THE SOCIAL DIMENSIONS OF KARST TOURISM: INCORPORATION INTO MANAGEMENT STRATEGIES

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Abstract

The host culture at any tourism site is active in the production of tourism (Nash 1996). Therefore the understanding of the social dimensions of tourism (in order to manage it) must include the relationships and interactions of the hosts. This plea from tourism anthropologists is reinforced by those working in natural resource management and sustainable development when they point out that there is still a dearth of knowledge with regard to social dimensions. It is therefore commendable that Jenolan Caves Reserve Trust has instigated research into, and development of, indicators for the social dimensions of Jenolan Caves karst tourism site. This paper discusses the theoretical context for the project, outlining the strategies used and intended outcomes. The paper is being presented to inform others in the field about the project, and to argue for continued inclusion of social dimensions in karst management.

Table 1: Comparison of Visitor Impact Management process to study

VISITOR IMPACT MANAGEMENT	RESEARCH STRATEGY	METHODOLOGY
• Review existing knowledge • Management objectives • List of possible indicators • Levels of indicators • Compare existing conditions • Probable causes • Management strategies	Literature search, document analysis Social system study Workshop + Delphi " " " " " " " " " "	Ethnography Participatory Action Research Ongoing industry driven analysis

Introduction

This paper provides a brief overview of a research project at Jenolan Caves, NSW (just north of Wombeyan and the same management body). The project is titled:

Developing indicators for visitor impact management at Jenolan Caves: Understanding the Jenolan Caves social system.

Today I will explain what it is I am doing, why I am doing it, and what the intended outcome will be. I will not be presenting results; I have been busy collecting data but have only just begun to analyse them. I wanted to make this presentation to let people know that this research is occurring; to receive comment from an audience with considerable experience in karst areas; and to encourage management bodies to tackle the issues associated with social dimensions.

Context

The project was originally drawn up as part of a Visitor Impact Management (VIM) program. Visitor Impact Management is a management framework concerned with the issues of visitation in areas visited primarily for their natural resource values. It is a process of monitoring unacceptable changes that result from visitation. The Visitor Impact Management process is a cycle of information collection, information handling and decision making. Many of you may be aware, through the work of Elery Hamilton-Smith, that Jenolan Caves Reserve Trust has adopted the process of Visitor Impact Management as one of its management strategies (Hamilton Smith 2000: see Elery's papers for details of the SEM process). The adoption and development of Visitor Impact Management has led to the establishment of a SEM committee; a Social and Environmental Monitoring Committee that advises and oversees the process itself.

My project aims to contribute to the process already set in train by the SEM committee (see Table 1 for comparison of Visitor Impact Management to this project). The basis of Visitor Impact Management is the identification of 'indicators' that represent the level of 'health' or desired state of a particular dimension, or the whole.

Whilst the goal and the ideal is that a monitoring process be wholistic, that is include physical, environmental and social dimensions of the site or community, this study focuses on the social dimensions, and omits the bio-physical. That is, the project is concerned with the experiences and meanings that derive from people's association with Jenolan Caves.

The purpose of this study is to understand the social dimensions of karst tourism in order to comment on, and contribute to, issues of viability.

There are two issues with respect to the inclusion of social dimensions in management of protected areas that partly explain why I am doing this project at all, and why I have chosen this approach. The first is that whilst there has been much significant work done on human interaction and relationship with the natural environment, there is still much that we don't understand. And as management and communities have begun to focus on sustainability the emphasis has been on environmental (flora, fauna, geology etc.) facets, avoiding or forgetting the social dimensions (Ritchie 1998; Steins & Edwards 1999; Sharpley 2000). The focus on social dimensions is particularly pertinent to karst areas and karst tourism because questions of human interaction with this resource from a leisure/tourism perspective have only recently been asked and explored. (See Doorne 2000; Kiernan 1989; White, N. 1993; Pavlovich 1998).

The second, as the works of Ritchie (1998) and Doorne (2000) demonstrate, is that when social facets are examined a narrow perspective is taken, usually for pragmatic reasons but, resulting in blindness to the broader social context. The natural resource is considered to be an isolated entity, or the visitor is taken to be homogenous and the only significant human dimension. For example, the social dimensions of, lets say the Great Barrier Reef, are too often taken to be visitor behaviours and attitudes, ignoring other people who interact with the site, and ignoring the broader social influences.

This point is also made within the tourism literature. Nash (1996), a renown tourism anthropologist calls for the adoption of a bigger picture approach to tourism study, one that will include the producers of tourism and take note of the full range of transactions that occur in the tourism 'system'. Noting this point, the case study being undertaken at Jenolan adopts a 'big picture' view of the social dimensions at the site, attempting to understand the broad range of social interactions, and interactions with the resource. The study seeks to understand the experiences of show cave visitors, staff, coach drivers, local residents, recreation cavers, researchers and so on. This is made physically possible because Jenolan is a relatively small tourist site, and relatively isolated from other communities, making the task of studying the 'whole' feasible (although still a daunting task).

I should explain that I adopt the principles of constructionism. That is, I take knowledge and understanding of the world to be socially constructed. Gaining knowledge is not the task of finding 'truth', rather it is the interpretation of what we see, hear, experience, and feel; always building on previously held understandings or interpretations (Crotty 1998). Adoption of this perspective influences the choice of method and interpretation.

The end goal is the development of indicators. We are all experts at designing and using indicators. They are used constantly in our daily lives to help make sense of the world around us, at individual (body temp, tone of voice), technical (temp gauge in a car, telephone ring), community (employment figures, patient numbers) and institutional (profit, retention rates) levels. Whilst we are all experts at indicator design and use at a day-to-day level, at a complex level we can benefit from past practice and systematic processes.

Underlying this process is the assumption that we care about the 'state' of the social dimensions. We ask how can we know that the social dimensions are healthy and sustainable? We could wait until a change of considerable magnitude occurs such that we are forced to acknowledge that the situation is no longer 'healthy'; or we can 'keep a close eye' on the situation to reassure ourselves that all is going well, or beginning to change (for better or worse). This latter strategy of course is monitoring and may be done through an informal and unstructured process or a structured and formal process (or perhaps both).

If we choose to monitor the 'state' we need to clarify what it is that we care about, what we value, and what we envision for the community. Ravenscroft (2000) refers to this as base line data, as compared to future data. Once we are agreed on 'what' it is we want to maintain, we identify measurable features that will reveal how effectively we are achieving the vision and maintaining the things that we value.

The measurable features are 'indicators', or to borrow from social policy studies, are the relatively easy to measure facets that act as surrogates for harder to measure phenomena (Carley 1981). In this study the harder to measure phenomenon is the health or viability of the social systems at Jenolan Caves. The process assumes that ongoing monitoring of the indicators will detect problems early enough for the organisation to implement strategies that will change or limit the course of deterioration.

The project has two phases.

Phase 1
In line with the principle of constructionism the first strategy or phase is an ethnography that uncovers the multiple constructed meanings of Jenolan Caves. Ethnography will uncover the different meanings for the same landscape and ways in which people interact with the landscape. The task is to incorporate this knowledge and understanding as baseline data into the monitoring process; to clarify what is valued by various people associated with Jenolan.

Ethnography was selected in preference to other methodologies, such as grounded theory or phenomenology, because of its focus on the cultural nature of meaning, as distinct to individual meaning making. Whereas phenomenology seeks to understand individual meaning making, ethnography seeks to understand the broader cultural interactions. I decided not to use grounded theory because it is a method that focuses on theory development, and I felt that the question required a more exploratory, and less post-positivist approach, that is less 'black and white meanings'.

The specific methods used in ethnographic fieldwork are interviews, observations, and document analysis, which are then inductively analysed for themes and patterned regularities (Creswell 1998). The major tasks of data collection, analysis and interpretation are repeated over and over again in a cyclical or iterative research process (Schwartzman 1993: 48). Initial fieldwork is often open-ended and relatively unstructured but as analysis is concurrent or cyclical with data collection the process becomes more selective particularly with respect to time, context and people (Hammersley & Atkinson 1995; Wolcott 1994).

An intensive six to nine month period is currently being spent in the field doing interviews, observations, and document analysis.

This involves semi-structured interviews with represent-atives of all members of the Jenolan Caves social system, including guide staff, visitors, nearby residents, and recreation cavers.

Interviews ask about the meaning or value of Jenolan Caves, ways of interacting with the site, and benefits attained from that interaction. In addition existing documentation, such as promotional material, management reports and other public documents, are being analysed for the ways in which they construct Jenolan Caves, particularly as a tourist site.

Phase 2

The next phase is a process of changing data into something useful for management decisions (note: not decisions made by management but any decisions relating to the management process).

In the second phase of indicator development members of the Jenolan Caves social system will assume roles of analyser and interpreter, in a process of participative decisions (Heron 1996). The original researcher becomes a collaborator in this process (Ellis & Kiely 2000). The details of this method are yet to be finalised but I would like to cover the principles that I hope will guide the process and outline the most likely strategies.

Organisations and communities currently use numerous methods to develop social and environmental indicators. Interestingly, the principle of monitoring has similarities to the concepts of organisational learning and action research.

At the heart of all action inquiry strategies is a recurring action-reflection cycle predicated on the relationship of improved knowledge through action, and new or revised action based on imaginative reflective learning (Ellis & Kiely 2000: 83).

An organisation or community 'monitors' something so that it can detect when it may need to alter particular strategies. The reason that we collect information, or monitor, is to learn: to change thinking and practice. The information is useless if it is not reflected upon or contributes to decision making.

I mention organisational learning because it offers strategies and principles that may be of use in this process. It also alerts us to the realisation that monitoring can be embedded in the organisation itself to various degrees. It may be done by a particular part of the organisation, integrated into organisation practice or done by an outside body. Irrespective of the approach adopted it needs members support and involvement because they are the one's with much of the data and knowledge. However, they will not be able to effectively input into the process unless they have the time and tools available, and see the relevance and benefit of the process. Issues of cost, efficiency and effectiveness need to be considered in selecting a process. I suggest that which ever method(s) is used that the following basic principles be adopted:

- All interested parties or stakeholders will participate (or accepted representation, e.g. with visitors).
- An established framework of indicator development will be used to help ensure that a comprehensive indicator list is selected. A framework will provide a systematic rather than adhoc approach to indicator development.
- Indicators will meet the established criteria of effectiveness (as much as possible).

There is a range of ways that participation in the indicator development process might occur (see Table 2). First, and never to be underestimated or ignored, is face-to-face interaction and discussion in a workshop. Face-to-face interaction always sets up some kind of 'group dynamics', such as domination by outspoken members or group-think, and will usually require careful facilitation. To get representation from all stakeholders (or members of the social system) it might be necessary to hold one or more workshops. Workshops can be costly to run, and have a limited time available (both an advantage and dis- advantage). Workshops can also utilise other methods, such as face-to-face Delphi technique or nominal group technique.

The second option is the Delphi technique, more usually set up as a non-face-to-face discussion (Dick 1999). We might ask a group of participants to write an answer to the question 'What indicators would you use for the following attributes of Jenolan Caves?' Answers are collected and collated and sent back to participants. They are asked to reconsider the same question in the light of other people's answers. If they choose to maintain the same answer(s) they are asked to explain their reasons why. The answers from this second round are again collected and collated, and re-sent to participants. The process continues, and often produces an emerging consensus.

The third process, which again might well be incorporated into any of the methods described above, seeks to embed the process of indicator development, monitoring and review in the organisational culture rather than external or segmented from it. The establishment of data collection processes, information sharing, reflection and decision-making and action undertaken by the broad range of members are the key components in organisational learning.

Table 2: Suggested ways to ensure stakeholder participation

	Workshop	Traditional Delphi	Organisational Learning
Communication	Face to face discussion	Written communication via mail or email	Would be expected to utilise multiple communication mediums including face-to-face
Decision making	Selection of a majority or similar Decision making may be 'encouraged' because of limited time	Group process shifts toward a consensus - if consensus not formed then majority, or comparison to findings from other methods	With respect to original indicator development majority would probably be used
Participants	Limited to representatives of stakeholders	Able to include a larger number of people for less cost - but restricted to people who are happy to interact through written materials	All employees of the organisation, and additional interested and available people eg members of Scientific Committee, Board, visitor representation
Time	Limited to allotted time	Overall process will be quite lengthy	The original process might be the workshop, and / or Delphi, but information sharing becomes part of every day culture
Cost	Relatively high due to transport and accommodation, and coverage of staff time	Cost will be less apart from facilitator's time (which is free anyway)	Incurs the same immediate costs as workshop or Delphi, but the more it is embedded into the day-to-day the lesser the costs will be and the higher the benefits

The considerable use of indicators in policy development, management, sustainability and natural resource management has meant that there are several commonly used processes or frameworks of indicator development. The proponents of these frameworks argue that their use ensures that the resulting monitoring process is not biased towards a particular area. For example, a monitoring program at Jenolan that measures the health of the water, flora and fauna populations but ignores the social dimensions would be biased. The use of a framework or system helps to ensure that a comprehensive set of indicators is developed. The frameworks that are commonly used are presented in Table 3:

These same disciplines have developed quite clear guidelines describing the effective indicator. The following list as to what makes a 'good' indicator is drawn from health policy literature (Carley 1981; Gruenewald et al. 1997), natural resource management literature (ANZEC 2000; Graefe et al. 1990; Newton et al. 1998; Pearson et al. 1998; Turner 1987 in Pigram & Jenkins 1999: 101) and sustainability literature (Bossel 1999; Emmett & Teller in Siniscalco 1999; Hart 1999; OECD 1999). Effective indicators need to be:

- sensitive to changing conditions providing enough time to act;
- feasible in that they are easy to measure, and cost effective;
- relevant to management, policy, and community needs and objectives (i.e.: pragmatic);
- considerate of global issues even if focusing on local, ie must measure local sustainability that is not at the expense of global sustainability;
- reliable and valid in that you can 'trust' the information (or is considered scientifically credible); and
- clear and easy to understand.

In addition, it is recommended that they:

- include a process of review, acknowledging the relevance of time and place to indicator development;
- have long term significance;
- include the broader community, both in development and as recipients of the information;
- be comparable with indicators from similar organisations; and
- reflect links between components eg link between social and environmental well-being. (Also see Table 4)

Table 3: Indicator development frameworks

Category	Explanation	Example
Goal – issue based	The process is underpinned by the articulation of a vision or desired state. This might be expressed in management goals and objectives, or implicitly derived from observed issues (issues are taken to arise from failure to achieve an explicit or implicit goal).	• Netherlands – Policy Performance Indicators; • Oregon Benchmarks (Hardi *et al*. 1997); • Visitor Impact Management
Common unit	Using existing units or constructed units, this process devises a method of calculation that expresses sustainability indicators in one measurement unit, e.g.: monetary, spatial or as capital.	• Ecological footprint (Wackernagel & Rees 1996), • Full cost accounting at Ontario Hydro, • Four capitals approach of World Bank, • Manitoba's sustainable development in the prairie ecozone (Hardi *et al*. 1997)
Systems theory	This approach treats the domain under examination as a system. Indicators are designed in relation to identified system components.	• Bossel's systems theory (Bossel 1999), • CIFOR (http://www.cgiar.org/cifor/index.html)
Driving force – State – Response	This approach links cause, condition and appropriate response in one framework and requires indicator development for all three components. Also called pressure-state-response.	• Samoa Visitor's Bureau, • CIAT-World Bank-UNEP (http://sdgateway.net/topics), • CIFOR (http://www.cifor.org/cifor/index.html), • Australian Environmental Indicators (ANZEC 2000)
Categories	Generally used in conjunction with one of the above frameworks; indicators are quite often developed in social, environmental and economic categories. Other groupings are possible.	• World Tourism Organisation (International Working Group on Indicators of Sustainable Development 1993), • Sustainable Seattle (http://www.scn.org/sustainable/susthome.html)

The end result will be a monitoring program or plan. As a written document it will provide a record of the decisions made regarding desired state and suitable indicators and the processes to be undertaken. It is a reminder, reference point and communication document. It should be taken seriously but not treated as law or non-negotiable. Table 5 provides an example of what the outcome MIGHT look like.

Conclusions

The process of monitoring and the development of indicators are every day practices. When we wish to 'monitor' complex systems and processes the principles are the same but the practices are more involved and intricate. Rather than become overwhelmed by the enormity of the task, it serves us well to remember the basic principles. Social dimensions and human behaviours are complex; we constantly look for rules and categories that help us to understand and then control people's behaviours.

We may never fully understand these complexities, and perhaps we don't really want to, but when it comes to management of a natural resource for human benefit we must attempt to understand these human behaviours the best we can. Sustainability or viability of any system that has human components implies social sustainability. Before we can comment on social sustainability at a karst tourism site we require a comprehensive understanding of the social dimensions in order to identify, with confidence, the critical factors that contribute to sustainability. And as far as we are able, we must consider as many facets of that social network as possible - not just one element of it. Because as we all know, socially and ecologically, we are interdependent organisms. The purpose of this study therefore is to understand the multiple perspectives held by the actors in the Jenolan Caves social system before proceeding to develop systems and methods of contributing to sustainability and viability.

Table 4: Characteristics of effective indicators

Indicator criteria	Relevance to Jenolan
Sensitive to changing conditions in order to have enough time to act	An indicator of water quality must register that water quality is deteriorating BEFORE significant damage or sickness results.
Feasible in that they are easy to measure and cost effective	An indicator that meets all other criteria but is difficult or costly to implement is unlikely to be used.
Relevant to management, policy and community needs and objectives (i.e.: pragmatic)	An indicator that shows that visitors increase their fitness as a result of their visit(s) to Jenolan is not all that relevant to the operation of Jenolan as a tourist site.
Considerate of global (broader issues) even if focusing on local	This means being aware of the broader impacts of operation, e.g. Jenolan's drinking water quality might be maintained at a high level only because the sewerage outlet is placed off the reserve.
Reliable in that you can 'trust' the information (or consider it scientifically credible)	Just think of the visitor questionnaires! When they tick the box that says 'every thing was wonderful' did they really mean that or were they tired and wanted to finish the questionnaire as quickly as possible, and it was the first option.
Valid in that the indicator will measure what is intended	If we want to measure the level of weeds on the reserve we probably wouldn't count the number of weed species – this does not provide enough information regarding the intended question to the organisation.
Clear and easy to understand	An indicator that measures the physiological stress indicators such as blood pressure, hormone levels is not as useful as asking people whether they 'feel relaxed'.
Comprehensive	The aim is to monitor all the aspects that are most likely to change and result in a diminished state – if we forget to monitor visitor satisfaction of people who travel on coaches, or level of feral species we may not have a comprehensive set of indicators.
Relevant to outputs of the system rather than inputs	It is more useful to monitor the levels of visitor satisfaction than expectations; or measure the number of accidents on the five-mile rather than the number of vehicles that could potentially have an accident.
Include a process of review, acknowledging the relevance of time and place to indicator development (highlighted above)	In 2001 Jenolan might monitor the number of vehicles parked per day, but in 2020 when there is a cable car operating this measure is no longer relevant.
As much as possible have indicators of long-term significance	Using the example above, as Jenolan is aware that a change might occur to transport used by visitors and constructs an indicator that is appropriate to both situations.
Include the broader community and stakeholders in development and as recipients of the information	The people for whom the indicators are relevant should input into their development and receive the information that is gathered from them – ie staff at all levels, people who visit/use the site, tour operators, local industries that have association and so forth.
Amenable to aggregation of broader issues in order to enhance understandability – Hart (1999) refers to this as reflecting links and relationships between components. Should also be amenable to disaggregation in order to understand the detail.	Link visitor use with visitor impact, or visitor satisfaction with income, or visitor satisfaction with environmental integrity.

Table 5: <u>Example</u> monitoring program document

Facet of concern / interest	Indicator (what is measured)	Process / method (how)	Frequency (how often)	Level (desired state)	Responsibility (by whom)
Visitor satisfaction • Cave tour • General environment / ambience • Hygiene facilities • Food / picnic facilities • Other activities • Etc.	• Reported satisfaction • No. complaints • Unsolicited comments in suggestion box • Reported satisfaction • Etc. • Etc.	• Visitor questionnaire • Complaints made to Guides Office • Comments in suggestion box • Visitor questionnaire	• Annual • Daily record • Fortnightly collation • Annual	• 100% rating 4 or 5 • zero complaints • zero negative comments • 100% rating 4 or 5	• Visitor Services Mngr • Office Administrator • Senior Guide # 2 • Visitor Services Manager
• Safety & security • Visitor safety • Staff safety • Security of resources and possessions	• No. first aid calls • Perceived safety No. occ. health incidents • No. thefts reported	• Record of 1st aid calls in incident book • Visitor questionnaire • Record of incidents in … • Record of thefts	• Variable • Annual • Variable • Variable	• Etc.	• Etc.

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