

FUTURE OF WILDLIFE LIES IN INTEGRITY OF HUMAN: ECONOMICAL PROSPERITY OR SURVIVAL VALUE?

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ABSTRACT

This paper presents the results of research conducted in major tourist destinations of Chitwan- Sauraha and Kasara which is near to Chitwan National Park (CNP). The park has experienced the problems associated with anthropogenic activities like habitat degradation, poaching, pollutions which have threatened the wildlife. Our results showed that the visit by tourist inside the park has largely influenced the wildlife and their activities. Tourism establishes the linkages between the local community and economy and is concerned with the development of the area however it has also negatively impacted the local community and wildlife. Thus, our study suggest that the well and systematic management plan should be prepared and implemented for making the association between wildlife, local community and tourists, a beneficial one. Future planning on conservation policies and strategies should be emphasized instead just focusing on raising the revenue from tourism and growing socio-ecological condition of local community because for long term sustainability of the protected areas, nature based tourism is the urgent need.

KEYWORDS: Chitwan National Park (CNP), Protected Areas (PAs), World Database on Protected Areas (WDPA), United Nation (UN), Department of National Parks and Wildlife Conservation (DNPWC), National Park and Wildlife Conservation (NPWC)

INTRODUCTION

The modern concern takes the Protected Areas (PAs) as one of the most significant form of habitat used by human and protecting it with obligations. PAs have become a significant tool especially in conserving variety of species within the biological world (Lopoukhine, 2008). According to the World Database on Protected Areas (WDPA) records, there are now 160,000 protected areas worldwide covering more than 13 % of the earth's land surface (Oli et al., 2013). Ferraro and Hanauer (2011) stated that PAs lessen poverty by supplying ecosystem services, ecotourism services and by providing socio-economic development. PAs provides various direct and indirect benefits like recreation, tourism, ecological processes, biodiversity, education and research, including consumptive and non consumptive values (Dixon and Sherman, 1991). The values of protected areas are not always direct and commercial but also possess indirect values, options values, existence values and non-use benefits (Pearce and Moran, 1994).

The Protected Areas (PAs) in developing countries have experienced towards the growth in the past 25 years. In case of Asia, PAs have been established at the beginning of second quarter of this century (Mishra, 1982) with the concept taken from western country. Nepal is a least developed countries on the list of United Nations (UN) where the National parks and PAs works under the Department of National Parks and Wildlife Conservation (DNPWC), Ministry of Forest and Soil Conservation (MFSC) and it's main aim is to conserve and manage the rich and varieties of species of Nepal

especially targeting the Protected areas and wild life (DNPWC, 2010). The National Parks and Wildlife Conservation (NPWC) act of 1973 has provided the legislation for the management and protection of protected areas of Nepal. The country comprises ten national parks, three wildlife reserves, one hunting reserve, six conservation areas and eleven buffer zones. More than 19.7% of the total area of the country (147,181 sq km) is declared as Protected areas (Rijal, 2010). PAs have wide role, but the core aim is to alleviate poverty and contribute in the development of nation.

In the past the PAs had implemented the "fines and fences" approach in managing the natural resources and wildlife but later after the realization of local people's need and support in the wildlife management, the integrated conservation approach was introduced with the purpose of benefiting both wildlife and local community. This approach was mainly done to reduce the dependency of people on forest's resources and to provide alternative sources of income to local communities through the direct payment or through opportunities with the aim of alleviating poverty and raising awareness towards conservation of natural resources.

Tourism today has grown up to be one of the most crucial industrial sectors. It has been recognized as the world's largest generator of employment and wealth globally. Tourism generates more than 11.7 % of the global Gross Domestic Product (GDP) (WTO, 1999). Tourism has employed 200 million people and is supposed to transport approximately 700 million international travelers per year and the figure is expected to double by 2020 (Roe and Urquhart, 2001). The tourism industry is responsible for the economical prosperity of the developing countries like Nepal especially to foreign exchange earnings, employment and GDP. So, it is believed that tourism helps in alleviating poverty though has positive and negative effects. The positive aspects are related to economical advantages, capacity building, training and empowerment, enhancing collective benefits and development while negative aspects include the displacement of local people, inflated prices, loss of access to resources and social and cultural disruption. These days, the nature based tourism, wildlife tourism, eco-tourism and community based tourism has been a major focus throughout the world. These all are based on sustainable use of resources and benefits sharing by the local people. Moreover, these all involve both cultural and environmental tourism and add up the benefits to the local community.

Tourism industry in case of Nepal is also taken as one of the most vibrant and crucial sectors of socioeconomic development playing a fundamental role in employment. Approximately 30% of Nepalese depends on tourism for their livelihood (Pandey, 2003). Since 1970s, tourism has been incorporated to National development strategy in Nepal. Tourism influences the tradition and culture and the popularity expands worldwide. The effect of tourism is not always productive and beneficial. The resource demands of tourism can severely affect the local people. Tourism sector seems to create economic and legal problems because the price and values of the materials rise up and mostly the local people seem to be affected. Besides, habitat degradation, generation of waste, depletion of resources and pollution are the effects caused due to improper tourism (Bandyopadhyay and Tembo, 2010). Tourism on one side enhances the socio-economic progress while on other sides it leads to increment of illicit activities, rise in price of daily requirements, increment of pollutants/litter, habitat fragmentation and the most threatening case of tourism can be seen in Protected Areas (PAs) where the flow of visitors not only affects the daily activities of wildlife but also modifies the behavior of wildlife gradually due to their adaptability to day to day disturbances created by visitor's activities. Thus, disturbances create both short and long term effects on wildlife. It is thereby very essential to study the impacts of visitors on wildlife and their consequences to achieve the conservation goals.

STUDY AREA

Chitwan district lies about 146 km south west from Kathmandu valley, the Capital of Nepal. It is the main destination of attraction for tourists and about 47% of the Nepal's population occupies the terai region. Chitwan National Park (CNP) was formerly recognized as Royal Chitwan National Park. It lies in the inner terai region of Chitwan, Makwanpur, Nawalparasi and Parsa districts of Nepal. It is at southern part of Chitwan district. Chitwan National Park (CNP) is in a tropical and subtropical bioclimatic zone and is mainly characterized by three climatic seasons, namely hot, monsoon and winter. Initially, the area of CNP covered 544 sq km and in 1996, 750 sq km areas were separated as a buffer zone (DNPWC, 1997). The Park now covers a total area of 932 sq km. It is surrounded by Parsa Wildlife Reserve in the east and India in the southeast. Balmiki tiger sanctuary and Udaipur sanctuary lies across the border of India. The park was gazetted in 1973, as the first national park of the country. The park has magnificent fauna and flora. The faunal diversity comprises 68 species of mammals, 544 species of birds, 56 species of herpeto-fauna, and 126 species of fishes, 150 species of butterfly as well as several invertebrate species(<http://www.chitwannationalpark.gov.np>) and the floral diversity comprises 600 plant species that includes 3 gymnosperm, 13 Pteridophytes, 415 Dicotyledons, 137 Monocots, 16 species of Orchids (UNESCO, 2003). CNP has been well-known globally because of its unique and diversified ecosystems, thus has international significances.



Figure 1: Chitwan National Park and Buffer Zone

The nature based tourism in CNP was started in Nepal during 1960s. The main objectives of tourism in the park is to enrich the experience of visitor and anticipate their role in protecting cultural heritage for future generation. Tourism in Nepal has been doubled as compared to the past because of the proper security services. The Park shows the increase in trend in the number of tourists visiting the Park, started with 836 in 1974-1975 to 1,46,662 tourists in 2010-2011. CNP is one of the important destination for the tourists which attracts more than 145,000 visitors in a year. The annual tourist influx of last year (July 2010–June 2011) was 146, 662(www.tourism.gov.np); 172,425 in the fiscal year 2013-14 and 178,220 in the fiscal year 2014-15 (*The Himalayan Times*, July 23, 2015).

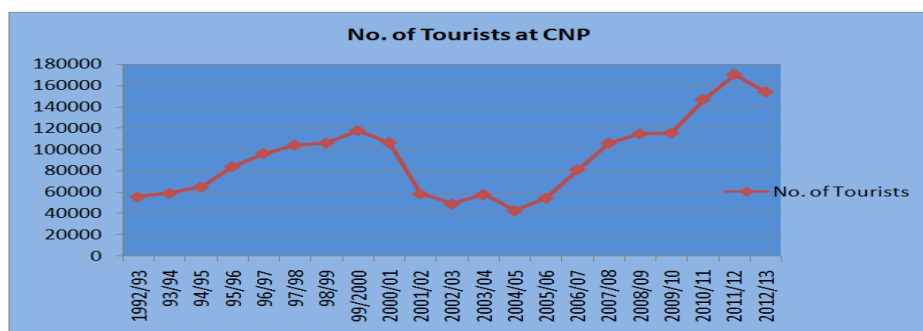


Figure 2: Number of Tourists at CNP

The figure above shows that the flow of tourists is increasing gradually as compared to previous years. The number of Visitors visiting Chitwan National Park (CNP) stood at 172,425 in fiscal year 2013-14 and as per the records received recently from the authorities of the Park, a total of 178,220 tourists visited the National Park in the fiscal year 2014-15. Thus the figure shows that the CNP has been the tourist attraction site.

OBJECTIVES

The main objective of the study is to determine the impact of tourist's activities on wildlife especially larger mammals.

METHODOLOGY

The researcher used mixed method approaches to inquiry for the study. The mixed methods design is used in capturing best of both qualitative and quantitative approaches. The questionnaires used for study include both open ended type questions and closed type questions so as to understand the ongoing issues and problems properly. The purposive sampling method was selected by the researcher for taking a sample size. The sample size of the study has been calculated by using the Krejcie and Morgan (1970) model for determining sample size of the tourist and the sample size was 85. The main goal of purposive sampling was to focus on particular characteristics of a population that are of interest. Being convenient and less time consuming this method was selected for tourists as they come for short span of time. After collecting data they were analyzed by using computerized software program SPSS version 21 and the necessary tables and charts were prepared by advanced excel.

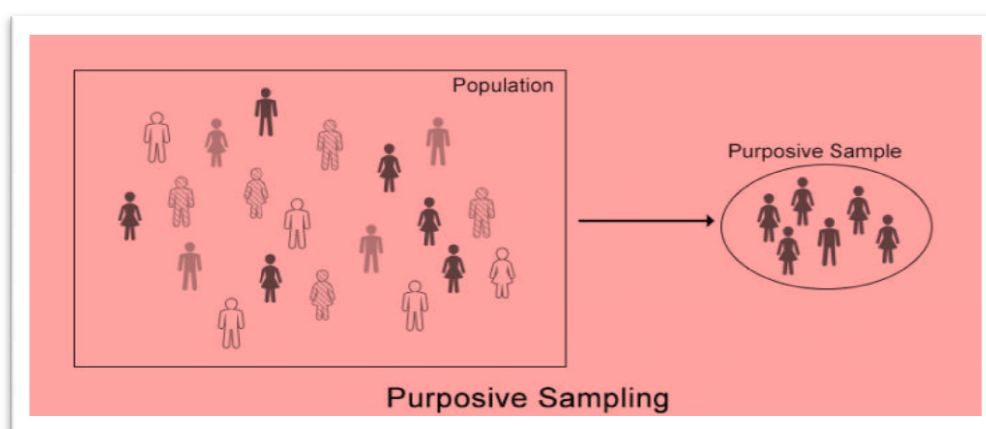


Figure 3: Purposive Sampling Method

RESULTS

General Characteristics of Tourists

The total sample of tourists taken was 85 but there were 83 respondents giving their details on age. The age characteristics of two respondents were found missing. 41 tourists were between the age group 21-30, 18 falls in between 31-40, 9 were above 50, 8 ranges between 41-50 and 7 respondents were up to 20. The tourists taken for sample were above 16 year. The highest respondents were between the age 21-30, followed by 31-40, above 50, 41-50 and then the least numbers of respondents were below 20 age group.

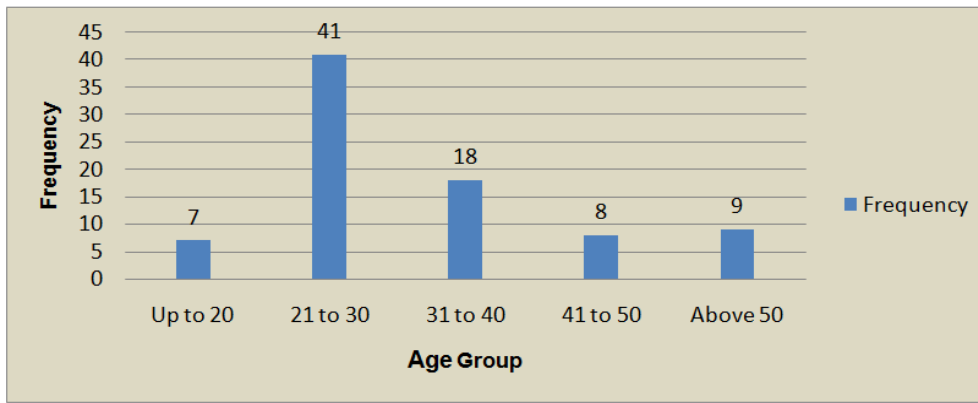


Figure 4: Age Group of the Respondents

Out of 85 respondents, 52 were Males and 33 were Females. Majority of the Male and Female respondents were between the age group 21-30.

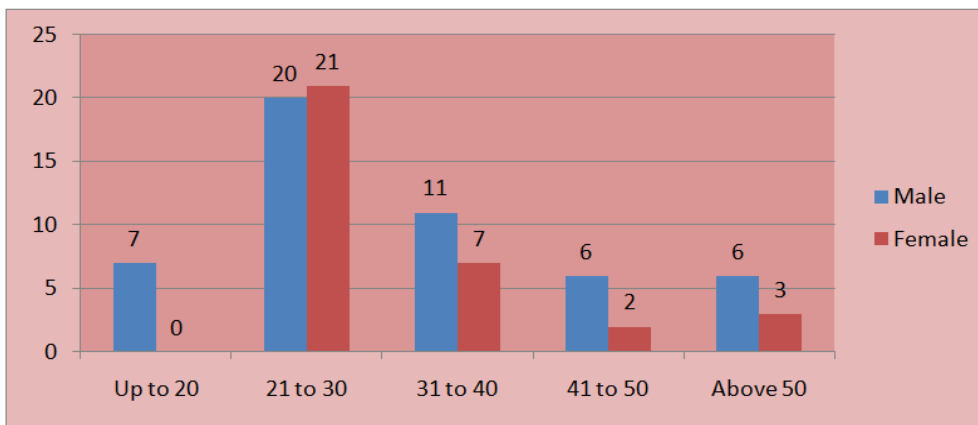


Figure 5: Sex of the Respondents

The highest Participants for the interview were Males as compared to Females as per educational background wise. 37 Males and 26 females had attended University Level, 4 Males and 3 Females were from Higher Secondary level. 8 Males and 4 Females were from Secondary Level and there were only 2 Males from Primary Level.

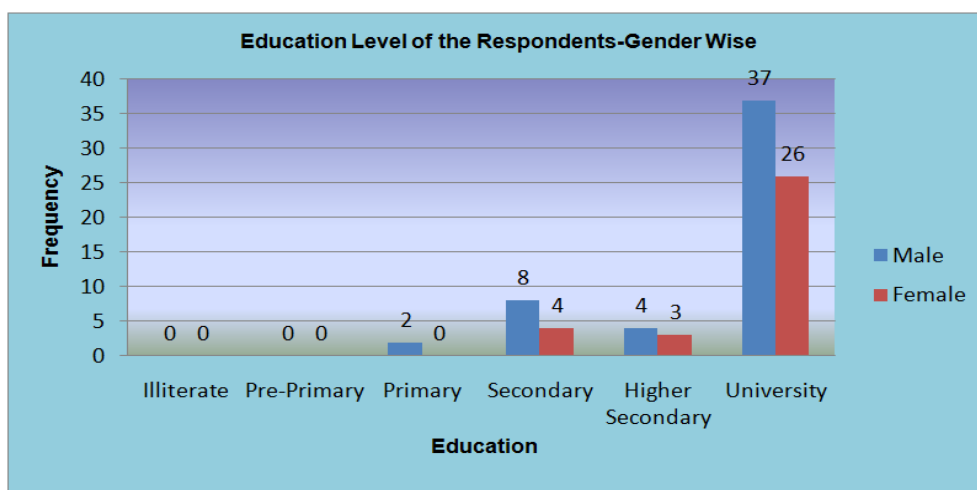


Figure 6: Education Level of the Respondents

Flow of Tourists Affecting Wild Mammals

The visitors were questioned whether the high inflow of tourist affect the wild mammals or not.

Table 1: Wildlife Affected by Flow of Tourists

Is Wildlife Affected	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	60	70.6	75.9
	No	19	22.4	100.0
	Total	79	92.9	100.0
Missing	System	6	7.1	
Total	85	100.0		

Out of 79 (92.9%) respondents, 60 (70.6%) said that high inflow of visitors affect wildlife while 19 (22.4%) said it does not.

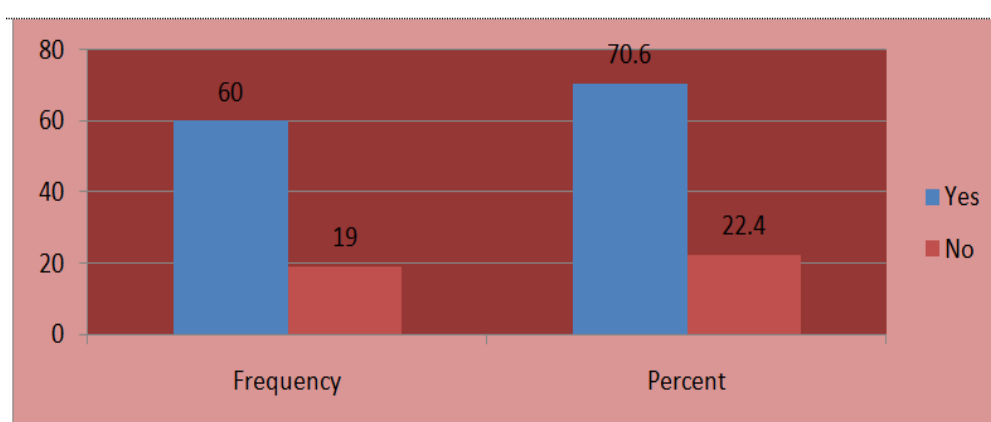


Figure 7: Wildlife Affected by Flow of Tourists

Activities of Tourists Disturbing Wild Mammals

The question was raised about what sort of tourist activities can affect wild mammals.

Table 2: Activities of Tourists Affecting Wildlife

Activities of Tourists	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Jeep safari	22	25.9	26.2
	Elephant safari	7	8.2	8.3
	Taking photos, videos	5	5.9	6.0
	Making sound	5	5.9	6.0
	Making pollution	32	37.6	38.1
	1 & 5	8	9.4	9.5
	All of the above	5	5.9	6.0
	Total	84	98.8	100.0
Missing	System	1	1.2	
Total	85	100.0		

Out of 84 (98.8%) respondents, 32 (37.6%) said wild mammals are affected by pollution, 22 (25.9%) said Jeep safari as the cause, 5 (5.9%) respondents listed photography/videography as the factor, 7 (8.2%) said elephant safari can affect mammals, 5 (5.9%) assumed the noise/sound produced by tourists on excitement after noticing mammals can have negative effect on wild mammals, 8 (9.4%) visitors said that Jeep safari and Pollution both distress wild animals while remaining 5 (5.9%) said all of the above reasons have an effect on the wild animals.

Table 3: Items Carried by the Visitors inside the Park

Items Carried by Visitors		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cameras	40	47.1	48.8	48.8
	Water	5	5.9	6.1	54.9
	Juices and food items	5	5.9	6.1	61.0
	1 & 2	25	29.4	30.5	91.5
	All of the above	7	8.2	8.5	100.0
	Total	82	96.5	100.0	
Missing	System	3	3.5		
Total		85	100.0		

Out of 82 (96.5%) respondents, 40 (47.1%) said that they carry cameras with them, 5 (5.9%) said they take water with them, 5 (5.9%) said they carry Juices and food items, 25 (29.4%) respondents stated that they carry both cameras and water with them and remaining 7(8.2%) respondents said they carry all of the items mentioned above.

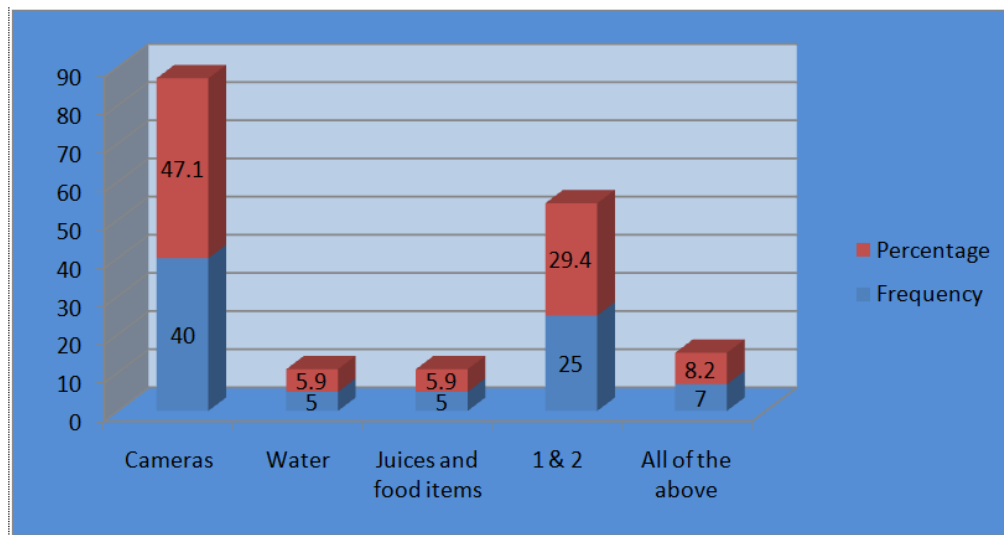


Figure 8: Items Carried by Visitors

DISCUSSIONS AND CONCLUSIONS

International tourism at present, occupies fourth place among the world's leading industries after energy, chemicals and automotives (Honey and Gilpin, 2009). Here, we studied the interrelationship of tourists and mammals to determine the causes and effects of interaction. According to Dearden and Rollins (2002), the combination of human use and preservation is very tough to maintain because one of the greatest threats to ecological integrity is the activity of tourists within the Parks. Ecological integrity here refers to the carrying capacity to manage the issues of human impacts on wild animals of the park. Payne and Nielsen (2002) have stated ecological carrying capacity as "the capability of natural environment to withstand human use".

Our results showed that the different activities affecting wildlife includes pollution, jeep safari, elephant safari, making sounds and taking photographs / videos. Moreover, our study showed that the wildlife is mainly affected by the high flow of tourists. The overflow of tourists creates challenges in balancing conservation priorities and tourism so it is very urgent to limit the number of visitors' entering the Park. The report has showed that CNP is recognized with nature based tourism in these recent years and to make it successful, the boundaries should be maintained so as not to surpass anything above carrying capacity. Overcrowding diminishes the quality. Nature based tourism is facing the problems with

growing tourism, over flow and overcrowding and even by disturbing the nature and wildlife (Newsome-Moore-Dowling, 2012). Similarly, Kafle (2014) in his study at CNP also mentioned the view given by visitors where it was suggested to keep the number of tourists at limit so as to preserve nature and wildlife. Thus, our results showed that wild mammals are influenced mainly by the exceeding number of tourist as it disturbs the wild animals and their daily activities. Therefore, a policy should be made to minimize the impact created due to overpopulation and the guideline is necessary for the proper track. Our study showed that the items like camera and water are often being carried by visitors while travelling inside the Park but few visitors were also found carrying juices and food items. In some cases, a visitor intentionally comes closer to wild animals to take photographs or watch them from close distance which may be risk. Ream (1979) warned us "the problem is harassment of wildlife....it is what photographers, skiers and bird watchers do-". It is therefore very essential to make clear and transparent policies regarding the do's and don'ts for the visitors while entering inside the park. The Park management should be aware regarding the items carried by visitors while entering the park and should strictly check the items to make sure that everything is fine as even the small negligence sometimes can pay the high costs. Therefore, the proper guidelines are required to minimize the effect of tourism on wildlife. Tourism should be planned, managed and undertaken in such a way that besides managing biodiversity it should be economically viable, environmentally sustainable and socially equitable (Ibrahim and Hassan, 2011). Wildlife conservation thus is the responsibility of human and future of wildlife lies in integrity of human. Conservationists always argue in favor of wildlife with a query -Wildlife for Economical prosperity or for survival value?

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