Environmental orientations and environmental behaviour: Perceptions of protected area tourism stakeholders

Sophia Imran a,b,*, Khorshed Alam a,b, Narelle Beaumont b,c

a School of Commerce, Faculty of Business, Education, Law and Arts, University of Southern Queensland, Toowoomba, Queensland 4350, Australia
b Australian Centre for Sustainable Business and Development, Toowoomba, Queensland 4350 Australia
c School of Management and Marketing, Faculty of Business and Law, University of Southern Queensland, Australia

HIGHLIGHTS

- Relationship between tourism, livelihood and conservation is dynamic and complex.
- Understanding tourism stakeholders’ attitudes towards protected environments is important.
- Triangulation of qualitative with quantitative analysis validated the research findings.
- There were significant differences among the stakeholders’ orientations towards the environment.
- Multiple factors influenced stakeholders’ intentions to engage in environmental conservation and sustainable tourism.

ABSTRACT

There are numerous studies in the academic literature which assert that environmental attitudes can influence the process of sustainable tourism in protected areas. To test this claim, this research was undertaken in Central Karakoram National Park, Pakistan. The purpose of the research was to examine the differences in environmental orientations of four stakeholder groups associated with protected area tourism and to determine the factors that might influence their intentions to engage in environmentally responsible behaviour. The New Ecological Paradigm scale was used to assess environmental orientations. In addition, interviews were conducted to examine the factors that impacted these orientations. The results show significant differences among the stakeholders’ orientations towards the environment and multiple factors that influence stakeholders’ intention to engage in environmental conservation and sustainable tourism, namely economic benefits, awareness and information, top down governance and resource use rights.

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1. Introduction

Research suggests that the relationship between tourism, livelihood and conservation is dynamic and complex (Njole, 2011; Nyaupane & Poudel, 2011). Equally complex are the environmental and ecological perceptions of the multiple stakeholders driving the process of protected area tourism. Lately, researchers, policy makers and practitioners have recognized the importance of understanding these perceptions. The reason is that environmental issues have become a central concern for policy makers as stakeholders’ attitudes and behaviour towards the environment can lead to the success or failure of the sustainable tourism process (Kim, Borges, & Chon, 2006; Lewis, 2006). Moreover, the complex interaction of people with the environment makes it crucial to examine the link between environmental issues and people’s perceptions of the environment (Gray, Canessa, Rollins, Keller, & Dearden, 2010). Researchers suggest that factors such as perceptions, attitudes and participation towards protected areas are highly correlated and can affect stakeholders’ intent to engage in conservation (Sirivongs & Tsuchiya, 2012).

On the other hand, it is also argued that tourism can empower and can provide direct incentives to the local stakeholders and consequently help develop positive attitudes toward the environment and conservation (Arnberger, Eder, Allex, Sterl, & Burns, 2012; Clements et al., 2013; Nyaupane & Poudel, 2011). Research conducted on linkages among biodiversity, livelihood, and tourism around Chitwan National Park, Nepal, revealed that local residents in the highly developed tourism sites were more empowered and more supportive of conservation programmes (Nyaupane & Poudel, 2011).
Tourism, therefore, if managed effectively and sustainably, is increasingly being identified as a tool for conservation and livelihood enhancement (Bushell & Eagles, 2007; Harrison & Schipani, 2007; Udaya Sekhar, 2003).

Keeping in perspective the complex inter-linkages between people and protected areas, the study examined the differences in environmental orientations of four stakeholder groups, namely local communities, protected area authorities, tourism enterprises and tourists, associated with protected area tourism in the Central Karakoram National Park (CKNP) in Gilgit-Baltistan, Pakistan. These stakeholders are central players of protected area tourism and an insightful understanding of their attitudes towards the environment is important for the achievement of sustainable tourism development. Moreover, what factors influenced their environmental orientations and how these environmental orientations in turn might impact on stakeholders’ intention to engage in environmentally responsible behaviour was also researched.

2. Literature review

There are numerous studies in the academic literature which assert that environmental attitudes, place attachment, and commitment to the environment and conservation are predictors of environmentally responsible behaviour (Corral-Verdugo, Bechtel, & Fraijo-Sing, 2003; Davis, Green, & Reed, 2009; Kerstetter & Bricker, 2009; Lee, 2008). Research also suggests that people with attachments to the natural environment develop a sense of identity with the environment which can lead to pro-environmental behaviour (Cheng & Monroe, 2012; Halpenny, 2010; Vaske & Kobrin, 2001).

Place attachment is defined as a positive or negative relationship that people develop with a place, creating an emotional bond with it (Alam, 2011; Kyle, Mowen, Absher, & Havitz, 2006). Scholars argue that place attachment consists of two components: place identity, which denotes a symbolic or affective attachment to a place, and place dependence, which refers to the functionality of a place (Lee, 2008).

Research also suggests that economic incentives motivate people to become committed to the environment and conservation, particularly in remote protected areas (Campbell, Kartawiayaja, Yulianto, Prasetia, & Clifton, 2013; Novelli & Scarth, 2007; Udaya Sekhar, 2003). Tourism is recognized as an extremely promising source of finance in protected areas. It is argued that the income associated with tourism in protected areas can change the local communities’ perceptions of their environment (Coad, Campbell, Miles, & Humphries, 2008; Sirivongs & Tsuchiya, 2012) and can increase their commitment to the environment and conservation. The results from a study conducted by Udaya Sekhar (2003) in Sariska Tiger Reserve in India showed a correlation between benefits from wildlife tourism and support for protected area conservation, suggesting that benefits impact people’s attitudes towards the environment and conservation.

Similarly, Lee (2008) asserts that sustainable use of the environment can be increased when its users have positive perceptions about conservation and the benefits of tourism. A study on tourism for sustainable local livelihood and the conservation of Lake Manyara National Park revealed that increased environmental conservation awareness and sharing of the economic benefits delivered from tourism increased local support for the conservation of the area (Njole, 2011).

On the other hand, it is observed that restricted rights to resources and displacement of people in protected areas often causes people to develop negative attitudes towards the environment and conservation, which can result in biodiversity loss (Coad et al., 2008). Törn, Siikamäki, Tolvanen, Kauppila, and Rämet (2008) explored the opinions of local people about nature conservation and the development of tourism which showed that most of the negative attitudes toward nature conservation were influenced by the lack of involvement of local people in the foundation and management of protected areas, the lack of perceived benefits from protected areas, and inadequate interactions between local people and conservation administrators. When local stakeholders had a chance to commit to the planning process they had positive perceptions of and opinions about nature conservation and tourism development (Törn et al., 2008). Marcus (2001, in Novelli & Scarth, 2007) argues that people are happier about the creation and maintenance of protected areas when they feel they are benefiting from them. This parks and people debate, therefore, requires stakeholders to acknowledge the trade-offs involved in achieving conservation outcomes (Voyer, Gladstone, & Goodall, 2012). Social research such as the assessment of stakeholders’ attitudes towards the protected area environment and their perceptions about the conservation of the protected area resources could play an important role in building an understanding and appreciation of the key factors that influence conservation. Such factors can help inform management decisions. In addition to the reasons given above that could influence the perceptions of stakeholders about the environment and conservation, research has indicated the existence of a three-dimensional structure of environmental perceptions (Albrecht, Bultena, Hoilberg, & Nowak, 1982; Schultz, 2001; Stern, Dietz, & Guagnano, 1995; Thompson & Barton, 1994). Amérgio, Aragonés, de Frutos, Sevillano, and Cortés (2007) also confirmed a three factorial structure of environmental beliefs in their study on the underlying dimensions of environmental beliefs. These were: an anthropocentric dimension based on the instrumental value of the environment for human beings (humans above nature), a biospheric dimension that values the environment for its own sake (natural balance) and, lastly, an ego–bio-centric dimension that values human beings within nature as a whole (limits to growth).

Similarly, it has been empirically established that people’s environmental orientations are likely to form three different categories, namely importance of self over the environment (egoistic), importance of the environment for people (socio-altruistic), importance of the environment for itself (eco-centric) (Schultz, 2001; Schwartz, 1994; Schwartz & Bilsky, 1990). People who emphasize the importance and worth of the environment for one’s own benefit seem to have an egoistic orientation; those who underscore the importance of the environment and its use and protection for human beings in general have a socio-altruistic orientation; and, lastly, those who call attention to the intrinsic value of the environment and ecosystems have an eco-centric orientation. These orientations guide their level of interest in conserving the environment.

Keeping in perspective the above discourse and in view of this importance given to the stakeholders, the research attempts to explore the human–environment relationships within the protected area tourism context. It explores the differences in environmental orientations among protected area tourism stakeholders and factors that influence these orientations to help shape future investigations in conservation and livelihood development through sustainable tourism initiatives.

3. The study area

Central Karakoram National Park (CKNP) located in Gilgit-Baltistan, Pakistan, was officially established and notified as a national park in 1993 (Fig. 1). It is the largest protected area in Pakistan, covering over 10,000 km² (Hagler Bailly Pakistan, 2010). It includes the world’s greatest concentration of high peaks including K2, the second highest peak in the world, the world’s largest glaciers outside the polar regions (Hagler Bailly Pakistan, 2010), and a
rich cultural and archaeological heritage. Gilgit-Baltistan is one of the most visited tourist destinations in the country (Ahmed, 2003) offering great tourism opportunities for mountaineers, adventure seekers and nature lovers.

Apart from being an area of rich biodiversity and picturesque beauty, CKNP is also home to people who live within and around it. Approximately 230 villages, 97,608 people and 13,159 households are located in the area adjacent to CKNP (ICIMOD, 2011). The Gilgit-Baltistan region remains one of the most disadvantaged, with very limited access to essential facilities such as health care, education, communication, electricity, and transportation (Ali, 2012). The majority of the CKNP buffer zone communities depend directly or indirectly on natural resources found in CKNP to sustain their livelihoods. For the purpose of this research, the term “local communities” means the buffer zone communities. About 90% of the population is characterized by subsistence farming (CKNP, 2005) and is engaged in mining, livestock herding and the tourism sector, working as high altitude porters, guides, and cooks (Baig, 2011; WWF-Pakistan, 2008). A sizeable local population living in the towns adjacent to CKNP operate small and medium sized local tourism enterprises as their main source of income. For the purpose of this research, the term “tourism enterprises” includes the tour operators and hoteliers. This whole population living in the CKNP buffer zone is benefiting directly from the CKNP resources, i.e. high altitude pastures for grazing livestock, firewood and tourism (Baig, 2011).

CKNP comes under the jurisdiction of the Forest and Wildlife Department Gilgit-Baltistan. It is governed by the Northern Areas Wildlife Preservation Act 1975 (CKNP, 2011) and is being managed by the CKNP Directorate. For the purpose of this study, the term “protected area authorities” is used to denote the Forest and Wildlife Department Gilgit-Baltistan, the CKNP Directorate, the Tourism Department Gilgit-Baltistan and the Environmental Protection Agency Gilgit-Baltistan.

The reports of various projects (Ev-K2-CNR, 2010–2013; HKKH, 2007; WWF-Pakistan, 2011; WWF-Pakistan, 2012) identify unsustainable resource use and tourism practices as the key challenges faced by CKNP. Although no official statistics are available, it is estimated that more than 50% of international tourists arriving in Pakistan visit Gilgit-Baltistan (Ahmed, 2003; Cook & Butz, 2011).

The sustained growth of unregulated tourism in Gilgit-Baltistan, especially in CKNP, has contributed to environmental problems in CKNP (Ahmed, 2003; WWF-Pakistan, 2008). Unrestrained tourism activities, coupled with unsustainable exploitation of natural resources by tourists, tour operators and buffer zone communities, have put tremendous pressure on its natural resource base (WWF-Pakistan, 2012). Porters cut wood for cooking and cut young trees for use as walking sticks. They also cause deforestation in wooded areas above the village by stripping the branches of juniper trees for fuel. Nawaz, Shadie, and Zakaria (2009) further state that there is also evidence of environmental degradation in the alpine grasslands used as camping sites by trekking groups. The most noticeable indications of damage to this area are decreased vegetation and exposed soil caused by the digging of tent platforms. Another significant problem attributed to tourism is the accumulation of human waste and litter in villages, along trails leading out of the villages, and in campsites used by trekkers, porters and tour operators in alpine pastures and on glaciers (Nawaz et al., 2009).

Tourism is one of the major contributors to the local economy of Gilgit-Baltistan. However, the 9/11 incident in 2001 has adversely affected foreign tourism revenues in Gilgit-Baltistan. The number of international tourists visiting Gilgit-Baltistan has declined over the
years and annual revenues from adventure tourism have decreased by about 50% since the 9/11 incident (Ali, 2010). It is estimated, on average, that less than 10,000 tourists currently visit Gilgit-Baltistan annually (IGBS, 2011).

4. Methodology

Four main stakeholder groups were identified as a key target population. These included: tourism enterprises (tour operators and hotel owners) that access CKNP for business purposes; protected area authorities that have management jurisdiction of CKNP; local community members who are dependent on the park for their livelihood; and tourists who are engaged in different recreation and adventure activities.

Convenience sampling was deemed the most appropriate, as obtaining a sample through random sampling was impractical (Zikmund, Carr, & Griffin, 2012) due to the difficult mountainous terrain, insufficient population data and time constraints. An on-site convenience survey was conducted in 2011 in different locations around the Park. About 20–24 community members from each of the eight valleys adjacent to the Park were conveniently approached for the survey. The tourism enterprises were selected from the two main towns, Gilgit and Skardu, conveniently with help from the Tourism Department and World Wide Fund for Nature-Pakistan which gave access to information about these enterprises. The Forest and Wildlife Department Gilgit-Baltistan allowed the researcher to conduct face-to-face surveys with the protected area authorities’ staff members who were available during the time of data collection.

A limitation of the study was the relatively small sample size of tourists due mainly to accessibility issues related to reaching the tourists at high altitude base camps in CKNP, and time and resource constraints. Only 62 tourists were surveyed out of an estimated 5000 tourist arrivals during that particular season. Tourists were conveniently approached either in the hotels or at main tourist hubs adjacent to the park depending on their availability. The tourists sample, therefore, could not capture seasonal variations as well as the geographic concentration of visitor flows. Although the small convenience sample size limited the researchers’ ability to generalize the study findings, most tourists were mountaineers, adventure seekers or nature lovers and it therefore provided a small representative sample which enabled the researchers to address the research objectives.

The survey was carried out using the New Ecological Paradigm scale (NEP). The NEP scale has been increasingly applied and tested within diverse cultural contexts in social research to measure general environmental attitudes (Corral-Verdugo & Armendáriz, 2000; Hawcroft & Milfont, 2010; Kim et al., 2006; Mair, 2011; Rideout, Hushen, McGinty, Perkins, & Tate, 2005) and has been found to have considerable validity (Bostrom, Barke, Turaga, & O’Connor, 2006; Dolnicar, 2010; Dunlap, Van Liere, Mertig, & Jones, 2000). The NEP consists of two distinct dimensions in which 7 of the 15 items are worded in a human over nature direction and focus on “anthropocentrism or the belief that nature exists primarily for human use and has no inherent value of its own” (Dunlap et al., 2000, p. 431), thus depicting a human exemptionalism paradigm (HEP). The remaining eight items view human beings as part of the ecological system and their interdependence with the natural world, emphasising a pro-environmental paradigm (NEP).

The following analysis includes the responses made by 292 respondents, aged between 18 and 65 years, out of 300, as eight respondents provided incomplete data and were excluded from the analysis. The response rate was 97.3%. The number of respondents in each of the four stakeholder groups was: local communities 155 (53%), tourists 62 (21%), protected area authorities 32 (11%) and tourism enterprises 43 (15%). The survey instrument was ranked on a five-point scale ranging from “strongly disagree” to “strongly agree”.

The survey data were analysed using the Statistical Package for the Social Sciences (SPSS) version 18. Means and percentages were calculated for each item to identify the trend of the stakeholders’ perceptions towards these items. ANOVA was conducted based on the dimensions which were determined in the exploratory factor analysis. Tukey post-hoc comparisons were conducted to find out whether there were significant differences among the four stakeholder groups.

Purposive sampling was used to collect qualitative data. Purposive samples of each of the stakeholder groups were selected on the basis of their knowledge about the issue being studied, their willingness to talk, and their representation of the range of points of view (Rubin & Rubin, 2005). On-site, face-to-face interviews were conducted with 33 stakeholders. The breakdown of the interviewees was: local community members 14, including porters, shepherds, women, community-controlled hunting areas members, local activists; protected area authorities members 5; tourists 5; and tourism enterprises including hoteliers and tour operators 9.

To ensure accuracy in data collection each interview was tape-recorded and later translated into English and developed into a transcript for analysis. The qualitative analysis was guided by theoretical coding (Connell & Lowe, 1997). Each interview was coded with the initial letter of the stakeholder group name (e.g. PA, TE, LC and TR) then with the number representing the interview (e.g. PA1, TE1, LC1, etc.) and, finally, with a number representing the key points emerging from the interview (e.g. PA1.1, PA1.2, PA1.3, etc.). Each key point determined was compared with other points for similarities and connections. The concepts that shared common characteristics were grouped as categories and themes as shown in Fig. 2.

Typically, interviews lasted between 30 and 90 min. The overall aim of the interviews was to achieve greater understanding of the perception of stakeholders about factors that influenced their intention to get involved in environmental protection and resource conservation and how these factors were linked to their environmental orientations. Another objective was to triangulate the qualitative analysis with the quantitative analysis to determine the validity of the research findings.

5. Results

5.1. Quantitative analysis

Table 1 shows the total percentage agreement for each item with pro-NEP orientation. The pro-environmental responses varied from 14.0% (item 6) to 62.9% (item 7), with a mean pro-environmental score of 40.62%. Overall, nearly 28.3% of the respondents neither agreed nor disagreed with the statements, thereby exhibiting a greater degree of unfamiliarity with the environmental statements, and 28.43% exhibited a pro-human exemptionalism (HEP) stance. The data set values exhibiting pro-environmental orientations were consistently below the data collected from western countries (Dunlap et al., 2000; Rideout et al., 2005; Wurzinger & Johansson, 2006). However, the values show a close match with the data collected in developing countries and for African Americans (Bechtel, Corral, & Pinheiro, 1997; Corral-Verdugo & Armendáriz, 2000; Lee, 2008).

The two items that yielded the strongest responses were NEP 5 “Humans are severely abusing the environment” and NEP 7 “Plants and animals have as much right as humans to exist”. More than 60% of the respondents agreed or strongly agreed with these statements, producing NEP mean scores of 3.82 and 3.68 (out of 5). The
results of these two statements exhibit similar trends obtained in other research studies using the NEP (Kim et al., 2006; Lee, 2008), where the two statements reveal a strong inclination towards an eco-centric interest in nature. The respondents showed a significant level of uncertainty for Item 1, “We are approaching the limit of the number of people that the earth can support” (34.6%); Item 2, “Humans have the right to modify the natural environment to suit their needs” (32.2%); and Item 10, “The so called ecological crisis facing humankind has been greatly exaggerated” (33.6%). One reason for this inclination to take an indecisive stance could be that all the above three items are debatable and have generated controversial and inconclusive arguments.

Item 6 on the scale, “The earth has plenty of natural resources if we just learn how to develop them”, exhibited the smallest percentage agreement with NEP beliefs. Pro-NEP agreement with this item was 14.0%. The data from other studies also show Item 6 as generating the lowest pro-NEP agreement on the scale (Dunlap et al., 2000; Erdogan, 2009; Kim et al., 2006; Rideout et al., 2005; Wurzinger & Johansson, 2006). Rideout et al. (2005) are of the view that one possible explanation could be that respondents are not discriminating with sufficient depth of the use of the word “develop.” The statement may be misinterpreted as equivalent to: “The earth has plenty of natural resources if we just learn how to use them appropriately.”

NEP Item 4, “Human ingenuity will ensure that we do not make the earth unliveable”, also exhibited a small percentage agreement with pro-environmental values (21.6% with a mean rating of 2.67). The two possible explanations given by Kim et al. (2006) are that
responses might be rather undecided in their environmental belief and have some level of anthropocentrism. The other is that the wording of the item may not be structured in a way to represent belief and have some level of anthropocentrism. The other is that respondents might be rather undecided in their environmental belief and have some level of anthropocentrism. The other is that the wording of the item may not be structured in a way to represent anti-environmental orientation. Deeper analysis of the item indicates that it reflects socio-altruistic values most people attach to nature where the environment is considered as a natural capital that can be used but simultaneously developed. The results of the factor analysis in Table 1 showed very low factor loadings for items 6 and 4 confirming the inconsistency of the two statements which may not necessarily express an anti-environmental stance as anticipated in the scale.

5.1.1. Constructs of revised NEP scale

A factor analysis (principal component analysis with varimax rotation) was applied to determine the underlying dimensions of the respondents’ perceptions towards the protected area environment as shown in Table 1. It resulted in three factors explaining about 49% of the total variance. The reliability analysis resulted in acceptable value for the scale factors (Cronbach’s alpha, .783). Factor 1 (“eco-centric”) consisted of eight items (1, 3, 5, 6, 7, 9, 11, & 13) which indicated people’s strong association with the environment. Factor 2 (“egoistic”) contained three items (10, 12, & 14) reflecting strong anti-environmental, humans over nature values. Factor 3 (“socio-altruistic”) consisted of four items (2, 4, 8, & 15) and indicated anthropocentric values. As Item 6, although exhibiting a pro-HEP stance in the NEP scale, with a factor loading of (.76) was significant to its construct and did not jeopardize the integrity of the results, it was retained in the analysis for construct consistency. These factors were used to compare the differences in stakeholders’ perceptions about the environment.

5.1.2. Comparing differences in stakeholders’ orientations

The means for each of the three orientations (eco-centric, socio-altruistic, and egoistic) were calculated using One-way ANOVA with Tukey post-hoc test and compared the four stakeholder groups. Eco-centric orientation demonstrated high ecological interest; socio-altruistic orientation was linked to moderate interest in the environment; and egoistic orientation exhibited low ecological interest.

The overall findings indicated that protected area authorities and local communities exhibited the highest eco-centric interest in the environment with the mean scores of 3.68 and 3.64 respectively as compared to tourists and tourism enterprises (3.19 and 3.12). However, the tourists exhibited a high level of interest in egoistic values (3.17) followed by the tourism enterprises (2.94) as opposed to the local communities and protected area authorities who had lower mean scores for the egoistic orientation (2.84 and 2.70). Looking at the mean scores of the three sub-scales, we can conclude that the protected area authorities and the local communities showed a moderately high level of eco-centric interest in the environment with greater recognition of the intrinsic value of the environment as compared to tourism enterprises and tourists who exhibited a somewhat low interest in eco-centric values.

No significant differences were found between protected area authorities and local communities in the overall means across the three sub-scales (Table 2), reflecting a similar level of interest in the environment. Likewise, no significant differences were found between tourists and tourism enterprises exhibiting a closely matching environmental interest.

Considering that there was little difference in the mean scores of the three value orientations among the stakeholder groups (Table 2), we can safely assume that, though generally pro-NEP, the orientation inclined towards an egoistic interest in the environment with a utilitarian ethic. While environmental concern was shared, it could be attributed to the benefits attached to protection and conservation of the environment. The results of the analysis, therefore, showed a very complex mix of ecological orientations among the stakeholders that underlie the equally complex tourism system in protected areas where competing interests, economic gains and the struggle for survival could be an indicator of the differences in stakeholder groups’ environmental orientations.

### Table 1

<table>
<thead>
<tr>
<th>Items</th>
<th>Agreementa</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 We are approaching the limit of the number of people that the earth can support.</td>
<td>39.4%</td>
<td>.510 Eco-centric</td>
</tr>
<tr>
<td>2 Humans have the right to modify the natural environment to suit their needs.</td>
<td>35.3%</td>
<td>.999 Egoistic</td>
</tr>
<tr>
<td>3 Humans are severely abusing the environment.</td>
<td>53.3%</td>
<td>.350 Socio-altruist</td>
</tr>
<tr>
<td>4 Humans were meant to rule over the rest of nature.</td>
<td>53.8%</td>
<td>.300 Eco-centric</td>
</tr>
<tr>
<td>5 The balance of nature is strong enough to cope with the impacts of modern industrial nations.</td>
<td>56.0%</td>
<td>.584 Egoistic</td>
</tr>
<tr>
<td>6 The earth has plenty of natural resources if we just learn how to develop them.</td>
<td>14.0%</td>
<td>.763 Eco-centric</td>
</tr>
<tr>
<td>7 Humans will eventually learn enough about how nature works to be able to control it.</td>
<td>31.5%</td>
<td>.558 Socio-altruist</td>
</tr>
<tr>
<td>8 Human ingenuity will ensure that we do not make the earth unliveable.</td>
<td>21.6%</td>
<td>.300 Egoistic</td>
</tr>
<tr>
<td>9 Plants and animals have as much right as humans to exist.</td>
<td>62.9%</td>
<td>.706 Eco-centric</td>
</tr>
<tr>
<td>10 The so-called “ecological crisis” facing humankind has been greatly exaggerated.</td>
<td>29.8%</td>
<td>.719 Egoistic</td>
</tr>
<tr>
<td>11 The earth is like a spaceship with very limited room and resources.</td>
<td>35.6%</td>
<td>.558 Socio-altruist</td>
</tr>
<tr>
<td>12 Humans will eventually learn enough about how nature works to be able to control it.</td>
<td>31.5%</td>
<td>.399 Egoistic</td>
</tr>
</tbody>
</table>
| 13 The basis of a factor loading of at least .30. The factor analysis in Table 1 showed very low factor loadings for items that can be used but simultaneously developed. The results of the anti-environmental orientation. Deeper analysis of the item indicates that it reflects socio-altruistic values most people attach to nature where the environment is considered as a natural capital that can be used but simultaneously developed. The results of the factor analysis in Table 1 showed very low factor loadings for items 6 and 4 confirming the inconsistency of the two statements which may not necessarily express an anti-environmental stance as anticipated in the scale.

### Table 2

<table>
<thead>
<tr>
<th>SH groups</th>
<th>Mean</th>
<th>TE</th>
<th>TR</th>
<th>LC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAA</td>
<td>3.2148</td>
<td>.019*</td>
<td>.223</td>
<td>.570</td>
</tr>
<tr>
<td>LC</td>
<td>3.1775</td>
<td>.011*</td>
<td>.301</td>
<td></td>
</tr>
<tr>
<td>TR</td>
<td>3.1248</td>
<td>.155</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: SH Groups = stakeholder groups; TE = tourism enterprises; TR = tourists; LC = local communities; PAA = protected area authorities.

* Significantly different from other groups at p < .05.
5.2. Qualitative analysis

This complex mix of environmental orientations observed in the survey results were compared with the findings from the interviews. Results of the interviews analysis revealed four factors that influenced the stakeholders’ intention to engage in environmental protection and resource conservation. These factors were:

i) Awareness and information: Stakeholders perceived inadequate understanding of the environment and sustainable tourism as one of the key factors influencing their orientation towards the environment. Domestic tourists and tour operators visiting CKNP were not exposed to a tourism experience that engages them in environmentally responsible behaviour. The protected area authorities admitted that adequate information to the tourists was not being provided to avoid or reduce visitor impacts:

...tourists are creating great problems here; they go to places that are ecologically sensitive and leave behind waste. We are facing problems relating to the absence of information centres and other facilities. There are no wildlife watch towers; there are no view points, and no sign boards.

Moreover, the protected area authorities had not developed any code of ethics for the tourists and tourism enterprises:

There is no written code of ethics for the tourists.

There were hardly any information management facilities to assist tourists and tourism enterprises:

What is going on the roads, how is the weather condition, which passes are open or closed you get no information. ...that is frustrating. ......i think we should be better informed.

The knowledge of tourists about the region was generally poor. The tourism enterprises attributed this to the unavailability of information:

We need to give a lot more information to the tourists. About 90% of the tourists....don’t know the exact locations of different lakes and tourist spots in Gilgit-Baltistan. People don’t have any information at all.

The remark shows that there was not enough information reaching the tourists about the Park and its environment.

ii) Benefits and incentives: The perceptions of the stakeholders towards the environment were linked to stakeholders’ incentives. It was observed during the interviews that inadequate opportunities for income generation significantly influenced the participation of local communities in environmental protection and resource conservation activities. They were ready to conserve the environment if incentives were attached to it:

We at our end will conserve the environment to keep it attractive for tourists through tourism revenues. ...but we have a problem, our survival is attached to this resource. Show us what the benefit is for us in conserving this resource.

Unless we give benefits to poor communities, we don’t think any sustainable tourism is possible.

Wherever, the community benefited from sustainable trophy hunting revenues, it brought a change in their environmental orientation as compared to other communities which were left out. This was evident from this remark:

... trophy hunting has affected the level of community support for conservation of the Park. The Hushey community ...... takes care of its environment and has stopped hunting. Other communities still hunt extensively but they have often been neglected and don’t benefit much from tourism.

iii) Resource use rights: The creation of CKNP has left the impression on local communities of restricted access and use through legislation, enforcement and marginalization of indigenous people because of their land-use practices:

We are ready to manage the pastures to conserve them but we wouldn’t like the government to tell us that we have no use rights in the Park.

The local community feared that protected area authorities would change the present status of land-use rights and they would lose their rights for subsistence practices:

The local community fears that once the national park is operational the government will take possession of all land and exclude communities from any benefits. The community should be given their land rights.

iv) Top-down governance: Insufficient commitment of the stakeholders to the environment was related to the top-down governance structure, hence their exclusion from the planning and decision making process. In the local communities’ perceptions:

We should be involved in the development of regulations for CKNP and in the demarcation of its boundary line. If the government wants to do it alone it will not be accepted. If the community is not involved there will be great problems.

We are always unaware of what happens at the top and what the ground realities are. Officials always try to impose things from above. They don’t understand what the local communities want.

Similarly, the protected area authorities felt powerless to implement decisions due to the hierarchical governance structure:

When policy is made at federal level it misses a lot of things on the ground. Our area is fragile and sensitive and we want to have regulations that address actual issues.

6. Discussion

Similar to previous studies, the results of the research showed the tendency among all the stakeholder groups to endorse pro-ecological values (Corral-Verdugo & Armendáriz, 2000; Dunlap et al., 2000; Kim et al., 2006). The four stakeholder groups, though, did not hold a distinct pro-HEP or pro-NEP position; they rather held both positions giving relatively more importance to the pro-ecological viewpoint. As indicated in previous research (Bechetel et al., 1997; Corral-Verdugo & Armendáriz, 2000; Liu, Ouyang, & Miao, 2010), the stakeholders did not see a major conflict between the two opposing views depicted in the NEP and HEP dimensions of the scale as there was no disagreement in holding both beliefs.

The stakeholders were concerned with the negative human impact on the environment but at the same time were interested in benefiting from the profits they could gain from the protected area resources. In addition to an intrinsic interest in the natural environment, a moderate level of use interest in the environment was also evident. This view is opposed to the results of NEP research in western countries where the respondents’ perceptions of the environment are distinctively pro-NEP (Dunlap et al., 2000).
The findings suggest that, although the respondents had environmental concern, it was not their top priority. Such dualistic environmental values suggest that the paradox here is one of “self” (one’s entitlements and rights) versus “the environment” (Mair, 2011).

It was observed that local communities and protected area authorities had a higher level of eco-centric orientation. One possible assumption for this eco-centric orientation could be their close proximity to and relationship with the protected area, as confirmed in previous research studies where higher levels of place identity amongst residents were associated with higher levels of pro-environmental attitudes (Carrus, Bonaiuto, & Bonnes, 2005; Dolnicar, 2010; Gosling & Williams, 2010; Liu et al., 2010). By contrast, the tourists and tourism enterprises were more inclined towards an egoistic stance towards the environment. It could be assumed that the tourists and tourism operators only had a business and recreation association with CKNP.

Furthermore, they had inadequate exposure to knowledge and understanding about the environment and sustainable tourism principles and practices. The interview findings revealed that domestic tourists and tour operators visiting CKNP were not exposed to tourism experiences that would potentially engage them in environmentally responsible behaviour. Therefore, lack of awareness and information influenced their environmental orientations and consequently their environmental behaviour (Jamal & Stronza, 2009). Creating opportunities for tourists and tourism enterprises to learn about the environment and sustainable tourism principles is said to potentially heighten awareness and commitment to environmental protection (Krider, Arguello, Campbell, & Mora, 2010). Research suggests that providing avenues for nature-based environmental learning, education, and experience can transform “a general tourist” [or tourism enterprise]... into a “responsible tourist” [or tourism enterprise]... who cares about and acts for the environment, the community, and the society (Luo & Deng, 2008, p. 394).

In resonance with other studies (Berenguer, Corraliza, & Martin, 2005; Dolnicar, 2010; Dolnicar & Leisch, 2008; Khan, 2003; Mobley, Vagias, & DeWard, 2010; Weaver & Lawton, 2002), we could assume that a more pro-environmental attitude among the protected area authorities in CKNP could be associated with their higher level of education, formative environmental education knowledge, the legal mandate of the Park, and their higher level of moral obligation to behave in an environmentally friendly manner. Likewise, local communities’ closer experience with the protected area environment and dependence on it for survival could have caused them to support the NEP more than stakeholders who just visited protected areas. Similar results were found in a protected area study in China where local farmers’ pro-ecological attitude towards the environment was linked to the strong connection between their livelihood and the park (Liu et al., 2010).

When the results of the qualitative analysis were compared with the results of the survey, it was discovered that stakeholders’ orientations towards the environment and conservation were influenced by economic incentives and benefits. For instance, the local communities associated their interest in conservation with what they would achieve by conserving the wildlife species. They were committed to conserve the environment if they received benefits from trophy hunting. Communities that benefited from trophy hunting showed a positive attitude and engaged in environmental protection and conservation activities. Economic incentive was, therefore, a motivational factor for them to be committed to their natural environment. These results were similar to many studies which show that economic benefits drive conservation and are required to increase biodiversity conservation (Brown, 2002; Clements et al., 2013; Muchaponwda et al., 2009; Sirivongs & Tsuchiya, 2012; Wunder, 2000). The findings suggest that there is evidently a compelling link between local stakeholders’ livelihoods and the natural resource base which they exploit for their survival.

The other two factors for insufficient commitment of the stakeholders to the protected area environment were top-down governance structure, and fear of restrictions on resource use rights and exclusion from the protected area planning process. These results were consistent with previous research studies where factors such as governance of the protected area tourism system is linked with property rights issues, tenure conflicts, and access to resources (Strickland-Munro, Allison, & Moore, 2010). Moreover, the centralized governance system hindered the protected area authorities from taking informed decisions influencing stakeholders’ environmental intentions and behaviour.

Research shows that environmental behaviour is complex and is determined by a multitude of factors (Jansson, Marell, & Nordlund, 2010; Stern, 2000). A range of causal factors such as attitudinal, personal capabilities, contextual factors, and habit and routine have been identified that can influence environmental behaviours (Stern, 2000). The key factors perceived by protected area tourism stakeholders were related to both contextual factors (benefits and incentives, top down governance, and resource use rights) and attitudinal and personal capabilities (awareness and information). These factors could play a vital role in influencing the environmental orientations and consequently their behaviour towards the environment and conservation. Stakeholders with environmentally sound behaviour are especially important for protected areas with fragile environments that need the income that these stakeholders bring through tourism to support conservation and local livelihoods. The protected area managers need to address the issues linked to these factors to facilitate the stakeholders’ participation in sustainable resource management and tourism initiatives.

7. Conclusion

The research explored the environmental orientations among protected area authorities, local communities, tourists and tourism enterprises in a remote alpine protected area. To obtain a deeper understanding and a more holistic view of the relationships between stakeholders’ environmental perceptions and the protected area system, an inductive approach to data analysis was applied in addition to a deductive approach. The analysis not only identified the differences in stakeholders’ environmental orientations, it further determined the factors that influenced these orientations. It was observed that in the perception of stakeholder groups, factors such as economic benefits, awareness and information, governance structure, and resource use rights influenced their intention to engage in pro-environmental behaviour.

The findings of this research contribute to our understanding of more than just the environmental perceptions of key stakeholder groups living in a remote high altitude protected area. By combining the results of the quantitative analysis with qualitative analysis, these findings go beyond unit analysis and move towards process analysis (Connell & Lowe, 1997). The research, therefore, has assisted in increasing our shared knowledge on ‘knowledge-action-impact gaps’. The research illustrates that factors such as ecological understanding, education and knowledge sharing; availability of resources and opportunities; adaptive legislation and regulations; and collaborative planning and management could enhance stakeholders’ pro-environmental perceptions and assist in developing protected area policies that can successfully narrow the ‘knowledge-action-impact gaps’. These factors, when put into action, can foster behaviour changes with a positive impact on the
protected area environment and local stakeholders (Thøgersen & Schrader, 2012). It is inferred from the findings that presently there are very few opportunities for learning, information sharing, and engaging in environmentally responsible behaviour. Continuous education, information dissemination, and inclusion of stakeholders in planning and management of protected areas could facilitate the stakeholders’ transformation from egoists to socio-altruists. These socio-altruistic values underpin the ethos of sustainable development that seeks a balance between environmental protection and satisfying human needs (Meadows, Meadows, & Randers, 1992).

In terms of practical implications, the protected area policy needs to include interventions that inform and educate the stakeholders about tourism and resource use activities and their environmental impacts. Policy interventions are required that encourage the stakeholders to participate in the protected area planning and decision making process for conservation and sustainable tourism, as conflicts and problems often surface from attitudinal and personal factors linked to awareness and knowledge (Bartos & Cihar, 2011). In addition, more positive environmental orientations can be enhanced through addressing contextual factors such as participatory governance structure, inclusion and engagement of stakeholders in tourism planning that promote income-generation and employment opportunities, and laws and regulations that favour the environment (Sirivongs & Tsuchiya, 2012; Stern, 2000; Thøgersen & Schrader, 2012).

References


Srivongs, K., & Tsuchiya, T. (2012). Relationship between local residents’ perceptions, attitudes and participation towards national protected areas: a case study of Phou Khao Khouay National Protected Area, Central Lao PDR. *Forest Policy and Economics, 21, 92–100.*


Sophia Imran holds a PhD degree in sustainable tourism management from University of Southern Queensland and a Masters in natural resource management from University of Melbourne. She is a member of the Australian Centre for Sustainable Business and Development at the University of Southern Queensland, Toowoomba. The focus of her research is sustainable tourism in protected areas. Her research interests include sustainable tourism, policy, planning and participatory governance, sustainable development, natural resource management, and digital technologies.

Khorsheed Alam is a Senior Lecturer in Economics at the School of Accounting, Economics and Finance, University of Southern Queensland. He holds a PhD in resource economics from Murdoch University, Western Australia, and a Masters in Economics from the Institute of Social Studies in the Netherlands. His current research interests lie in the areas of sustainability, environmental and resource economics, economic policy analysis and economics of water, energy, climate change and digital technologies. He has done consultancies for various government agencies in Australia and overseas. He has authored a book on development planning, together with more than 25 research papers.

Dr. Narelle Beaumont is an Adjunct Lecturer in the Australian Centre for Sustainable Business and Development at the University of Southern Queensland (USQ), Springfield, Queensland, Australia. She was previously a Lecturer in Tourism in the School of Management and Marketing at USQ. Her research interests include sustainable tourism and green consumerism, sustainable visitor management in protected areas, ecotourism and education for sustainability, local tourism planning and governance, and tourism industry responses to climate change.