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PROSPECTS FOR ALLEVIATING POVERTY AND PROTECTING THE TAUNSA BARRAGE WILDLIFE SANCTUARY, INDUS RIVER, PAKISTAN, THROUGH CULTURAL AND ECO-TOURISM

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ABSTRACT

The common assumption about protected areas is that they aggravate poverty amongst local residents by excluding them from livelihood activities such as fishing, agriculture, tourism and logging. It has been increasingly recognized that protected areas should instead contribute to sustaining the resident communities of surrounding areas. Eco-tourism could be an alternative form of income generation and has a substantial potential to boost and develop a relationship between people and nature. At the Taunsa Barrage Wildlife Sanctuary (TBWS), on the Indus River, Pakistan, local communities rely on local ecosystem services for up to 90% of their daily needs. To determine the potential for eco-tourism growth a SWOT analysis (Strengths, weaknesses, opportunities and threats) was designed based on discussion with stake holders (including community representative, non-governmental and governmental agencies)and personal observation during 2010. It is proposed as an approach for communities to utilize otherwise marginal cultural or ecological assets.Sustainability and involvement are both fundamental for the enduring future of this form of tourism. This study indicates that the prospects of eco-tourism as an instrument for empowerment and poverty alleviation at the TBWS are good.Eco-cultural tourism can offers ways to achieve sustainable resource and to engage with wider society. It could also act as a model for how cultural- and eco-tourism could empower local people in comparable settings in Pakistan.

Key words: Ecotourism, SWOT Analysis, Taunsa Barrage Wildlife Sanctuary, Pakistan.

INTRODUCTION

Cultural and eco-tourism are defined as an activity in which natural and cultural features of a landscape are pooled to generate an attraction for tourists. Honey (1999) stated that to be considered eco-tourism, an enterprise must exhibit the following seven characteristics: travel to natural destinations; reduced impact; creates environmental cognizance; provision of direct monetary benefits for conservation; empowerment for inhabitants; respect for indigenous culture; and support for human rights and self-governing movement. It is proposed as an alternative strategy for communities with ample cultural or ecological assets to develop sustainably. Protected areas have always fascinated people, and with modern travel humans are now visiting places all over the planet. Indeed, tourism to natural and wild areas within protected areas is flourishing. Overall, tourism has increased from 2% of people going to places of interest in the late 1980s to about 20% of all holiday travel today(Weaver and Oppermann, 2000).

If all the ecosystem services of wetlands such as food, fish, fuel, fiber, medicine, building material like thatch and timber, recreation and tourism can be valued, it may be possible to convince local communities and other stakeholders about their importance and rally some support to keep destructive forces in abeyance. Financial support in proportion to the overall value of these services can also be sought either from the public or the government (Rao and Datye, 2003). Since early civilization, many cultures have learned to live in balance with wetlands and have benefited economically from them (Nicholas, 1998; Oviedo and Brown, 1999). Approximately 70% of Pakistan's population is rural, depending directly or indirectly on natural resources and their ecosystem services. Of these people, wetlands support the livelihoods of 87%, and in addition they contribute positively to the welfare of 70% of people outside the area through water regulation for hydropower (Ahmad*et al* . 2014).

Tourism and civilization have always been closely connected. Protected areas have forever been a destination for those fascinated by their wealth of natural and cultural capital (MacCannell, 1976). Others have identified tourism as the best opportunity from which to examine the source of cultural manufacture, and the

concept of cultural tourism conceivably takes this initiative to its rational conclusion. To sustain this foundation requires each one of us to make a personal commitment to live an environmentally ethical life (Newsome *et al* . 2002), and sustainable management links environmental protection and economic development (Hassan *et al* . 2005).

Though from last decade efforts has been made to make sustainable use of natural resources, still the biological diversity in the tropical region necessitate effective and tangible protection to persist (Bruner *et al* .,2001; Myers *et al* . 2000) .Human activities such as environmental destruction and disintegration ,contamination ,over harvesting along with lack or faulty performance of governance and the administrative structures are the key factors to abolish the biological diversity in tropical regions(Brooks *et al* .2002; Myers and Knoll, 2001; Novacek and Cleland, 2001; Pimm and Raven, 2000; Singh, 1996). It is clear and evident that proper and systematic planning is essential for the improvement, maintenance and sustainability of any protected area. Similarly, the natural resources that eco-tourism is based upon must also be protected. Without this, the potential for sustainable development and income generation for local communities will also be lost.

Based on their global significance, 19 wetlands have been designated as Ramsar sites in Pakistan. Out of these, three are located in Punjab; namely the Ucchali Wetlands Complex, Chashma Barrage Wildlife Sanctuary and the Taunsa Barrage Wildlife Sanctuary (TBWS).Local communities around the TBWS live in abject poverty without any regular source of income, and the government has not provided any civic amenities to these villages (Ali *et al* . 2011). Consequently most depend upon natural resources from within the TBWS to fulfill their subsistence needs. As a result the wetlands are becoming degraded, and population growth is exacerbating the hardship of local communities. However, by generating cultural and eco-tourism in the TBWS, an incentive could be generated to conserve the wetland while also lifting communities out of poverty. This paper considers the prospects for the development of cultural and eco-tourism in the Ramsar site, and steps required to realize this potential.

MATERIALS AND METHODS

Study site: The Taunsa Barrage (30°42'N 070°50'E) is located on the Indus River in the Punjab Province of Pakistan; its construction was completed in 1958. It was declared a Wildlife Sanctuary covering 6,576 ha in 1972. Taunsa Barrage was notified as a Wetland of International Importance in 1996 by the Ramsar Convention Secretariat. An area on both sides of the reservoir, 9 km upstream and 3 km downstream of the barrage has been proposed to be included in the sanctuary (Scott, 1989). The TBWS is famous for the presence of endemic fauna, including the Indus River dolphin (Figure-1).

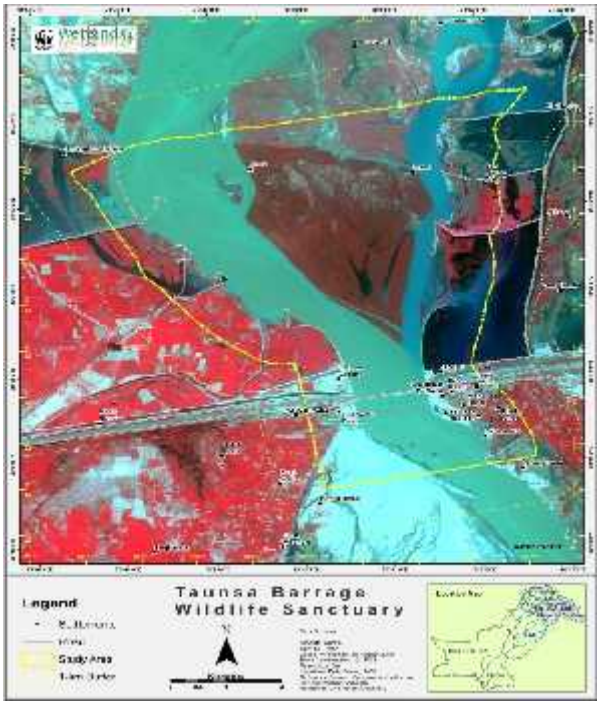

Figure-1: Taunsa Barrage Wildlife Sanctuary

Livelihood characterization: The characteristics of the local population and their livelihoods were derived from unstructured surveys and observations of the villages surrounding the TBWS undertaken in 2010.

SWOT analysis: Data was collected suitable for SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis (Hiwasaki, 2007; Masozera *et al* . 2006).The discussion with stake holderscomprising representatives from local communities, governmental and non-governmental agencies along with research team personal observations during field visits in 2010 served the base for this analysis. Data collection was also based on a review of literature and institutional issues relating to eco-tourism in protected zones. Challenges faced by existing recreational tourism in the TBWS were also documented.

RESULTS

Livelihood characterization: Three villages in the surroundings of TBWS constitute 3,793 households with an average number of 7 people per household. The total estimated population was 26,551. 70% of houses had thatched roofing while 30% were constructed from mixed sun dried and fire dried bricks. The principal means of transportation in the area was cart driven by donkey or bull. Most people from the TBWS area were illiterate (64%).

Peoples' livelihood activities were collecting natural materials for fuel wood (80%), grazing livestock (100%), fishing (90%), hunting (5%), and catching and trading freshwater turtles (10%). Timber collected from the TBWS was used for making furniture and firewood. ayurvedic (traditional medicine) practitioners collected herbs and shrubs from the wildlife sanctuary for medicinal treatments. They also used lotus plants for curative purposes, and 40% of people use the roots of this plant as a source of food. Thatching material (e.g. *Typhaaugustata*and S*accharummunja*) for roofing was also collected from the TBWS and from river banks. Fishing was one of the major activities in the area. The community which is largely dependent on the river fishery had about 60 boats in the union council surrounding the barrage. Wildlife such as migratory birds and the hog deer (*Axis porcinus*) were shot by locals and hunting parties for meat and also as a sport. Dolphins and turtles are trapped for their body fat which is removed and used by hakims in medicines. A cottage industry provided a minor source of income from the making of "Saf mats" from *Typhaagustata*, baskets from *Tamarixdioica* and "Ralli" made from small cloth pieces sewn together and sold in markets. The local people value products from wild resources more highly than those from cultivated, farmed or bought assets (Ali *et al*. 2011).

A profile of villages' livelihoods indicated that occupations were ethnically distinct. In the villages of Sindhis and Sheikhs, 80% of people were involved in fishing and basket making. In Chandia, 10% of the population was engaged in contract labour. TBWS therefore acts as the primary foundation for the local economy and livelihoods. The sanctuary also provided ecosystem services such as raptors which control the rodent population, breeding habitat for migratory bird species, and climatic regulation.

SWOT analysis: In order to better understand the resource base of TBWS, study of the list of possible tourism activities and main tourist attractions are presented in Table 1. Because of its biological and cultural significance, TBWS has great potential to promote eco-tourism and convert existing recreational tourism into environment-friendly and responsible tourism. To date no serious effort has been made to promote tourism in an organized and environment friendly manner. It is need of time to redesign the ecotourism sector to generate additional income and employment opportunities for the local community from potential ecosystem.

Table1. Potential ecosystem and culturally-based tourist attractions and activities at TBWS

Natural and man-made features	Cultural features	Biological features	Activities
River landscape	Tomb of Taunsa Sharif	Indus River dolphin	Boating
Barrage structure	Mat-making	Migratory birds	Sailing
Canals	Traditional lifestyle of fishing people	Variety of fish	Angling
	Village landscape	Native vegetation	Swimming
			Camping
			Nature walks
			Bird watching
			Village tours
			Day excursions to Taunsa Sharif

Handicrafts products could be latent source of income for the local community .Table.2 shows SWOT analysis for the cultural activities and eco-tourism at TBWS. The establishment of handicrafts shops and proposed Taunsa visitor information center could be helpful in progression of handicraft sector. These protected areas are the tourist attention holder sites where local community can make income by selling handicrafts, locally produced vegetables, fruits, fish and poultry items at profitable rates to the visitors. These items are already in high demand by recreational tourists that visit TBWS.

Table 2. SWOT analysis for cultural and eco-tourism at TBWS

Strengths	**Weaknesses**
Easily accessible from Multan, D.G Khan and other towns via metaled road.	Unavailability of facilities for tourist such as picnic shades, car parking spaces, first aid and. public toilets.
Located near popular tourist destinations such as Multan, Bahawalpur and Taunsa Sharif.	Inadequate tourist board and accommodationservices.
A number of domestic frivolous tourists already visit the area on weekends and public holidays.	Meager landscaping.
Being located on the Indus Flyway, the TBWS is a significant breeding, staging and wintering ground for a large array of water birds.	Deprived visitors' orientation and management.
Opportunities for Indus River dolphin watching.	Lack of strategies for educating tourist about the area.
Opportunities for bird watching in the winter.	Poor solid waste and waste water disposal strategies.
Opportunities of different recreational activities such as boating, fishing and picnicking.	Lack of tourist handling skills in local community.
High cultural interest sites in the surrounding area.	Disastrous boating facilities.
	Reduced water rescue services.
	Impact of visitors on local economy is minimal
	Illegal hunting
Opportunities	**Threats**
Promote community-based eco- or recreational tourism by introducing a micro finance scheme.	Unpredictedexpansion of tourism infrastructure.
Develop nature trails along the water edge with bird watching hides at suitable locations.	Increase in visual, noise, air and water pollution.
Develop Community Guest Houses.	Over-crowding.
Improve quality of services of local community by providing training in guest houses and restaurant management, visitor management and tour guiding skills.	Disturbance and hunting of wildlife.
Introduce proper waste management system.	Over-exploitation of natural resources.
Establish a Tourism Information Centre as a focal point for ecotourism activities in the project area.	Over-pricing.
Involve local women in handicrafts production and establish craft shops to promote community handicrafts.	No control on quality of tourism services.
Publish tourist information brochure and specialized pamphlets on birds, Indus River dolphin, vegetation and fish.	Increase in solid waste production.
Establish new picnic spots.	
Establish water safety and rescue posts.	

Current development of tourist facilities at the TBWS is haphazard, and damage done to the environment is quite visible, because of no proper waste n sewage system exists for local shopkeepers and visitors. Consequently this does not qualify as eco-tourism, but rather is sick- managed tourism. The ill management of the solid waste generated by restaurants and tea stalls pose a serious threat to the protected area. The impact of domestic tourism on the local economy is least as the place being visited by local visitors on weekend bases cannot bring economy up to the mark. It was observed that there was a gap in the locals' knowledge of the latest trends in tourism trade, and requirements of a good standard of tourism products. There was also no quality control or checks on the standard of services by any government agency or regulatory body. Therefore, tea stalls/restaurant owners were unaware of quality standards and hygiene conditions which are the norm of tourist industries in other countries.

The marketing and promotional strategies were not encouraged to cope with the standards. The data providing sector was incapable to update information on tourist facilities. Provincial and national departments, such as the Tourism Development Corporation Punjab

and Pakistan Tourism Development Corporation have not done enough in this regard. Mostly the staff in the restaurants was not well trained in the marketing expertise to satisfy the tourist. Basic amenities such as public toilets, picnic shades, water rescue and first aid posts were not available. Presently there is no proper mechanism to collect and disseminate data on tourism trends and growth in the tourism sector in the project area. There was also a need to promote sustainable procurement, travel and biodiversity by reducing the environmental impact of people's activities.

DISCUSSION

Pakistan is exceptionally rich in its diversity of ecosystems. Considerable attention has been paid to community-based natural resource management in recent years as a strategy for the enhancement of natural resource stewardship (Matta and Alavalapati, 2006). To achieve this, it is necessary to generate management plans which include multiple stakeholders' views on the long term conservation of wildlife protected areas (Allendorf, 2007). Recently, the idea of community-based tourism as a tool for achieving both conservation and poverty alleviation has been promoted (Jain and Triraganon, 2003).

Most of the human livelihoods in the TBWS were found to be economically dependent on agriculture, livestock and natural resources in and around the barrage. However, ecosystems are showing signs of degradation and over-exploitation. For visitors, boating was the main recreational facility at the barrage. According to the local community, fishing had been another popular recreational activity but due to decreases in the fish stocks this is no longer as popular as it used to be. Besides this, special interest groups of nature tourists come to the TBWS in winter for bird watching and Indus River dolphin watching, but their numbers are very low.

Although the TBWS has been declared a protected area under Ramsar and the Punjab Wildlife (Protection, Conservation, Preservation and Management) Act 1974, and hunting is not allowed, illegal hunting still occurs. The Department of Wildlife is unable to check this due to inadequate staffing. The level of hunting of migratory birds, turtles, and hog deer encountered was particularly high. The Pakistan Wetlands Program and WWF-Pakistan have made efforts to raise awareness and educate people to prevent the shooting and hunting of birds, mammals, reptiles. Some educated people were aware of the importance of wildlife and wish to conserve the natural flora and fauna of the area by maintaining the habitat, but due to the unavailability of resources were unable to prevent hunting. Limited conversations with hunters showed that the majority of hunters were unable to identify migratory birds, or claimed to be unaware that some are threatened species.

Poverty-related issues emerged as a major cause of the unsustainable use of wetlands. As resources that are actually or perceived to be common property, wetlands are excessively used for fishing, subsistence hunting, and the extraction of shoreline vegetation and as water sources. The low level of development, poor access to markets, and lack of investment in local processing creates a downward spiral of poverty. In these circumstances communities have few alternatives to the excessive extraction of wetland products in order to survive. This has led directly to the degradation of the TBWS and the reduction of habitat for key species.

Poverty, corruption and black marketing are the ultimate cause of commercial poaching in Pakistan. Due to the high illiteracy rate amongst local communities around the TBWS, most people were unaware about the importance of wild fauna and flora, and consequently have no idea about sustainable management. A pervasive lack of awareness is evident in policy making and public attitudes to almost all forms of natural resource management including wildlife sanctuary management. At a site specific level, lack of awareness lies at the heart of unsustainable uses of TBWS biodiversity such as hunting and poaching. Hunters were generally unaware of the threatened and endangered status of some species of migratory and resident fauna that use TBWS. Communities were unaware of the importance of TBWS and its associated biodiversity and continue to degrade these resources through harmful practices.

It is essential to revise the tourism facilities and to call for the local community in the tourism development and management plans so they could be able to earn their livelihood from this potential source and play effectual role in the conservation of protected areas. To develop tourism facilities at the TBWS some recommendations have been suggested.Visitor centers are very useful for enhancing the interest of visitors. The establishment of visiting centers for tourist not only serves for circularizing information among visitors but also encourage awareness about conservation of endemic wild life in particular to Indus dolphin.The right bank of the barrage is the most suitable place to establish visitor information centre. Many people visit this place for recreational tourism and picnic and especially on weekends it receives large number of tourists from surrounding cities and towns. The visitor information center is supposed to provide information regarding regional history, cultural and natural environments, flora and fauna and irrigation system of the protected area.

Use of posters, charts, photographs and maps can be cooperative to display the information.The building design of the tourist visiting center should reflect the cultural harmony of the area. The center should be featured with ample reception staff, exhibition hall, and

projection room along with relic shop apart from tuck shop and toilet facilities. The center should appoint a qualified officer who can respond and guide jubilantly to visitors. He should have excelled over English and Urdu language to answer visitor's queries about facilities in project area and places of tourist interest.

The center should have authority to issue permits to visitors to enjoy the facilities available there. Launching of community nature guide services in the project area could increase the revenue and raise the awareness about the significance of the protected area among local community and other visitors. The tourist visitor center is supposed to provide information leaflets, guides and maps free of cost to the visitors. The exhibition hall could be a source of attraction to the tourist. A fully designed presentation rooms with audio video facility having a setting arrangement of at least 50 persons is one of the most important constituent of center. The center should have funds to offer off scheduled presentations during peak visiting days by tourists.

Presently there is very limited accommodation facility in the form of two small rest houses of the Irrigation Department. However, the availability of these facilities was mostly reserved for government officials. The Irrigation Department should build additional accommodation in the land available along the existing rest houses. Low interest loans or matching grants should be given to those local entrepreneurs who are interested in building guest houses at TBWS. The concept of an eco-tourism holiday village should also be considered to provide additional accommodation for tourists in distinctive rural and cultural spirit having utmost elements of interest for the tourist. Nonetheless the development should ensure the nature exploration and actual wilderness experience for visitors. The financial gain from such facilities in the center could make local community involve in the conservation and resource management of the protected area.

In order to facilitate tourism, training programmes in hospitality management skills should be arranged to improve the quality and standard of services of entrepreneurs in managing these guest houses. Also, bird watching hides should be provided at suitable locations around the wetland areas upstream of the barrage. These hides should be simple but useful structures made with local material.

In this study, the prospects for cultural and eco-tourism as a means of achieving conservation and poverty alleviation has been investigated. Although the potential appears to be great, any planning and implementation process needs to understand and incorporate the attitudes and beliefs of local inhabitants towards the protected area (Allendorf, 2007). Clearly the protection of the TBWS should be promoted for the benefit of the local inhabitants' livelihoods. This will require the creation of awareness amongst villagers about the potential benefits of sustainable management linked to eco-tourism, and therefore their participation in management and planning (Olesu-adjei, 1998). Therefore we conclude that environmentally-friendly tourism could provide an opposite sustainable model for the management of Ramsar wetlands throughout Pakistan, but the TBWS should be first developed as a demonstration site.

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