovation can be complex, especially in a developing world context, where traditional and cultural systems considerably influence socio-economic development and change. Innovative ideas and policies can impact positively on the social, cultural, economic and political environment. However, the local micro business environment will only benefit if projects are supported by a macro framework of governmental support that goes along with a change of attitude and work ethics.

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Chapter 9 A.G.S.E.P., Sri Lanka

Nico Schulenkorf

Introduction

The *Asian German Sports Exchange Programme* (A.G.S.E.P.) is an NGO, which has been conducting sport events and international exchanges between Sri Lankan and European sport teams since 1989. The organisation is based in Marawila, in rural western Sri Lanka, and was founded by the current CEO of the programme, Dr. Dietmar Döring, who at that time was the national coach of the table tennis team. Dr. Döring saw an opportunity to use sport events as an avenue to enhance tourism and the relationships between estranged ethnic communities in Sri Lanka. The philosophy of A.G.S.E.P. is that sport is an ideal way of connecting people and transcending social, cultural, ethnic and religious cleavages. Sport provides a neutral platform for all participants, who are able to experience and learn from each other in a playful and open atmosphere.

A.G.S.E.P. is headquartered in the premises of the *Aquarius Resort*, a sport hotel complex, which was built by Dr. Döring and his partners in 1989 and is now managed and sustained by local Sri Lankan staff. Over the years, the resort grew from 12 rooms and 12 local staff members to now 40 rooms and over 40 staff. For the Aquarius Resort the close co-operation with A.G.S.E.P. guarantees a steady influx of tourists such as sport teams and their entourage, who participate in sport exchanges and reside at the resort during their stay in Sri Lanka. International large-scale events such as football tournaments or intercultural festivals for the whole community are staged about three to four times a year, while small-scale event projects and exchanges for schoolchildren from the different areas of Sri Lanka take place on a two-week basis.

Against the background of a long lasting civil war, social sport event tourism provides an innovative, sustainable form of tourism in Sri Lanka. This type of active tourism has a socio-cultural focus and combines people's travel experiences with the emotional factor of contributing to the advancement of intercultural understanding and peace in a divided country. With their sport tourism co-operation, A.G.S.E.P. and Aquarius Resort aim to provide an opportunity for friendly competition and social approximation between international and local sport teams, and even more importantly, between local teams from the estranged ethnic communities of war-torn Sri Lanka. Whereas sport events themselves are not entirely new to tourism, A.G.S.E.P. innovatively uses friendly matches between international sport teams and the Sri Lankan ethnic teams to advance rural community development. The socio-economic benefits for the organisations and local community include the promotion of the destination and an increase in jobs and revenue. International tourists and sport clubs are attracted on a regular basis to the touristically unattractive and often neglected rural town of Marawila, and benefit from the shared experience with local clubs.

Drivers of Innovation

For more than two decades, civil war and political struggle between the Sinhalese-dominated Sri Lankan Government and the *Liberation Tigers of Tamil Eelam* (known as *LTTE* or *Tamil Tigers*) have severely hindered socio-economic development in the country. Often described as the most violent and dirty ethnic conflict in modern states, the civil war has resulted in over 80,000 casualties. The intergroup relations among Sri Lanka's people are deeply shattered and in order to encourage socio-economic development and sustainable tourism, an active, neutral, peaceful and fun-bringing platform is needed.

Dr. Döring's innovative idea of combining tourism with integrative sport events is strengthened by research that shows sports' potential as a conflict reduction mechanism (Lea-Howarth 2006; Sugden 2006; Verweel and Anthonissen 2006).

A.G.S.E.P. defines integrative sport events as peaceful intergroup sport encounters that popularise social values such as intercultural togetherness, respect, courage, commitment, and appreciation through active participation and exchange. Integrative sport events are planned, organised, implemented and staged in co-operation with the three major ethnic groups on the island, the Sinhalese, the Tamils and the Muslims. These events target international sport tourists, who want to actively contribute to the peace process in Sri Lanka by participating in sport encounters.

Three main benefits arise from integrative social sport event tourism. First, the interaction of different people who are contributing towards the common goal of staging a successful sport event is expected to create collective feelings of passion, unity and a sense of community. The participating groups may further gain from an increase in pride when staging successful inter-community events. Second, sport has the power to encourage activity, contribute to health and fitness, develop intercultural participation, intergroup understanding and learning, and therefore lead to overall physical, social and cultural development. Third, sport events attract international participants, who add to the international flair of the events and contribute to the socio-economic development of the local community. In this case, sport event tourists secure financial benefits *inter alia* for the hotel resort, tourism operators, local shops and businesses in rural Marawila.

Barriers to Innovation

There are many external and internal barriers for A.G.S.E.P. and the Aquarius Resort to overcome in the development and staging of intergroup sport projects. First, the frequent change of the socio-political circumstances and the varying safety and security situation in Sri Lanka are significant external barriers. The latent risk of terrorist attacks is prevalent at all times, particularly in relation to large events and sport activities staged in the war-torn northeast of Sri Lanka. The fear of attacks has further increased following the ending of the Cease Fire Agreement between the

Government of Sri Lanka and the LTTE in January 2008. To overcome this external barrier, sport events with Tamil teams from north eastern Sri Lanka are currently only taking place in the western Sri Lankan community of Marawila – exchanges to LTTE controlled areas are avoided. The second external barrier to innovation is the lack of infrastructure in many regional parts of Sri Lanka, including the rural western town of Marawila, where A.G.S.E.P. and the Aquarius Resort are located. Streets are in bad condition, public transport is unreliable and sport grounds are primitive by international standards. This barrier is partly overcome by the provision of two community buses that provide transport for the international visitors to the event.

Internal to the organisations, the biggest challenge for A.G.S.E.P. and Aquarius Resort is the differences in socio-cultural values and local customs such as food, nightlife and alcohol between Asian and European tourists and sport participants. For example, whereas German sport teams are used to European style food and heavy consumption of alcohol, the Sri Lankans favour rice and curry and do not always handle large amounts of alcohol well. In addition, there are cultural differences in valuing competitiveness and the desire to win at A.G.S.E.P. events. European teams expect strong competition even when playing international friendly matches. Sri Lankans take part in friendly matches for social and cultural reasons to primarily enjoy the atmosphere of the day. For them sport is the means, not the end. This becomes a serious problem when the level and strength of play is different, and European teams are not challenged enough and embarrass the Sri Lankans in soaring defeat. To deal with this problem, Sri Lankan teams are inspected by A.G.S.E.P. staff before the exchange trips are planned to analyse and categorise their level of performance, which is then matched with suitable teams from Germany.

The second major internal challenge is that of language. While the German investor is able to communicate in English, his Sinhala is very basic and he does not have any Tamil language skills. Additionally, not all locals are capable of understanding and

speaking English fluently, and some have no English skills at all. Further complicating the problem, Sinhala and Tamil are two completely separate languages from different backgrounds and often members of the two ethnic groups do not understand each other. The ethnic mix of staff (Sinhalese, Tamil, Muslim and European) at the Aquarius Resort is not the norm in Sri Lankan tourist companies and against the background of a long lasting civil war, ethnic prejudices, stereotypes and rivalries need to be overcome. It took several months of continuous interaction before basic language skills were learnt and first signs of trust between all parties could be witnessed.

Processes for Innovation

A.G.S.E.P.'s sport and social development activities can be divided into two main phases. The first phase lasted from 1989 until 2002, throughout which the international sport exchange program between Sri Lankan and European sport clubs was started and consequently advanced. The second phase started after the signing of the Cease Fire Agreement (CFA) between the Sri Lankan Government and the LTTE in 2002. Since then, A.G.S.E.P. has been focusing mainly on intra-Sri Lankan sport events.

During the first phase, an international exchange programme between Sri Lankan sport teams (mainly football, basketball, volleyball and table tennis) from the governmentally controlled western and southern parts of Sri Lanka and European clubs was established. The dual foci of this programme were to provide a positive socio-cultural experience for all participants, and to advance the development of outstanding athletes and coaches. For both the Sri Lankan and European participants the sport exchanges offered new, different and exciting cultural experiences, social opportunities with foreign people, and the chance of representing their country abroad. During their visits to Sri Lanka, the European teams stayed at the Aquarius Resort. They were invited to look beyond the scope of the sport experience and combine their "beach and sport holidays" with cultural activities such as visiting

historic sites and highlights of the island. These trips and activities were organised and conducted by players from the local communities and allowed local tourism providers to benefit from extra business. When performing at sport matches in Europe, the Sri Lankan teams were accommodated free of charge by host families.

The other focus of the exchange programme was on sport development and on the individual training and education of talented sports people and coaches. Selected Sri Lankan participants were invited to train with and learn from European sport experts and former professional players. The best were given the opportunity to train with professional teams and sign overseas contracts to further their individual careers. At the same time, Sri Lankan sport coaches, trainers and support staff were invited to attend workshops, seminars and conferences to learn from experienced European coaching experts. Theoretical knowledge was combined with practical experience to “train the trainers”. This multiplier strategy secures future support of many local sportspeople and the qualified and proficient development of individual players in Sri Lanka.

The second phase of A.G.S.E.P.’s sport and social development projects started in 2002, after the signing of the CFA between the Sri Lankan Government and the LTTE rebels. Since then, A.G.S.E.P. has been placing its focus on integrating sportspeople of Sri Lanka’s rivalling ethnic groups in sport camps, sport events and workshops to provide them with a platform to get to know and appreciate each other. In the first years, the inter-community sport events were conducted on the Aquarius Resort premises in Marawila. Recently, exchanges with teams from all over the island have occurred, including the heavily war-affected north eastern parts of Sri Lanka. After tedious negotiations with all parties the first big success was achieved in October 2003, when in the border town Vavuniya, which separates Government and LTTE controlled areas, a women soccer tournament was held featuring the Sri Lankan national team, a Tamil selection, and the German club, SV Herrmannstein. This sport

event was the first event to be conducted in northern Sri Lanka for over 35 years and attracted more than 10,000 local and international spectators. The few remaining hotels, hostels and guest houses in the former war-zone were completely booked for the first time in years, as tourist and visitor demand exceeded supply.

Because of the increased demand in sporting events, local communities and workers from the area have recently constructed four multi-sport complexes on the island, where sport events are now regularly staged. The local communities and tourism operators are managing and sustaining the four sport centres, and they are planning and organising the exchanges, events and adjunct programs for tourists and visitors. To secure long-term benefits of social sport event tourism, the Marawila community decided to establish an International School that would focus on sport and tourism courses. The aim is to educate children from different communities in a multi-lingual, multi-ethnic context, and to provide scholarships for children from underprivileged family backgrounds. It is hoped that this purposeful education will provide the community with qualified graduates, who can contribute to the local tourism, event and sport sectors. The capital for the International School is expected to be secured through the community's event projects, other financial and in-kind community contributions, international aid money and private donations.

Networks for Innovation

Without reliable local and international networks, the co-operative tourism endeavours of A.G.S.E.P. and Aquarius Resort could never be realised and the internal barriers would detract from the success of the integrative sports program. First, personal networks can establish the initial contact and co-operation between key players in the sport, event and tourism industry, community members, representatives of clubs or associations, and government officials. Having influential people on board allows for the sharing of existent networks and the commencement of a multiplier effect. For example, Dr. Döring built on existing relationships with other players in the sport

business world to arrange sport exchanges between German and Sri Lankan table-tennis clubs. Once the first events were successfully staged, more and more people knew about the program and the sport resort in Sri Lanka, and consequently decided to take part in future activities. Similarly, Dr. Döring's contacts to the government and LTTE sports council have proven beneficial in regards to the quick and reliable handling of visa documents for sport exchanges, and the granting of permissions to enter the northeastern parts of Sri Lanka for intercultural sporting events.

Second, the local tourism network in and around Marawila secures community support and provides a special and authentic Sri Lankan experience to all visitors. While the sport teams are staying at the Aquarius Resort, many daily activities, outings and performances are provided by the local tourist operators, which realise a win-win-win situation for the Aquarius Resort, the local businesses and the international tourists. Aquarius Resort can offer authentic Sri Lankan products and services, the local businesses benefit from the increase in tourist demand, and the internationals profit from local expertise in their unique Sri Lankan experience.

Summary

The innovative and sustainable idea of linking community development to sport event tourism has proven to be beneficial to A.G.S.E.P., the Aquarius Resort, and the local tour operators in rural Sri Lanka. The sport exchange programme has provided more than 5,000 participants with the opportunity to have a socio-cultural experience in a foreign country, and thousands of locals were given the opportunity to participate in peaceful inter-community events and exchanges on the island. In times of difficult socio-political circumstances in Sri Lanka, A.G.S.E.P. has continuously attracted international sport tourists to the Aquarius Resort and has given local businesses and communities the chance to benefit economically. Today, Sri Lankan staff successfully manages A.G.S.E.P. and the Aquarius Resort. The international and interethnic networks created over the years form a great part of the overall success of the

organisations, as they help to overcome internal and external barriers. In conclusion, Dr. Döring's innovative social sport event tourism projects have been beneficial to the investors, the tourists, and the local Sri Lankan communities.

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Chapter 10 The Sustainable Tourism Laboratory, Blackstone Valley, Rhode Island, USA

Larry Quick

Introduction

Since 1985, the Blackstone Valley Tourism Council (BVTC) has built its tourism platform on the concept of *place-making* (not *place-taking*) (Billington 2006); a commitment to a holistic social, economic, ecological, cultural and built form of development at the local level. In choosing this approach, the BVTC acknowledges that the Blackstone Valley and tourism within the valley are elements of a larger, whole system, or 'system of systems' that are interdependent and synergistic. If one system fails, it brings down all. The BVTC believes that without this view, the Council and tourism in the Valley will not survive. This type of thinking is driving the Council to innovate tourism in partnership with the communities they represent. A key innovation of the BVTC is the Sustainable Tourism Laboratory (STL). The STL is a community-based teaching and learning network connecting local and global thinkers and communities to work on advancing sustainable tourism strategies. Though still in its infancy, the STL is starting to apply complex adaptive systems methods through resilience thinking and a resilient community process as a basis for its theory and practice. In this approach, tourism is seen as one critical driver of community resilience – *the ability of a system (community) to absorb disturbance and still retain its basic function and structure* (Walker and Salt 2007), or, *the ability of a community to flow with changes in conditions and prosper*. (Quick 2007).

The Laboratory's purpose is to introduce the concept of planned sustainable tourism to local, regional, state, provincial and worldwide tourism leaders and community stakeholders aiming to develop viable and successful destinations (Billington and

Cadoppi 2007). The STL is not a building; it is a place-centered network that will expand its practice of resilience to include tourism communities from across the USA, and eventually the world. In the Blackstone Valley it uses local social, built, natural and historical environments as cases for and demonstrations of tourism, sustainability and resilient communities. By deliberately embracing an open-source process, the STL envisages that as the network grows it will inspire connections with other community nodes; leading to the development a global network of resilient tourism professionals and practitioners.

Through strategic action, the STL is actively provoking government and the private sector (often seen as barriers to sustainable tourism) to adopt resilient tourism processes, and to approach innovation and development in a way that supports a community's values and enhances its ability to become resilient.

Drivers of Innovation

In conventional community development, drivers of innovation are typically those that will either push to keep a community the way it is (for instance to sustain a social, economic, cultural, ecological and built form), or change it for the better (to innovate novel and resilient social, economic, cultural, ecological and built forms). A decision as to what is to be innovated and why is generally driven by a perceived problem or opportunity, a narrow focus of community, and a single departmental or 'siloed' agenda.

The STL resilient communities approach takes a broad view of innovation and the need to transform communities through three key perspectives:

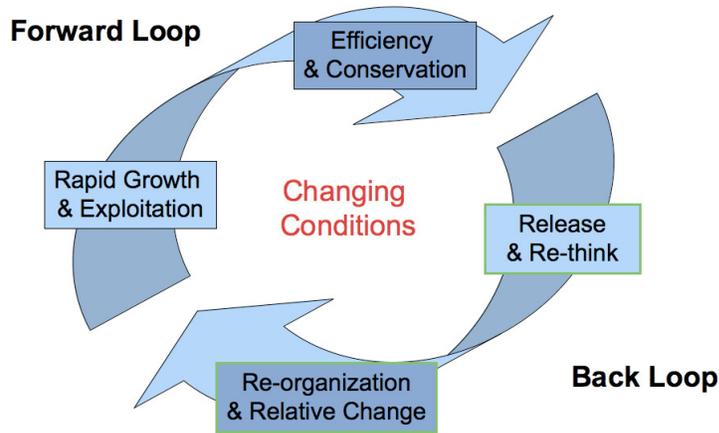
1. A community within the STL connects and operates itself as a 'whole place'. As resilient communities they are whole, complex systems – a network of networks, a 'plexus' (Quick 2007) that only work if key systems are aligned, connected and

working in tune with each other. Diverse elements like social, ecological, economic, education, cultural or built environments are understood to be interdependent and a community knows that intervening in one environment will impact on all.

2. Places and organizational forms within the STL are subject to a broad scale of local, regional and global conditions that are continuously and discontinuously changing the environment that shapes a community. Hence communities are complex and to be resilient must embrace this complexity by continually looking inside and outside to establish an authentic 360-degree view of the conditions that will or may impact them. Through this view the community can build a shared context that provides a foundation for inclusive decision-making across a whole place view – feeding information and giving direction to both tourism and non-tourism related capabilities.
3. STL communities understand that they are subject to an innate, natural cycle of change that they may either follow, or ignore, at their risk. The notion of an adaptive cycle (Gunderson and Hollings 2002) is a highly useful metaphor to understand such changes and to describe the behaviour of social, economic and ecological systems through space (geographic scale) and time (history and future planning).

It is the belief of the STL that, like any other social/economic form, tourism is subject to these three perspectives and if tourism is to be a primary, underpinning element of a community, tourism initiatives must be driven by these principles.

Figure 10.1: The Adaptive Cycle within a Whole Place View



Adapted from CS Hollings –Adaptive Cycle -www.resalliance.org/570.php

The adaptive cycle posits that all systems experience four phases. This understanding is important for policy and management as each phase provides a different point of leverage for innovation and change. Early in the cycle the system is engaged in a phase of rapid growth and exploitation as an innovation takes hold and new opportunities are created. Within this phase the role of innovation is to 'trim-tab' or value-add to the originating innovation and to create momentum for the system to transition to the next phase. In the efficiency and conservation stage innovation is used to maintain the state of the system – to keep it in a state of near equilibrium so that maximum returns are drawn from minimum input. All states of the adaptive cycle are inextricably linked to the changing conditions that provide the context and path through the transition of the system. When conditions no longer support the efficiency phase, a new set of conditions drives the system to release and re-think a new and novel form or change of state that will be sustainable within the new conditions. This phase represents the most challenging environment for innovators, as it requires a completely different approach to innovation and innovation leadership that will take a community from a history of certainty into a story of possibility and uncertainty, based

on (more than likely) weak signals from conditions that are only understood at an intuitive, non-experiential level.

As the system innovates a new form and begins to balance creativity and structure it transitions from ideas and possibilities to an organized form that is consistent with change. Innovation at this phase requires an ability to drive toward growth and exploitation – and so the cycle repeats itself. At any phase it is possible for the cycle to breakdown, but in particular the two states where the system is most vulnerable are the leap of faith between reorganization and rapid growth, and from conservation and efficiency to release and re-think.

A key outcome of the adaptive cycle for the STL is strategic adaptation that creates resilience and resilient communities. Communities achieve this by closely watching the immediate and emergent conditions, and in the context of changing conditions asking 'is forward or back loop strategy required?' Given this information they are in a position to innovate capabilities that align and are adaptive to changes in conditions.

The Blackstone Valley provides a perfect backdrop for the thinking and behaviors outlined above, and the activities of the STL. The Valley was the birthplace of the industrial revolution in the USA and its network of villages and towns grew rapidly around industrialization energized by an abundant watershed and other conditions that provided a labor force and access to ports for distribution of finished product. Initial conditions like this made the Valley a major attraction for industrial growth. However, visit the towns of the Valley today and like many places its future is easing through the remnants of the past glories of the industrial age, and the realities of growing 21st century capability. While aspects of its heritage and setting might provide a rich environment for tourism, the Valley struggles under a set of conditions that make sustainable economic and social development problematic.

Tourism is one capability that has its obvious benefits, but, in taking a whole place or whole system view, it is counter productive to be developed in isolation to other conditions that impact the communities. For instance, conditions like the disparate socio-economic make up of communities – the Valley is home to a large population of immigrants (both documented and undocumented) whose long-term welfare must be taken into account. The river with many heritage buildings along its banks is central to the Blackstone Valley watershed. The river is both a beauty and a beast, and requires long-term understanding as to how it will function in a fast changing climate. The Valley must also be clear on how other global conditions will impact it. The rise in oil prices, food prices, the cost of being carbon neutral, the cost of climate change and a state in recession are a few of the economic pressures that the whole place view must take into account. In creating a strategy, the Valley and its many stakeholders must make integrated innovation decisions that include conditions that impact the whole, and do not create unintended negative consequences for its parts. For instance, a tourism strategy that created negative synergy for broader, social, economic and ecological facets of the Valley would be counter-productive to the whole – including tourism itself.

In the context of the above types of conditions and the adaptive cycle, the Valley is facing decisions of what to invest in from a forward loop perspective, and what to let go of to innovate in the back loop. This is a hard decision for communities to make as they are caught between the successes of the past, and a distant, risky creative product of the future. However, if the focus is on over-innovating within the efficiency and conservation stage, communities take the risk of holding on to capabilities that only bare value within a past set of conditions. Over-innovation in capabilities that are no longer supported by conditions provides marginal return (if any) and the maximum payback is only ever in the gentle journey to oblivion of managed decline. Very well managed decline has been an abundant element of the valley's past 'growth strategy' and in many ways emergent conditions demand that it quickly drives innovation that

responds to the realities of the 21st century, and that lets go of elements of a 20th century that is long gone.

The innovation challenge for tourism in the Blackstone Valley is addressed through the following question: *Considering that whole place environment is characterized by a broad raft of very necessary social, economic, ecological, cultural and built environment reforms, what role does tourism play in a 21st century?*

Barriers to Innovation

From an STL perspective, the issue of barriers to innovation is not so much the forces that stop innovation, but more the capabilities and commitment to innovation that has the potential to create resilience. The initial task of creating a whole place view, an intimate understanding of conditions and a strategic use of the adaptive cycle are all initial barriers to *resilient* innovation. Municipalities, organizations and innovators generally tend to take a different view of change and innovation to that taken by those committed to resilience and resilient communities. This situation represents an innovation challenge for innovators themselves as they have to release and rethink their approach to innovation and to re-organize their thinking and the processes they use. Like all resilient innovations, if the present state has provided strong efficiencies and rewards, change is highly problematic and more than likely will not happen without a crisis in conditions – where conditions are such that they force the system into a new state that is far from the original state being held onto.

A way of framing this barrier is Schumpeter's concept of '*creative destruction*' which he described as a '*perennial gale of creative destruction*' (Schumpeter 1950). Another useful metaphor is that of the frog in boiling water. If the frog is dropped into boiling water it will immediately jump out. However, if the same frog is placed into cool water which is then gradually heated to boiling, it will adaptively innovate itself to death. In resilient communities thinking this behavior is described as '*managed decline*' (Quick

2006); a state where a community devotes most of its resources and innovation potential to remaining the same or marginally the same – attempting to remain in the efficiency and conservation stage of the adaptive cycle. When the conditions that created the original growth and efficiency are long gone, the community takes a long journey to a sharp awakening and any hope or possibility of innovation leading to a state similar to the past is lost.

Processes for Innovation

The STL and its application to resilient innovation within tourism follows a process akin to that applied to resilient communities:

The community plans using a dynamic method. Resilient communities plan using processes that allow them to plan and act in a *continuous progressive movement leading to strategic planning in action* (Quick 1995). Dynamic planning creates a strategic platform for change that resembles designs that are never done and that are constantly trim-tapped to be relevant and relative to conditions – a strategy in action based on immediate and emergent conditions. This STL approach to planning is known as the Resilient Communities process and requires a different approach to different situations. However, in general and simple terms, the process addresses the following eight primary questions:

1. Who and where is the community? Who are the people, and what is the geography involved?
2. What is being proposed and why? What are the problems or opportunities, and what is to be achieved?
3. What conditions are impacting the community? What are the immediate and emergent conditions that the community is facing at a local, regional and global level – at a whole community perspective – social, economic, ecological, cultural, community knowledge and built environments?

4. What level of connectivity exists within the community? Given the proposition and conditions, what are the key networks involved and how connected and collaborative are they? What is their whole system perspective?
5. What capability is required? Given the conditions what level of capability is required to achieve the proposition?
6. What value are we adding? Given the capability was created, what value could be added to the original proposition? Describe this in a whole place bottom line.
7. What catalytic action is most effective and efficient? Given the above, what are the highest return actions to be taken?
8. What conversations need to happen to put and keep this strategy in action? What is the community message, and how will it be generated?

These eight questions are not necessarily explored in a linear manner and are more likely to be addressed simultaneously throughout the process.

Networks for Innovation

The STL and its approach to resilient tourism thrive on its ability to network, share information, work collaboratively and join together to operate individually and as a whole. Imperative in this 'web' is the STL network's ability to understand conditions, create a shared context for decision making, appropriately connect their capabilities and execute catalytic projects that will benefit the whole.

In doing so:

The community employs an open platform innovation system (OPIS). The STL understands that innovation systems are a critical element of resilience, and that to achieve optimal innovation in today's highly connected world requires an openness that attracts and leverages all manner of entrepreneurship and collaborative effort. Hence the platform may be owned by a community, but is also open to partners to allow interested parties to align with its common cause.

The community is the message and the medium. STL communities are deeply conversational and interact through a combination of media forms. They do not rely on 'the media' for news, to communicate with each other, or to set the agenda – they are the agenda. Social networks drive an 'organic narrative' that spells out clearly what the STL community is and what it is up to.

Summary

The Sustainable Tourism Laboratory's mission was informed by significant and critical sustainable tourism development issues. The Laboratory fulfils this mission by designing and presenting a series of robust symposiums, conferences, and programs to link the Laboratory's work to the local and global arenas (Billington, Carter and Kayamba 2007).

The critical and immediate need to pursue sustainability strategies is well documented and broadcast throughout the world. Not only is the idea of a sustainable future consistent with how the STL works within the natural environment, but also how holistically its social, economic and built systems comply with sustainable change.

The STL has long been committed to sustainable growth and a key underlying principle it follows is that in planning and developing sustainability there is a global need to change processes and practices that may have served tourism in the past, but are not appropriate for the future. The rise in sustainable thinking has also presented planners and policy makers with a conundrum – community leaders tend to know what is not sustainable without really knowing what is sustainable, or how sustainability might be achieved. This dilemma is further exacerbated through a lack of a comprehensive and integrated 'whole community' sustainability framework and tool-set that can be applied at a community level while being supported by policy at a regional, state or national scale.

In the STL's experience the notion of a sustainable community and sustainable tourism is an admirable ideal and goal. The majority of practice is fragmented, tactical and confusing especially to communities who are informed that what they are doing is not sustainable, without being told about what is sustainable and how sustainable practice can be achieved in an integrated, whole systems manner that serves the entire community.

Having said this, by no means does this suggest that the goal of sustainability is not 'alive and well'. In an attempt to do something that resembles an environmentally sustainable future, communities are doing great work in the areas where they understand and see they can make a difference. Such efforts are primarily in the three R's: *Recycle, Restore, Reduce* – recycle and reuse what you have, restore conditions back to past levels that might work in the future and reduce consumption of resources – especially consumption that dramatically impinges upon limited and changing natural resources. As stated, these are highly admirable and required activities. However, the STL believes that in too many instances key ecological, economic and social thresholds have been crossed beyond what recycling, restoration and reduction can salvage toward a robust foundation for the future. Hence, in adding to and building on the initial start of the three R's the STL adds one more R to tourism strategy: *Resilience*.

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Chapter 11 Wenhai Ecolodge, Northwest Yunnan, China

Ginger Smith and Jiayi Du

Introduction

The case of Wenhai Ecolodge in Northwest Yunnan, China, may be regarded as a cogent example of current and future successful development of sustainable tourism destination management in China. Yunnan province is one of the most ethnically, geographically, and biologically diverse places in China. Approximately three million people live in Yunnan Province, including 13 of China's 55 ethnic minorities and as much represent a culturally diverse and uniquely attractive tourism destination. In 2006, Yunnan Province's tourism revenue reached \$6.2 billion and accounted for 12.5% of the GDP. The Northwestern portion of Yunnan is famous for its rural villages, and the Old Town of Lijiang is also a UNESCO World Heritage Site.

Map 11.1: Northwest Yunnan



Wenhai Ecolodge is a community-operated retreat in Northwest Yunnan, China run by a local cooperative of 56 households from upper Wenhai village with support from the US-based Nature Conservancy. This lodge is nestled in a valley at approximately 10,000 feet above sea level and about 15 miles from Lijiang, one of China's loveliest cities. There are 12 newly renovated, and nicely appointed rooms in the lodge with room rates starting at US \$12 per day. Every household purchased shares and contributed start-up financing through a loan to the Ecolodge. The Ecolodge uses sustainable energy systems including biogas and solar panels to decrease the impact on the surrounding resources by eliminating or reducing the dependence on fossil fuels as an energy source. It also has a small library with information and books about the cultural and natural resources of Wenhai. Ten percent of the lodge's profits go to a conservation and community development fund that supports projects around Wenhai Lake. In 2003, Wenhai was named one of the World's Ten Best Ecolodges by *Outside Magazine*. Wenhai also cooperates with Northwest Yunnan Ecotourism Association, whose goals are to support environmental protection, preserve the area's diverse cultural heritage, and contribute to community development.

Drivers of Innovation

Through employment with community-based ecotourism companies, local villagers are able to earn much-needed tourism-generated revenues that replace income earned through destructive practices such as illegal game hunting/poaching, logging/clear cutting for fuel/charcoal-making and over-fishing for food supplies. Biogas, solar panels and, in some cases, wind or hydropower help to reduce the drain on natural resources that tourism can bring to a community. Furthermore, local residents who open their own guesthouses are proactively embracing these kinds of sustainable energy solutions.

Managers and employees of companies are local community members who benefit directly through skills training in such areas as nature guiding, hospitality services,

and business management. Some of the local young people learn English and enhance their language skills by working as travel and tourism guides. These activities contribute to employment and retention of human resources in the local tourism-related industries. Additionally, more indigenous families are reconstructing their houses, and opening bed-and-breakfast establishments and small hotels to accommodate tourists. Most agreed that their traditional lifestyles are not significantly or negatively changed, and in fact that their family incomes have been increased in all regards.

Companies are owned and managed by local community members, which enables the community to direct and influence the development of tourism in its area. Since the company is community-owned, the local residents keep most of the income and have the greatest influence on the future development of the sustainable tourism destination management project in their home community (in this case, the Wenhai Ecolodge resort community).

By seeing the interest in and enthusiasm for Chinese local culture and heritage that visitors experience from learning about local traditional tourism destinations, the value of this cultural heritage increases among community members as well. Family traditions have passed from generation to generation because of sustainable tourism destination management and the growing interest worldwide of intangible cultural heritage.

Barriers to Innovation

There remain numerous internal and external barriers to successful implementation of Northwest Yunnan's sustainable tourism management. First, tourism employers and tourists have multiple misconceptions of the new-found tourism industry. The tourism industry was historically regarded as a non-polluting ("smoke-free") industry in China, especially in early development stages; therefore, many tourist sites lack the early

implementation of laws and regulations to control the pollution and environmental degradation often caused by the tourism industry. Compared with other industries, the tourism industry in certain regards requires less initial investment and produces higher immediate profitability. Tourism resources are misperceived as inexhaustible and able to be utilized perpetually. These kinds of misunderstandings cause increasing investment in tourism products without sustainable planning and development measures put in place. Furthermore, sustainable tourism becomes a grandly applied term in many cases and is often misused. As a result, unmanaged tourism development too often occurs in the name of sustainable tourism.

When industry employees and tourists do not have a clear understanding of the drivers and reasons for innovation in the industry, their misguided policies and decision-making often, in fact, harm the industry. A primary reason behind this demise is the lack of professional education and training of all constituents in the industry. Many employees in the tourism industry do not have proper education background or training experiences. More than half the employees do not have any experience or professional skills whatsoever when they begin their careers they so desire to experience in the tourism industry. Some tourists, too, chronically fail to recognize their responsibilities to protect the environment, and some tourists thoughtlessly leave litter behind during their trip.

From the administrative perspective, proper industry management systems are lacking in China for many reasons. Tourism resources are owned and managed by the government in China; however, the government decision-makers do not always have full information about and awareness of sustainable tourism. Significant negative ecological effects on Yunnan's tourism resources occurred because of the government dam project at Tiger Leaping Gorge. Local government is interested in promoting the tourism industry to gain economic benefits but does not always offer support in areas such as tourism project management. Profitability is always regarded as one of the

most important measures of government investment. Market mechanisms in China are not always mature, and there is a lack of relevant laws and policies that are binding.

Processes for Innovations

The model implemented successfully at Wenhai Lodge suggests that all companies in a sustainable tourism destination management organizational structure should donate at minimum 10% of their net profits to a conservation and community development fund which provides financial support for community development and conservation projects in local areas.

To ensure that visitor activities do not have any significant negative impacts on the resources and local communities in the area, visitor management systems are currently being established. These include, for example, zoning to control ecologically and culturally sensitive areas and the number of tourists permitted to visiting them; [codes of conduct for ecotourists and tour operators](#); village ecotourism resource monitoring teams; and national and local enforcement policies and regulation mechanisms.

A community vision has been developed by community members to identify cultural traditions that they wish to preserve. With these guidelines in place, the impact of tourism on traditional customs can be measured and monitored, and controls can be established if it is determined that tourism is having a negative effect on the local cultures.

Networks for Innovation

Networks also play an important role in the innovation of sustainable tourism. A number of organizations and associations have emerged to assist communities and villages in China to promote sustainable tourism. The Northwest Yunnan Ecotourism Association is a local organization sponsored by the US-based Nature Conservancy.

The Ecotourism Association was developed to introduce tourists to unique ecotourism opportunities around Lijiang and beyond. By developing and promoting ecotourism in Northwest Yunnan, the Association's goal is to support environmental protection, preserve the area's diverse cultural heritage, and contribute to community development through job creation.

In the case of Wenhai Lodge, a management committee, including non-government organizations (NGOs), government, and community representatives, oversees and approves all projects initiated with fund money. A portion of profits generated through the tourist itineraries in the local community goes to funding community development projects, such as micro-hydroelectricity, irrigation, education, and health services. Community members determine what types of projects should be implemented.

Conclusion

The "real" dilemma/opportunity of sustainable tourism destination management in China is hard to ascertain because it is still early in the innovations evaluation process. It is difficult, therefore, to state with certainty that the Northwest Yunnan region - and specifically the case of Wenhai Ecolodge, as a model pilot for other emerging ecolodges - has achieved high sustainability in China's tourism industry. The Northwest Yunnan Ecotourism Association at Wenhai can provide, for example, Wulingyuan Nature Reserve and other regions in China with lessons on both internal and external barrier reduction and experiences in both the costs and benefits of innovation in sustainable tourism destination management.

First, the relationship between protection, tourism, and people's livelihood should be handled properly. The protection of heritage resources is basic and a prerequisite for the sustainable development of tourism and a better quality of life for the people in host communities. As mentioned above, the higher the values local residents place on their own economic, socio-cultural, and environmental heritage, the more sustainable

their commitment to protect and preserve these cultural heritage values and share them with visitors from other parts of China and the world.

Second, the involvement of local communities is the key to sustainable tourism destination management in China from the long-term perspective. When individuals are engaged collectively and cooperatively in a sustained manner as in the case of the Wenhai Ecolodge project, successful innovation for sustainable destination management can be achieved. The local community is comprised of people who personally and professionally best understand the interplay among tourism public, private, and non-profit organizations, tourism's natural, human, and economic resources, and cultural values as drivers for innovation for sustainable tourism in China and other local communities in the world.

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Chapter 12 Summary and Analysis

Jack Carlsen, Janne Liburd, Deborah Edwards and Paddy Forde

In this analysis section, cross-case analysis provides a summary of common, convergent outcomes associated with the set of cases. Cross-case analysis is a means of grouping together common responses to interviews as well as analysing different perspectives on central issues (Patton 1990, Getz et al 2004). Cross-case analysis began with a written case for each unit studied then grouping responses together according to the key questions listed in the Introduction and the key themes and sub-themes found in the relevant literature. In this way, the convergent and divergent issues that emerge in each case study are integrated within a descriptive analytical framework that provides the basis for comparison and contrast.

The key themes for this cross-case analysis are:

1. Drivers of innovation for sustainable tourism
2. Barriers to innovation for sustainable tourism
3. Processes for innovation for sustainable tourism
4. Networks for innovation for sustainable tourism

In order to provide some theoretical and literary context for these themes, the relevant research and literature is reviewed below. Tables of sub-themes and the relevant case studies are provided in each section below. These provide a means of cross-referencing case studies to the relevant research literature and themes that have emerged.

As with any qualitative, descriptive research, it is necessary to validate the thematic framework and case study findings and identify the contribution to knowledge that is made through the research. Whilst individual case studies by their nature have limited

generalisability, the themes and sub-themes that they capture can be related to the wider body of theory and practical knowledge on innovation for sustainable tourism. This is the purpose of the analysis and summary. Cross-case analysis is used to highlight the validity of the main themes and sub-themes in the literature on innovation for sustainable tourism, as well as to identify new and emergent issues that may not have appeared in the literature. This analytical component of case study research should provide readers with an overview of and insights to the key issues identified in the literature and case studies.

Key Drivers of Innovation

According to Bergin-Seers, Breen and Frew (forthcoming) innovation evolves from an innovative climate in which management plays a key role. They found eight determinants or indicators of innovative capacity that cover a number of management capabilities and behaviours - competent management, external relationship management, management of information, recognition of employees, acknowledgement of customer relations, market knowledge, implementation of a systematic new product development process and an awareness of barriers. These capabilities are embedded in the case studies in this volume and are all determinants or drivers of innovation to a greater or lesser extent (Table 12.1).

Table 12.1: Determinants of Innovation and Relevant Cases

Determinant	Relevant Case(s)
Competent and committed Management	Scandic Hotels, Xanterra LLC, A.G.S.E.P., EDDA
External Relationship Management	Ecocean, Scandic Hotels, Xanterra LLC, Diablo Trust, A.G.S.E.P., Blackstone Valley STL, Wenhai Ecolodge

Management of Information	Ecocean, Xanterra LLC, Blackstone Valley STL
Recognition of Employees	Scandic Hotels, EDDA
Acknowledgement of Customer Relations	Scandic Hotels, EDDA, Wenhai Ecolodge
Implementation of a new systematic product development process	Tasting Arizona, EDDA
Awareness of Barriers	Diablo Trust, Tasting Arizona, Scandic Hotels, A.G.S.E.P., Brenu Beach Resort, EDDA, Blackstone Valley STL
Values held by management	Scandic Hotels, Xanterra LLC, AG.S.E.P., EDDA, Brenu Beach Resort, Blackstone Valley STL, Wenhai Ecolodge
Management commitment to innovation	Scandic Hotels, Ecocean, Xanterra LLC, Diablo Trust, Tasting Arizona, EDDA, Blackstone Valley STL

Two additional determinants emerged from the case studies; the values held by managers, and the degree of commitment to innovation in their organisation. For Scandic Hotels their environmental awareness and associated values were first enunciated in the Brundtland Report in 1987 and then captured in the Natural Step principles of "New Scandic" which aimed to "to lead the way and work continuously to promote both a reduction in our environmental impacts and a better environment" (Nattrass & Altomare 1999, Scandic 2003). There are social values underpinning Scandic's sustainability also, with the concept of *Omtanke*, meaning "caring for our

guests and each other while caring for the environment and the society around us” (Scandic 2007), and the belief that it is “in everybody’s right to be treated equally, feel safe and be well taken care of [so called Nordic common sense]” and aims to “offer easy and accessible travel for all” (Scandic 2007). This ethical behaviour is also found in the case study of Xanterra who believed that an EMS program was “the right thing to do”. Clearly, this makes good business practice, so fits well with corporate strategy and economic sustainability.

A.G.S.E.P. demonstrates the values of the Founder and CEO, Dr Dietmar Döring, in seeking to address the ongoing political and civil conflict in Sri Lanka by using social sporting events as peaceful means of resolving ethnic and cultural differences and fostering unity and understanding between the three main ethnic groups. Social stability is a pre-requisite to economic development, so these values have direct implications for social as well s economic sustainability.

Conservation values come to the fore in the case of Ecocean, where the commitment of Dr. Brad Norman to conserve the threatened whale shark and generate public awareness of its status and vulnerability became his passion. Innovation in the collection and management of whale shark identification, information data and mapping of their migration was the key to achieving conservation. Conservation values were also evident in the case of Diablo Trust, Xanterra LLC and Tasting Arizona. Not only was conserving habitat and species important to these organisations, but also the lifestyle and future of those that live on the land or visit places of natural and cultural significance. Conserving culture and tradition can be just as important as conserving nature in the drive to innovate for sustainable tourism.

The values of lived experiences and unique memories can be realised in the way that they are expected by visitors and delivered by tourism operators and staff. The EDDA case recognises that the skilled and competent staff in the Danish attractions sector

plays a crucial role in creating those sought-after experiences; hence, innovation in staff training and management is a key to delivering memorable and sustainable experiences. For the A.G.S.E.P. creating harmonious lived experiences is central to the building, bridging and bonding of conflicting communities.

Of all the drivers of innovation for sustainable tourism businesses and the associated values that underpin them, the most powerful is survival. The power of the human spirit and ability to adapt in the most challenging and confronting circumstances with whatever resources are available is an abiding characteristic of innovation. The Japanese have a term for surviving in a business environment, "arumono" and it is evident in the case study of the female entrepreneur, dubbed Aunty Aggie, of the Brenu Beach Resort region in Ghana. In many thousands of family-owned and operated tourism businesses, family values predominate, and in turn these values influence entrepreneurial and innovative behaviour within family firms (Getz, Carlsen and Morrison 2004). Thus, it is not only important to recognise the reason for pursuit of innovation of sustainable tourism, but also that values underpin those individuals, families and organizations that innovate. These values can have environmental, social and economic dimensions, or a combination of these, and can result in many actions and outcomes that constitute a transformation toward sustainability. Social values can range from the higher ideals of equity and the importance of memorable experiences to the more basic human need for peace and survival. Environmental values can be focused on conservation of a single species or address the global ecological issues related to pollution and climate change. Finally, there is often an economic imperative associated with innovation that can be based on short-term opportunity or long-term strategy to develop new products, services or systems.

Barriers to Innovation

Getz *et al* (2004) found a lack of innovation among tourism and hospitality operators, due to the highly dynamic nature of tourism destinations, high rates of business turnover and ease of duplication of services in many destinations. New destinations are always emerging which are "able to employ the latest advances in tourism management without the drag on innovation of....staff who are used to doing things in a certain way." (Laws 2006:225). High rates of business turnover, and small business failure (Getz *et al* 2004) disrupts business continuity and discourages innovation in existing firms. For many firms in tourism, imitation as opposed to innovation is common as they attempt to remain competitive with truly innovative firms, which in itself may act as a disincentive to innovate in the first place. Oke (2007) found that service firms largely undertake 'me too' changes where firms copy others to remain competitive.

Bergin-Seers *et al* (forthcoming) found that the main barriers challenging the ability of tourist parks to be innovative included both internal and external factors. The external factors were local government regulations and legislation and in particular, planning and environmental legislation. Government taxes relating to land purchases also caused great concern. Governmental red tape was an issue for tourist parks located on large areas of land requiring redevelopment. Various strategies were undertaken to meet government requirements yet progress and change were often delayed. Meeting government requirements varied, yet often held up progress and change. Internal barriers were often related to the limited financial resources of the parks and their inability to tap into sources of finance. A limited number of employees and long working hours for operators made it difficult for parks to seize opportunities when they arose and restricted their ability to put in extra effort beyond day-to-day operations. Finally, the lack of business experience and professional development of some operators impeded innovation, particularly when outside support was not sought.

These barriers could be broadly classified as 'internal' (knowledge, financial, human resources, business) and 'external' (legislative/political, environmental, social, technological) and are encountered at some point in each of the cases studies of innovation (Table 12.2).

Table 12.2: Internal and External Barriers to Innovation and Relevant Cases

Internal Barriers	Relevant Case(s)
Knowledge	Scandic Hotels, Ecocean, Blackstone Valley STL, EDDA, Wenhai Ecolodge
Financial	Ecocean, Xanterra LLC, Scandic Hotels, Brenu Beach Resort
Human Resources	Scandic Hotels, EDDA
Business	Tasting Arizona, Diablo Trust, Xanterra LLC, Scandic Hotels
External Barriers	
Legislative/Political	Diablo Trust, Scandic Hotels, A.G.S.E.P., Brenu Beach Resort
Environmental	Diablo Trust, Wenhai Ecolodge
Social	Ecocean, A.G.S.E.P., Brenu Beach Resort
Technological	Ecocean

Scandic Hotel's internal barriers were mainly encountered amongst the staff and their lack of environmental awareness, so the implementation of an environmental policy

had to include specific actions for each hotel in the chain and each team member. This made implementation an incremental process, starting with altering the practices of employees and culminating in the phased introduction of technical solutions in cooperation with suppliers. Incremental innovation is a necessary approach for overcoming barriers to innovation; as is often the case uncertainty in internal and external operating environments will introduce barriers at all stages in the innovation process. These uncertainties were found in a number of cases and can be related to the financial, operational, legal or technical aspects (Table 12.2) of the actions undertaken on the path to innovation. In all cases, a creative and determined solution needed to be applied to realize the goals of the innovation.

Social barriers were also present in some cases, with suspicion and skepticism amongst resident and business communities emerging in a number of cases (Table 12.2). Change in society is always challenging and confronting for those that have embedded social norms and practices, so those that seek to innovate can expect to encounter social barriers ranging from community resistance to political intervention at some point in the innovation process. Understanding and working through the uncertainties and concerns amongst communities that can accompany any form of change, especially in the highly visible and critical area of tourism is one of the key requirements for those seeking to move towards sustainability through innovation.

Processes for Innovation

Most innovation processes in tourism are incremental, as opposed to disruptive 'breakthrough' innovations. Incremental innovation is characterized by steady improvement, following cultural routines and norms, rapidly implemented, producing immediate gains and developing customer loyalty (Schaper and Volery 2007). Importantly they are based on sustaining technologies that already exist and are easily adapted for tourism use, as described in a number of case studies in this publication. Regardless of the process of innovation, it "remains fundamentally an

application of knowledge” (Schaper and Volery 2007:64). Table 12.3 summarises incremental innovation processes and relevant case study examples.

Table 12.3: Incremental Innovation Processes and Relevant Cases

Process	Relevant Case(s)
Steady improvement	Tasting Arizona, Scandic Hotels, A.G.S.E.P., EDDA, Blackstone Valley STL
Based on cultural routines and norms	Diablo Trust, A.G.S.E.P., Brenu Beach Resort, Wenhai Ecolodge, Blackstone Valley STL
Rapid implementation	Ecocean
Produce immediate gains	Ecocean, Xanterra LLC
Produce customer loyalty	Tasting Arizona, Scandic Hotels, Xanterra LLC, A.G.S.E.P.
Adaptation of existing technology	Ecocean, Xanterra LLC, Blackstone Valley STL

Networks for Innovation

People, as customers or operators, are at the core of innovation in tourism. Hence, networks are critical and the social and cultural environment has to be supportive of innovative ideas and opportunities if they are to be realized. Hjalager (1996) indicates that networks are an integral part of the process of innovation, which often involves “redefinitions of interrelationships between actors” (Hjalager 1996:202), although these relationships may be cooperative or confrontational, both still stimulate innovation (Tremblay 2002).

Hausman (2005) also finds that “ideological innovations, such as new management practices” involve new partnerships as well as new ideas. Laing *et al* suggest that partnerships provide a means for the diffusion of innovations (Laing *et al* forthcoming). Liburd and Hergesell (2007) recognise the importance of training, education and employee retention and succession to improve learning and innovation for sustainable tourism in the European North Sea Region.

Table 12.4 summarises the types of networks that are formed around sustainable tourism innovations, as well as the relevant cases.

Table 12.4: Innovation Networks and Relevant Cases

Network Type	Relevant Case
Social/Cultural support network	Tasting Arizona, Diablo Trust, A.G.S.E.P., Brenu Beach Resort, Blackstone Valley STL, Wenhai Ecolodge
Knowledge/learning network	Scandic Hotels, Ecocean, Brenu Beach Resort, A.G.S.E.P., EDDA, Blackstone Valley STL
Redefined management network	Xanterra LLC
Diffusion network	Scandic Hotels, A.G.S.E.P. Blackstone Valley STL, Wenhai Ecolodge

In all cases, networks were found to be critical for the implementation of innovation, but rarely were they catalysts for innovation. Indeed, a new network of actors was the innovation, and ongoing innovation was mainly aimed at expansion of the network that will support the ideals and implementation of the original people that developed

the ideas. Hence, socio/cultural support networks include many different groups in society, for example: agricultural, native, educational and scientific groups in the case of Tasting Arizona and Diablo Trust; and international and local sporting groups in the case of A.G.S.E.P. Knowledge/learning networks were formed around innovation in Scandic Hotels, Ecocean, Brenu Beach Resort, A.G.S.E.P. and most notably EDDA. Customer and supplier networks were found to be important in all cases, especially Xanterra LLC. Diffusion networks include suppliers and employees in the case of Scandic hotels, and local sports associations and tourism businesses for A.G.S.E.P.

Innovation for sustainable tourism is evolving according to the rate at which the networks that support innovation can expand. The internet and the potential to stimulate discussion and ideas and disseminate information through user created content provides the perfect platform for continuous growth of all sorts of networks - social, commercial, knowledge and technical - that can accelerate the development of innovation and sustainability.

Summary

This set of case studies has set out a way in which to structure, describe and analyse the organisations and destinations that are seeking to innovate for sustainable tourism. The overall aims were to provide an avenue for critical thought and debate and to stimulate ideas that can generate discussion and understanding of the nature of innovation for sustainable tourism. During this process, it is equally important to determine the questions that remain unanswered, and the issues that remain unresolved as well as identify further research into innovations that can contribute to sustainable tourism in the future. Chapter 13 provides researchers and scholars with a set of questions and observations of the context, nature and impact of the innovation in each case and poses a series of possible dilemmas that have and could continue to confront the organisations and individuals described in these case studies.

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Chapter 13 Learning from case notes

Paddy Forde

Case studies that describe particular experiences and innovation processes provide insight into local dilemmas and ignite reflection that offers valuable learning at multiple levels. Scholars search case studies to find leads that improve theory. Practitioners appreciate that peer experience can inform or improve personal practice. Students enjoy thinking about how they would have tackled the situation. Therefore, these cases are expected to be utilised by readers in manners that meet their personal needs. Reader variety posed a problem for the editors when presentation and summarisation was considered. For example, structuring cases into a specific format that assisted one type of reader (i.e., students) would inconvenience other readers. As the cases were written by practitioners, their peers are expected to find them useful. Researchers may require more detail and this could be obtained upon request to case authors. Case notes have been provided to assist students looking for ideas on how to enhance their reflection.

These case notes are expected to be particularly useful to students and teaching staff, but they also provide convenient case synopses for other readers. Distilling the context, innovation, drivers, barriers, processes and networks into a few concise sentences naturally encourages cross-case comparison and consequently a focus upon case themes. In addition, a number of suggested dilemmas have been included. Dilemmas remind us that the cases represent snap-shots of real situations that will address continuing challenges. Case studies not only provide descriptions of experiences and achievements. They also stimulate us to reflect on how we might have tackled a particular situation or to imagine how we would go forward, if we were in that predicament. This reflection is the unique attraction of case studies and dilemmas are a tool that can facilitate that reflection. The dilemmas suggested in

these case notes are intended to motivate your thinking, however we recognise that reader perspective could easily suggest other interesting dilemmas.

Scandic, Scandinavia

Context: Scandic is one of the largest hotel operators in Scandinavia with more than 130 hotels. It is an independent company that was previously owned by an international hotel chain and the present owners are seeking to expand in Europe.

Declared innovation: A corporate environmental policy and program together with action plans for individual hotels.

Influence on sustainability: Scandic reduced energy and water consumption by responsible operation. Encouraging thinking about sustainability by using *Omtanke*, meaning “caring for our guests and each other while caring for the environment and the society around us”.

Implementation drivers: Changes in market characteristics caused Scandic to seek a new perspective that could underwrite a differentiated position within the international hotel industry. A strong brand was needed that employees and guests could identify with and that would provide short-term operational gains.

Barriers to achievement: A lack of knowledge and environmental awareness amongst team members. Having to include external organisations in Scandic’s practices. The commercial availability of technological solutions. The challenge of obtaining funding support.

Processes applied: Encouraging a common belief amongst management and team members that environmental responsibility was right. The use of Scandic’s compass model to implement core values. Monitoring resource consumption. Purchasing low environmental impact products and reducing waste. Obtaining external accreditation and recognition through publication. The appointment of a Vice President of Sustainable Businesses.

Networks utilised: Team members, local universities, consultants, peer organisation (Hilton Hotels), suppliers, accreditation bodies, media and customers.

Possible dilemmas: How to continue the project's momentum, within the various Scandic networks, in support of environmental responsibility? Will Scandic's quest for leadership recognition result in tangible benefits? How will financial returns be retained as start-up competitors take advantage of Scandic's environmental experience and build new operations without the cost of maintaining or replacing out-dated resources? What will have to be done to maintain Scandic's brand superiority?

Ecocean, Western Australia

Context: Small not for profit marine conservation organisation researching the whale shark.

Declared innovation: The involvement of tourists in the generation of Ecocean scientific data that globally identified and tracked whale sharks.

Influence on sustainability: The dissemination of research findings describing the whale shark situation is expected to provide changes in human practice that will enhance sharks' sustainability. The developed systems could be useful in researching other threatened species.

Implementation drivers: As habitat was threatened and the apparent numbers of whale sharks decreases, tracking the movements of individual sharks was expected to lead to a better understanding of their ecology.

Barriers to achievement: Data collection had to be non-invasive. The number of global sightings needed to be increased. A method of identification was required. The limited availability of funding that could support the research.

Processes applied: An Internet presence was developed to promote awareness of the whale shark's plight and also as a system to disseminate photographs.

Networks utilised: Peer researchers, research funding agencies, media and tourists concerned about the well-being of whale sharks.

Possible dilemmas: How will Ecocean attract continuing financial support? What will happen if tourists can not be relied upon to collect photographs? Is using amateurs, swimming with whale sharks, the most appropriate way to collect data? How can

scientific research and tourist activities be combined in a manner that minimises the human impact on natural habitats?

Xanterra LLC, Denver, Colorado, USA

Context: Xanterra is a complex organization (USA's largest national park concessionaire, operating hotels, lodges, restaurants, retail, campgrounds and transportation systems in more than 20 locations); with 8,000 employees; numerous buildings (in Yellowstone National Park alone they have over 900 buildings); third-party certification/audit; and is a corporation with shareholder responsibilities.

Declared innovation: The Environmental Management System (EMS) Ecologix provides a range of innovations (i.e., continual improvement of environmental performance; compliance with environmental regulations; best management practices; and flexibility). Ecologix is described as a hybrid EMS because it includes aspects of compliance, sustainability and accountability.

Influence on sustainability: The overall benefits of *Ecologix* flow not only to the environment but also to the business performance of Xanterra. Increased environmental compliance, corrective action and monitoring of certification enabled Xanterra to provide leadership in environmentally focused tourism that aimed to be sustainable.

Implementation drivers: Xanterra's mission provides significant motivation amongst staff and this enthusiasm has been translated into the 2015 objectives. Also, environmental responsibility is considered to be "good business".

Barriers to achievement: Ecologix was an extensive and costly exercise. It remains to be seen whether the process translates into improved environmental performance, therefore it was risky. The effectiveness of standards implementation depended upon the will and intention of the organisation. For Xanterra not only was top management support critical but there was public and private agency interest in what happened in national parks. In the US, there is strong competition for park concessions, therefore Xanterra not only has to be cost competitive but demonstrate strong environmental

performance, as well.

Processes applied: Employees were expected to hold management accountable by the adoption of a top-down mission and a bottom-up monitoring mechanism. The Ecologix EMS model was designed to achieve continuous improvement. Xanterra has a management structure that incorporates [environmental] objectives and targets into programs and procedures.

Networks utilised: Xanterra recruited the involvement of suppliers in the quest for environmental responsibility. Xanterra extended this responsibility to cuisine availability and accommodation practice and design.

Possible dilemmas: How should Xanterra ensure it achieves the 2015 objectives? What continuing initiatives should Xanterra consider to underpin the successful management of competitive and cost pressures? How should Xanterra describe environmental improvement so that shareholders perceive a direct link to their well-being? How should the EMS evolve to provide sustainable competitive advantage? What will be the response of Xanterra's competitors to the Ecologix project?

Tasting Arizona, USA

Context: Tasting Arizona is a consortium of tourism, non-government, indigenous, farming, education, community, festival and food organisations.

Declared innovation: The decline in small US communities is being tackled by reviving community collaboration to produce local products and to stimulate traditional farming activities.

Influence on sustainability: The consortium aims to preserve traditional farming practices, conserve wildlife, educate youth, keep food free from genetic modification, maintain agricultural diversity and biodiversity, as well as protect cultural traditions.

Implementation drivers: A need to reinvigorate local habitat and conserve species that were under threat from human activity. Also, to retain the indigenous knowledge and cultures associated with this environment. However, stimulating local development by effectively utilising the natural environment was a major incentive.

Barriers to achievement: Large producer expectations impacted natural and farm land usage. Consumer choices needed to be changed in favor of local products. Small operators had difficulty achieving economies of scale and continuity of supply. Organic methods did not have the disease protection offered by the use of modern chemicals. There was competitive demand for water.

Processes applied: Community supported agriculture that attracted over 290 participants. Building awareness amongst Arizona's youth. Enabling local operators to get tourists to discover Arizona's produce and services.

Networks utilised: Local universities together with non-profit federal and community groups. Also, for-profit tourism operators, farmers and restaurants were included.

Possible dilemmas: To improve viability, should 'Tasting Arizona' consider how local products and services could be distributed outside Arizona? How can consumers be encouraged to select local products in preference to economic alternatives from other places? How can the competing community interests be managed in the long-term? Can environmental and cultural benefits be described in specific economic terms? How will the appeal of a 'back to nature' lifestyle be sustained against the convenience of city life?

The Diablo Trust, Northern Arizona, USA

Context: The Diablo Trust was initiated in 1993 by two Arizona ranch families on the Bar T Bar and the Flying M Ranches. Membership of the Trust is diverse and includes ranchers, environmentalists, land managers, scientists and researchers.

Declared innovation: Communication amongst trust members is used to promote the social, biological and economic sustainability of federal, state and private lands; by engaging in collaborative stewardship harmony between the natural environment and broader community is strived for.

Influence on sustainability: By promoting the long-term continuation of traditional working ranches (i.e., as economically-viable enterprises) the trust is seeking to maintain un-fragmented landscapes and restore native ecosystems.

Implementation drivers: To create a range of economic opportunities in support of private landholders and traditional users, whilst preserving open spaces for future generations. There was a fear that traditional cattle ranches would not survive. Also, grasslands needed to be preserved not only for cattle but wildlife.

Barriers to achievement: Global trends in beef farming appeared to be contrary to cattle ranchers using ranges. Financial constraints associated with marketing 'trust' beef was a problem. Small-scale tourist activities were perceived to be economically difficult from both a human resource and legal liability, point of view. Finding new ways to use land that was aesthetically pleasing and did not dilute land-holdings was challenging.

Processes applied: Formation of the trust as a regional planning area covering 426,000 acres enabled the land use plan to be developed. The Trust undertook projects designed to enhance collaboration and learning about the land and the effects of management, recreation, climate, fire and time. Educational programs for local schools, wildlife protection, ranch management, community outreach and watershed improvements have been conducted.

Networks utilised: Land owners, local enterprises, government agencies and various community representatives.

Possible dilemmas: How can the trust ensure that member interests did not over-ride the need to address common problems? What should be done to ensure that different levels of stakeholders' economic strength and political power be effectively harnessed for the common good? How can the trust encourage stakeholders to assign enforceable land use controls to the trust for the benefits of the community? How broadly should the "common good" be defined?

EDDA, Denmark

Context: To capitalize on the trend towards user-oriented and experience-driven economies (that embraces "soft" aspects like identity, feelings, values, meanings, and aesthetics) a four-year project entitled "Experience Development of Danish

Attractions” (EDDA) was created. EDDA consists of 38 built attractions of varying size, theme and ownership structure that joined forces to share competence development and stimulate innovation.

Declared innovation: EDDA innovated by involving members in the development of competences, products, commodities and services; and this innovation extends from product development to management techniques.

Influence on sustainability: EDDA aimed to support the sustainable development of member attractions as strong and innovative businesses by creating opportunities for competence development and experience exchange.

Implementation drivers: There was limited growth potential within the Danish attraction market. Competition was fierce within the attractions industry (and with other types of experience providers e.g., theatres, cinemas, game manufacturers, retailers). Expectations were not well categorised for the ‘experience consumer’.

Barriers to achievement: There was a shortage of financial and human resources within participating EDDA attractions. In addition, there was initial reluctance and scepticism amongst employees and managers (this caused one attraction to leave EDDA). A lack of active contribution and commitment was expected. Trainers would need to adapt their course content to reflect the special needs of built attractions. The project would involve participants from all over Denmark and this constituted an organisational obstacle.

Processes applied: The project was guided by the principles of “socially inclusive wealth creation” as a way to enhance the quality of life for all. A learning programme was developed that incorporated: knowledge and tools; the latest learning methods; experiential discussion groups; and implementation support.

Networks utilised: The inclusion of all personnel from participating attractions. The leading organization behind EDDA was the Development Fund for Tourist Attractions. EDDA included representatives from public and private tourism development and marketing entities. External networks of academics and practitioners were involved in

EDDA activities.

Possible dilemmas: What steps should EDDA take to secure on-going financial support? Should EDDA continue to focus on learning as its key service? Should EDDA convert itself into a 'professional industry body' lobbying for members and providing member services?

Brenu Beach Resort, Ghana

Context: A change of Ghanaian government had democratically taken place with a promise to invest in the local economy. There was wide-ranging goodwill and expectations of personal and professional freedom. The tourism industry was encouraged to invest in innovative business ideas. Small enterprises were seen as a way to improve the quality of life.

Declared innovation: In Ghana, the term innovation can be perceived as 'coping' or a constant survival process. Therefore, innovation is practiced to survive. This case describes a process. Therefore, innovation is practiced to survive. This case describes a process of "creating something meaningful out of nothing for a specific purpose or aim, using available and appropriate resources".

Influence on sustainability: Auntie Aggie's ecotourism venture established an open air do-it-yourself chop bar and restaurant. Typical Ghanaian dishes are cooked and generally eaten with the hands. Tourists are encouraged to contribute by cooking and by setting up a camp on the beach. Therefore, the venture seeks to sustain a cultural lifestyle and to increase awareness of that culture.

Implementation drivers: The beach resort emanated from the owners survival instincts and a need to develop a business using very limited resources.

Barriers to achievement: All of the essential means and structures needed to develop a small resort had to be developed. Auntie Aggie started with basic cooking utensils (such as charcoal pots) and three traditional cooking stones on a beach that traditionally belonged to her family. She struggled against social barriers and had minimal access to technological support. Land ownership/property rights were not well

defined and misbehaviour was not necessarily dealt with fairly and justly.

Processes applied: Aunt Aggie's determination to survive and her willingness to develop a new business, was the process used. She also relied on customers from cultural backgrounds that were completely different to her own.

Networks utilised: Tourists were a major source of ideas and support. They provided suggestions on how to run the business effectively as well as what to change or innovate. Local networks had to be established.

Possible dilemmas: How should Aunt Aggie handle new competitors as local people learn from her experience? What should Aunt Aggie do to ensure the cooperation of local community members? Should Aunt Aggie embrace technology (to improve customer communications) or retain the 'un-spoilt' ecotourism flavour of the resort? What safeguards should Aunt Aggie consider to ensure that powerful entrepreneurs do not over-whelm her venture?

A.G.S.E.P., Sri Lanka

Context: A.G.S.E.P. is an NGO that has been conducting sport events and international exchanges between Sri Lankan and European sport teams. Based in Marawila it was founded by its CEO (Dr. Dietmar Döring) who was the national table tennis coach.

Declared innovation: A.G.S.E.P. promotes 'active tourism' that has a socio-cultural focus. It combines travel with contribution to intercultural understanding and peace.

Influence on sustainability: By providing a positive socio-cultural experience that advanced the development of athletes and coaches, A.G.S.E.P. promotes peace and well-being in Sri Lanka.

Implementation drivers: Relationships amongst Sri Lankan people were deeply divided. An activity that provided a neutral, peaceful and fun-bringing platform was needed. Sporting interaction was perceived to create collective feelings of passion, unity and a sense of community. There was a need to enhance local health and fitness, as well as to encourage understanding and learning. The economic development of the local community was in need of stimulation.

Barriers to achievement: The socio-political circumstances led to varying levels of safety and security concerns in Sri Lanka. The different values, customs and the lifestyles of local residents (when compared to European tourists and international sport participants) were a challenge. Language differences were also a challenge.

Processes applied: The philosophy adopted was that sport is an ideal way of connecting people and transcending social, cultural, ethnic and religious divides. Exchange programmes that focused on sport development and individual training was the key process used. Selected Sri Lankans were invited to train with European experts. Also, Sri Lankan sport coaches, trainers and support staff were invited to attend workshops, seminars and conferences.

Networks utilised: Local and international networks were used to achieve A.G.S.E.P. objectives. Personal networks established initial co-operation. Local community support enabled access to an authentic Sri Lankan experience.

Possible dilemmas: How should the resort prepare for the intermittent disruptions caused by local unrest? What cultural values should the resort use to underwrite its activities (Sri Lankan or European)? What level of responsibility should A.G.S.E.P. accept to ensure that local business and community interests benefit economically from arranged activities? What steps should A.G.S.E.P. take to ensure long-term viability in the event of senior management change?

The Sustainable Tourism Laboratory, Blackstone Valley, Rhode Island, USA

Context: The Blackstone Valley Tourism Council (BVTC) created the Sustainable Tourism Laboratory (STL) as a way to contribute to regional tourism development. STL's purpose is to promote the concept of planned sustainable tourism to local, regional, state, provincial and worldwide tourism leaders and community stakeholders.

Declared innovation: The STL is the key innovation. The laboratory is a community-based teaching and learning network that aims to advance sustainable tourism strategies.

Influence on sustainability: The concept of *place-making* focuses on a holistic social,

economic, ecological, cultural approach to community development. The BVTC environments are perceived to be elements of a large, whole system, or 'system of systems' that are interdependent and synergistic. STL adapts tourism processes in ways that support community values and enhances environmental sustainability.

Implementation drivers: BVTC communities recognised the need to closely watch the immediate and emergent conditions within their environment. Effectively adapting to changing conditions was considered to be a pressing and urgent need. Ignoring the natural cycle of change would result in greater risk to communities.

Barriers to achievement: Planning between local, regional and global influences was complex and ineffective. There was minimal understanding of the implications of resilience in planning. Changing established procedure was resisted because previous processes had provided rewards.

Processes applied: The STL is used as a community-based teaching and learning network. STL applies complex adaptive systems methods and thinking to community planning. Diverse elements like social, ecological, economic, education, cultural or built environments are understood to be interdependent.

Networks utilised: Starting in BVTC, the STL is considered to be a network that will expand the practice of resilience into tourism communities across the USA and eventually the world. STL expects that as this network grows it will inspire interaction with other communities leading to a global network of tourism professionals and practitioners.

Possible dilemmas: Should STL enter the debate about whom or what is to be the prime benefactor of sustainability? Should STL ground itself within the tourism arena or should it step up to embrace all forms of human planning? How should STL deal with community activities that are deemed not to be sustainable? What community interests should STL be loyal to (influential individuals, local, regional, national or global)?

Wenhai Ecolodge, Northwest Yunnan, China

Context: The Wenhai Ecolodge is situated in Northwest Yunnan, China. The Yunnan province is ethnically, geographically, and biologically diverse. The Ecolodge is a community-operated retreat run by a cooperative of 56 households with support from the US-based Nature Conservancy.

Declared innovation: The Ecolodge was created to provide an economical alternative to destructive practices such as illegal game hunting and poaching, logging and over-fishing. Members are encouraging the local community to use renewable energy to reduce tourism's drain on natural resources.

Influence on sustainability: Visitors to the Ecolodge generate interest in, and enthusiasm for, local culture and heritage. Therefore, the local community has a greater appreciation of its cultural heritage. Also, family traditions are being sustained by tourist interest.

Implementation drivers: There was a need to develop local economic activities. Natural resources were threatened and there was a need to demonstrate that sustainable tourism could be locally managed.

Barriers to achievement: There were local misconceptions about the tourism industry. Early tourist ventures produced unacceptable levels of pollution and environmental degradation. The finite nature of tourism resources was not appreciated. There was investment in tourism without consideration for sustainable planning and development. Therefore, previous tourist development made establishing the Ecolodge challenging.

Processes applied: Ecolodge was required to donate at minimum 10% of net profits to conservation and community development. Visitor management systems are being established. Community members participated in the identification of the cultural traditions they wish to preserve. The impact of tourism is monitored to determine that Ecolodge supports the sustainability of local cultures.

Networks utilised: Northwest Yunnan Ecotourism Association was used and sponsored by the US-based Nature Conservancy and the Ecotourism Association was created to

inform tourists about the unique ecotourism opportunities around Lijiang. The Ecolodge worked closely with local communities.

Possible dilemmas: What initiatives should Ecolodge consider to maintain its present state as the local community starts to push for modern improvements to their lifestyle? How should Ecolodge describe the benefits that result from protecting culture and heritage? Can the “local culture” change in the process? How should Ecolodge ensure that the ecological and economic impacts of its activities are balanced? How should Ecolodge communicate its achievements to key stakeholders in ways that will encourage continued support? Can local participation help facilitate sustainable tourism?

Further Issues Arising from the Case Notes

Do these cases suggest contextual similarities, if so, would categorisation be useful? For example, can cases that describe small-scale, green-field initiatives be compared with cases situated within complex multi-organisational developments?

Do the cases provide insight into how the concepts of innovation and sustainability are being used when associated with tourism? For example, has innovation been depicted as major change or small incremental improvements? Could the innovations be described as improvements in communication?

Have the cases described sustainability or the survival of stakeholder interests? Should environmental factors take precedence in tourism or is the incorporation of sustainability simply a convenience market-differentiating tool?

Can tourism, innovation and sustainability issues be informed by looking at the dilemmas practitioners have to resolve?