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ARE ATTITUDES AND PERCEPTIONS A THREAT TO WILDLIFE CONSERVATION IN THE RANTHAMBHORE NATIONAL PARK, SAWAIMADHOPUR, RAJASTHAN?

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ABSTRACT:

There are many factors which are responsible towards the success of wildlife conservation; these could be the attitudes of the local population, the understanding and implementation of the strategies by the conservation organizations and many others. However, there is a feeling among the local people that wildlife conservation declines them access rights to Park's resources, but at the same time the local people are also concerned about the annihilation of this natural heritage in the near future. For the present study Questionnaires and participatory rapid appraisal approaches were employed to generate data and facts from the people living around the protected area of Ranthambhore National Park (RNP). A total of 300 people in seven villages of the Ranthambhore National Park (RNP)were selected and questioned in regard to this study.

This study was carried out using a sample size of 300 respondents, across seven villages, in rural and urban landscapes, around 10 kms radius of the RNP, considering the huge population around the Protected Areas. Exploratory Analysis were carried out among the variables and Chi-Square tests were performed to find out significant relationships to answer some of the research hypothesis. For grouping respondents into different groups based on similarity of responses we conducted Cluster Analysis, but the responses were almost similar so we are not able to define if any particular group of people are environment friendly or conservation aware people.

The interaction with the respondents reflected that locals residing near Ranthambore National Park have shown that wildlife conservation can be a success within and around protected areas. Therefore, towards changing the attitude and perception of local people around protected areas, environmental education through sensitization and sustainable livelihoods ought to be encouraged. These unconstructive attitudes and perceptions can be well premeditated with carefully designed and implemented conservation programs.

KEYWORDS: *Attitudes, Perceptions, Wildlife Conservation,Protected Areas,Ranthambhore National Park.*

1. INTRODUCTION

The formation of protected Areas (PAs) has been the most extensively contested way of biodiversity conservation, upheld by nationwide and global agencies. Agrowing body of empirical evidence now indicates that the transfer of "Western'' conservation approaches to the developing countries has indeed had adverse effects on the food security and livelihoods of people living in and around protected areas and wildlife management schemes (Ghimire and Pimbert, 1997; Ghimire, 1994; Kothari et al, 1989. In many cases, local people have faced restrictions in their use of common property resources for food gathering, harvest of medicinal plants, grazing, fishing, hunting, collection of wood

and other wild products from forests, wetlands and pastoral lands. Denying resource use to local people severely reduces their incentive to conserve it.

Local people are vulnerable to the formation of PAs, chiefly in developing economies as their livelihoods are reliant on them (Rodgers, 1989) Historically, conservation strategies have been manipulated by endeavours to fence off reserve areas for nature and exclude people from the restricted areas (Adams & Hulme 2001). In fact, nowadays, around 70% of global forests are yet owned and administered by Governments. Though, in most cases the top-down exclusionary method to Protected Areas have not been able to stop deforestation and the associated loss of forest biodiversity that has become one of the main conservation issues in the world these days (Geist &Lambin 2002).

Conservation Areas are mainly administered by Government in growing economies. Efforts are made to encounter people's needs in conservation by including them in decision-making, permitting them to allocate benefits of conservation, and bestowing them with measures to mitigate every adverse results of conservation. Though, in countless cases people's perceptions of these efforts are scarcely elicited, analysed and encompassed in decision-making procedures (Chase et al. 2004). It is extensively acknowledged that people living inside or in the vicinity of protected Areas are critical to the accomplishment of conservation efforts. Local people are believed to have the vision, data and incentive needed to grasp and preserve the resources they depend on (Johnson 2001).

National Parks are the most extensive type of protected areas in India and globally.[1] The basic aim behind establishing National Parks are to (1) protect the ecological integrity of one or more ecosystem for present and future generations; (2) exclude exploitation or occupation detrimental to the purposes of designation of the area; and (3) provide a foundation for spiritual, scientific, educational, recreational, and visitor opportunities, all of which must be environmentally and culturally compatible[2]. National Parks comprise the highest percentage (23%) of the total area covered by protected areas worldwide[3].

There could be two methods which have been established towards conservation of biodiversity in National Parks: one approach is the preservation approach, which aims at setting aside National Parks to exclude human activities except for tourism. Through this approach, direct use of natural resources in the park for commercial or subsistence purposes is prohibited[4]. This type of approach is often referred to as the "protectionism approach" or "the fines and fences" approach[5]. The preservation approach aims at excluding human activities considered inimical to the objectives of conserving biodiversity in National Parks. The preservation approach was the most dominant approach until the 1980s, but in some National Parks, it has now been substituted by the second approach called the community-based conservation approach that allows people (especially those that neighbour National Parks) to benefit socially or economically from parks[6]. The community-based conservation approach was proposed to address the problems associated with excluding human activities from the park.[7]

objectives of the Study are :-

- To investigate the Attitudes and Perceptions of Locals towards wildlife conservation towards Ranthambore National Park (Rajasthan)

[1]S. Chape, S. Blyth, L. Fish, P. Fox, and M. Spalding, The 2003 United Nations List of Protected Areas, IUCN and UNEP-WCMC, Cambridge, UK, 2003.
[2] Ibid., at 44
[3] Ibid., at 46
[4]W. Adams, Against Extinction: The Story of Conservation, Earthscan, London, UK, 2004.
[5] Ibid., at 15
[6]S. Stolton, S. Mansourian, and N. Dudley, Valuing Protected Areas, The International Bank for Reconstruction and Development, Washington, DC, USA, 2010.
[7]R. A. Schroeder, "Geographies of environmental intervention in Africa," Progress in Human Geography, vol. 23, no. 3, pp. 359–378, 1999.

- To determine if the awareness about the projects related to Livelihoods, National Bamboo Mission, Horticultural Mission, depends on education level of the local community
- What behavioural impacts exerted by the various emotional and cognitive indicators of environmental identity on nature – protective commitments and decisions?

The assessment of peoples' attitudes and perceptions towards conservation has come to be a vital aspect in countless studies of wildlife conservation (Newmark et al., 1993). Wildlife conservation and accomplishment depends on the attitudes of people towards conservation (Osmond, 1994; Katrina, 2000). Equally, understanding factors that impact attitudes is vital to enable wildlife managers to apply ways that gains support from stakeholders and the general public. It is vital to pursue and attain the alert participation of possible stakeholders not merely in the technical efficiency of conservation knowledge, but additionally the extent of fulfilling traditional, communal and governmental considerations in the nature that can aid change the attitudes of original people towards wildlife attendance and conservation (Newman et al, 1994). People additionally demand to be notified across specific awareness movements or environmental education that can help change their attitudes towards conservation. Tsi et al. (2008) clarified that in Northern Cameroon, inactive and less literate people who inhabit Areas encircling nationwide parks regions are extra prone to wildlife crimes. The attitude concerning the Willingness to Pay (WTP), an important concept in wildlife conservation, is affected because environmental subjects are a necessity and not a luxury (Hökby and Söderqvist, 2005).

The Ranthambhore National Park (RNP) area has been well documented and more sympathetically most communities who live around the PA depend upon the grass, firewood and rearing of domestic animals for milk is the main activity. Recently, the RNP landscape has undergone substantial adjustments in socioeconomic and governmental words that demand to be understood in relation to wildlife conservation. In India, the western most populace of tigers is distributed in Ranthambhore Tiger Reserve (RTR), Rajasthan, Western India (Jhalaet al.2008). The RTR is one of the most critically protected areas in India because there is a high biomass of feral prey that can support high carnivore densities (Karanth and Nichols 2000) and, most considerably, the tiger populace it supports is genetically exceptional. Because RTR is at the western most allocation of their scope, the populace is sensitive to stochastic reasons of reduction at the populace or genetic level. Tigers inhabit merely 344 km2 of forest inside a 1,394-km2 reserve (Jhala et al. 2008), that is encircled by >300 villages inside 5 km of the park alongside >150,000 people and their livestock. Such reserves encircled by dense human populaces frequently are a main basis of colossal carnivore mortality and are susceptible to species loss. Land use practices outside RTR include intensive agriculture, and because there is a lack of native ungulates in the buffer area of RTR that constitutes tiger habitat, village livestock are the primary prey available for tigers in these areas.

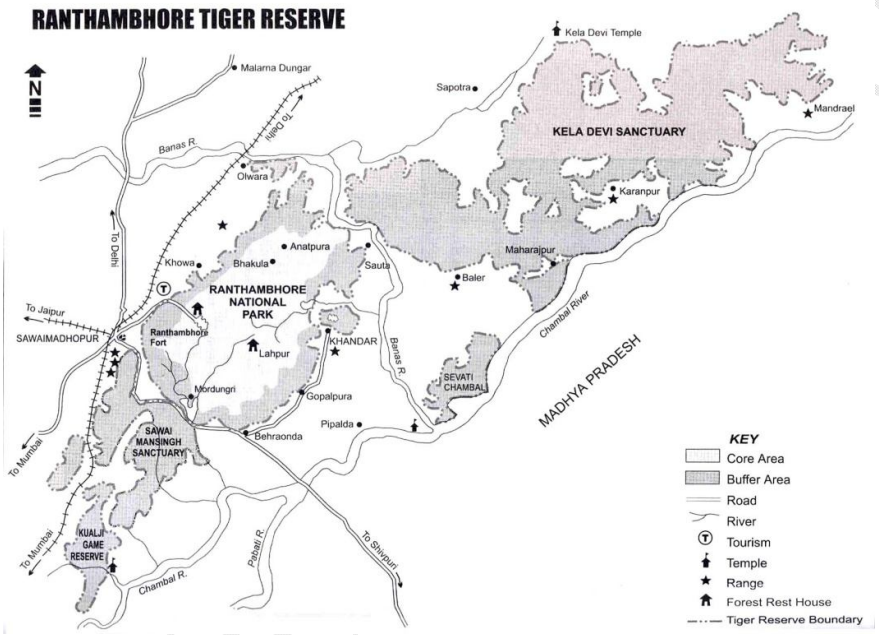
This study aims to comprehend the knowledge, attitudes, and practices of the local communities towards conservation of wildlife and natural resources.

Various wildlife projects that link conservation and progress have been implemented in and around protected areas in an effort to produce benefits for local communities that have or else been disenfranchised by protectionist policies. The rationale behind such initiatives is to engender support for conservation amid local communities, by including them in association and decision-making and by bestowing benefits to offset the opportunity costs of protection. If such wildlife projects succeed we should anticipate local communities to display extra affirmative attitudes towards conservation and associated projects. On the contrary, the respondent's awareness concerning each progress and livelihood wildlife projects like the Nationwide Bamboo Mission, Nationwide Horticulture Duty etc by the Power in the periphery of RNP was restricted to 58.6%. A number of studies have examined the subject of local's attitudes towards conservation and progress. It has usually been discovered that prices associated with conservation (such as harmful wildlife,crops depredation) have negative results on local's attitudes, as benefits from conservation (such as game meat, medicinal herbs) could have a little affirmative effect.

However, 17% differed to any compensation endowed by the Government for the damage provoked by wildlife to the residents who live near the National Park, as opposed to 71% who were cognizant of such compensation.

This study aimed to address this issue, the hypothesis is that receipt of benefits from protected area tourism results in larger support for conservation amongst the communities residing nearby. Approximately 91% of the respondents were of the opinion that populace of tigers in India is reducing due to human pressures on their habitat and inside this segment 96% concurred that tourism will plummet if the number of tigers drops in this forest.

Figure-1: Ranthambore Tiger Reserve



2. MATERIALS AND METHODS

Geographical characteristics of Study area

The Ranthambhore Tiger Reserve is composed of the following – Ranthambore National Park (RNP) (392 sq. km), SawaiMansingh sanctuary, Kualji close area and KeladeviWildlife Sanctuary (676.38. sq km). There are 4 villages inside park boundary and 123 villages within 5 km having cattle population 51354 and 332 villages in tiger Reserve covering an area of 1334.64 sq. km.

The Ranthambore Tiger Reserve encompasses an area of 1,334.64 km^2 constituted by the Keladevi Wildlife Sanctuary (674 km^2), Ranthambore National Park (392.5 km^2), SawaiMansingh Wildlife Sanctuary (127.6 km^2), the Kualji Closed Area (7.58 km^2) and other forest area (132.96 km^2). Project Tiger Ranthambore is responsible for the management of 627.13 sq.km.

The Rivers Chambal in the South and the Banās in the North bound the National Park. The hills to the northwest of fault-line are the Aravalli's and typically have cliff of sand stone on one side and on the other side escarp slope. The hills south west of Great boundary fault are the Vidhya's. The sand stone beds of these hills are flat – topped and form extensive table lands known as "Dangs". Small and short lived streams have eroded deep in shale, long and narrow gorges that are locally known as "khos". The highest peak is called Gazel peak 507 meters above MSL and lowest in the area of Bodal Village 244 meters elevation. Ravines along Chambal are as deep as 50 mts.up to park boundary.

History of RNP

The forests around the Ranthambore Fort were once the private hunting grounds of the Maharajas of Jaipur and desire to Park the game in these forests for sport was responsible for their conservation. After independence in 1955, this area was declared as the Sawai Man Singh Wildlife Sanctuary and subsequently in 1972, Project Tiger was launched. At that time, it was estimated that there were around 1927 tigers in India, of which Rajasthan had 74, and the number of big cats in Ranthambore Sanctuary was 14. With the launch of Project Tiger, this sanctuary was brought under the national Project, along with eight other sanctuaries and national parks in 1973.

This Tiger Reserve in Rajasthan comprises of the Sawai Man Singh and Keladevi Sanctuaries with varied conservation history and virtually separated geographically, with narrow corridors linking them to the core-Ranthambore National Park. Keladevi Sanctuary is the northern extension of the Ranthambore Tiger Park in Karauli and SawaiMadhopur districts.

2.1 Conservation Issues of RNP

The population around the Ranthambhore tiger Park is mainly agriculturist, pastoralist and working class, dependent upon the natural resources of the Park like grasses and small timber wood. The Park has some negative impacts on the population of the adjoining settlements, such as, raiding by wild animals, livestock kills etc. Based on the above-mentioned factors, the Zone of Influence (ZI) of Park is "tentatively" identified as an area within 10 Kms radius of the legal boundaries of Park.

There are 4 villages inside the Ranthambore National Park, 15 villages inside the Kela Devi sanctuary, 4 villages inside the SawaiMansingh sanctuary & 3 villages in SawaiMadhopur sanctuary. These villages are part of Core and Buffer zone and are situated inside the Park boundaries.

Major communities living around the Project area

Meena: Meena are scheduled tribe and main landlords of this area. They are agriculturists and keep livestock to support their economy. This tribe is politically powerful and has an aggressive approach towards the negative impact of the PA. Their main dependency on the PA is for grazing, small timber and building material.

Gujjar: This is a forest dwelling community and mainly pastoralist. Gujjars do not have much land and are mostly dependent on animal husbandry for their livelihood. They depend on the PA for livestock grazing. Gujjars prefer free range grazing their livestock than stall feeding. They keep large herds of buffaloes and livestock of poor quality along with goats and sheep. Nearly all their livestock feed off the forests. They also collect wood for building their livestock pen, house, fuel and also collect fodder from the PA.

Jat: Jats are not present in large numbers in the SawaiMansingh Sanctuary; they reside mostly in the Khandar area of the PA. They are mainly agriculturists and keep small numbers of livestock to support their economy. They are dependent on the forest for small timber needs and for grazing their livestock.

Bairwa: Bairwa's are scheduled castes and consist mainly of workingperson. They provide working for agriculture, grazing, and for the departmental works of forest and other line departments. They also keep livestock, goats to supplement their income. They use fuel wood, small timber for building purposes and also graze their livestock in the forest.

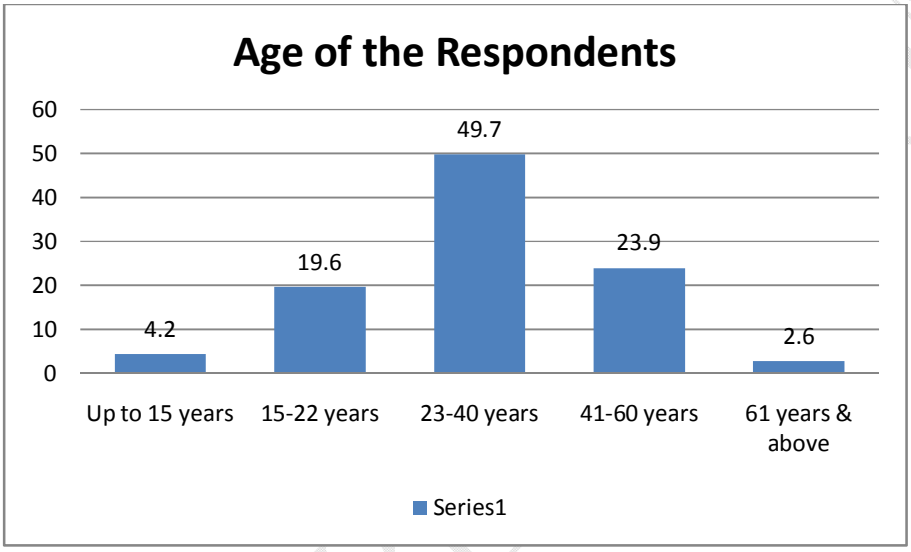
Muslims: They are mainly agriculturists. They also engage in services like painting, building houses, run small businesses and workshops. They depend on the forest for small timber, fuel wood and fodder. They also poach ungulates which enter their fields.

Mogiyas: These are landless nomadic tribes. The community comprises of professional hunters and are a real threat to wild animals. They are engaged by farmers of all classes to protect their crops from wild animals and stray livestock. They move camps depending on the availability of employment and wild animals which they hunt.

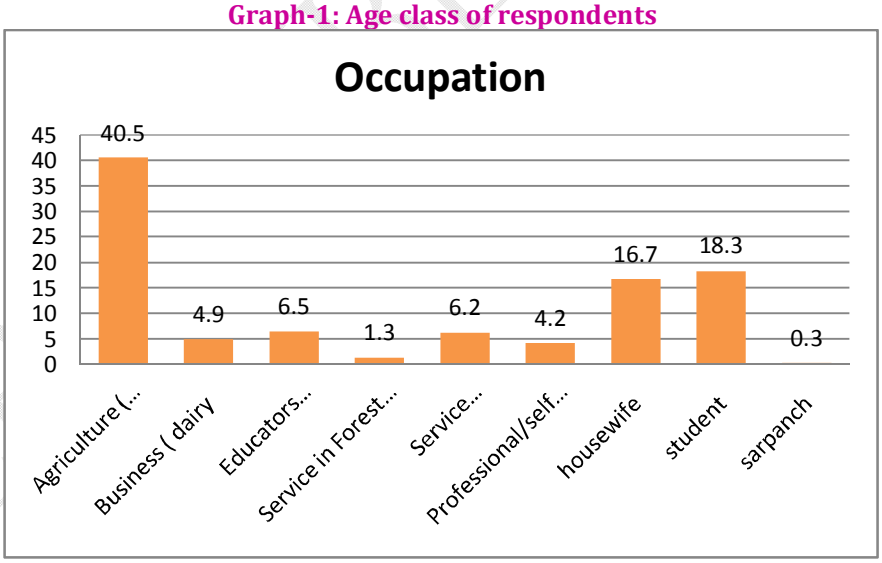
The ZI outside the Park maybe further divided into two parts. The first part is up to 2 Kilometres from the Park boundary and is most important from every aspect. The forest dependency of

this area is maximum and highest impact of the Park is felt by these areas. 88.9% respondents agreed that the forest cover of the Park forms a catchment area for the surrounding villages, which is major source of water. There are 112 villages in this area. This area is classified as "eco-development zone". The people living in this zone consider the Park as their resource to use and get antagonized when they are stopped from doing so.

As we go further from the boundaries of the Park, the dependency of the people on the Park decreases but seasonal dependency on the Park is still there. In the areas further than 2 Kms from Park boundaries, the negative impact of the Park is not felt much, and as a result the antagonism toward the Park is much less in the people of the area.



Graph-1: Age class of respondents



Graph-2: Occupation of the respondents

3. DATA COLLECTION

Measures

The four -page questionnaire included both closed and open questions, and addressed knowledge and attitudes in relation to wildlife conservation, tigers, park managementclimate change, and self-identity measures for avoiding man-animal conflict, pro-environmental values and self-

identity, pro-environmental behaviours. Questionnaires were piloted with 30 residents from SawaiMadhopur District, following which certain modifications were made to the questionnaire.

A multi-level collection sampling technique (de Vaus, 1996), using structured interviews based on a questionnaire (opened and closed), in the local language, was used to collect information from the community areas experiencing wildlife losses. The villages surrounding the RNP were chosen based on their proximity to the Park and the local community's use of resources from the Park.

Preliminary analysis had shown that an increase in the sample size would not have increased the precision (de Vaus, 1996) to gain an understanding of the wide range of variation between families in areas with different wildlife losses. Pilot testing was performed on a sample of 30 respondents randomly selected and a questionnaire of 100 questions was administered to them. Based on the understanding levels and the multiplicity in framing the questions, some questions were rewritten before final administration (de Vaus, 1996). A pre-test was conducted with two village assistants' one male and one female, to ensure that the questionnaire was fully understood. Some of the challenges met during the administration of the questionnaire were, people found it difficult to comprehend questions that spoke of a utopian scenario, but understood those questions, which related to their situation and in the now. We also found that the levels of comprehension were commensurate with the education levels of the proponents.

3.1Statistical analysis

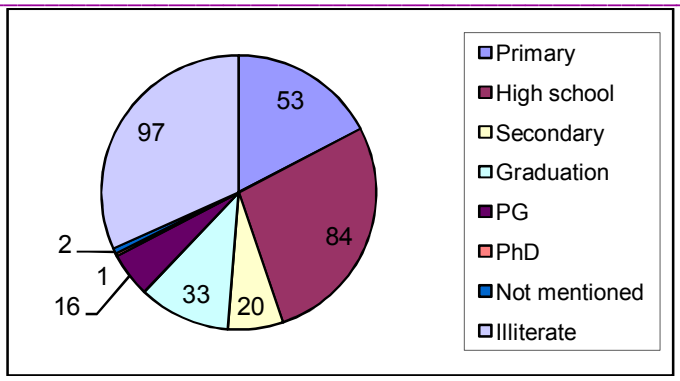
The questionnaire consisted to more than 60 questions which have been grouped as Indicators of knowledge, attitude/perceptions and practices forming four different sets of responses. Relative frequencies were calculated based upon the total number of responses. Chi-square test has been used for test of significance and means of responses of subgroups within the gender and education groups have been compared for analysis with the help of Cross tabulation analysis.

4. RESULTS

4.1 Role of the local communities' education towards conservation

The Central and state education boards have included subject of Environment Science in the school curriculum. The objective was to imbibe awareness and sensitization in view of the destruction and depletion of natural resources, forests and wildlife and the resulting global warming and other disasters. It is hence assumed that respondents who have completed school education and have been sensitised about the environment issues during their formative years of learning are likely to show higher awareness about them, contain more positive attitudes towards conservation and practice a favourable behaviour towards conservation.

The total sample comprised of 23% with no formal education while 54% educated up to secondary level (10^{th}), 7% were post-secondaryeducated and 16% were graduates and Post graduates and doctorate. The objective of this analysis is to compare differences in knowledge, attitude and behaviour between the group of respondents with no formal education and the educated and to find out differences in KAP due to different levels of education. Among women 14 % had basic secondary and higher secondary education, while 10% had no formal education.



Graph-3: Educational Status of the Respondents

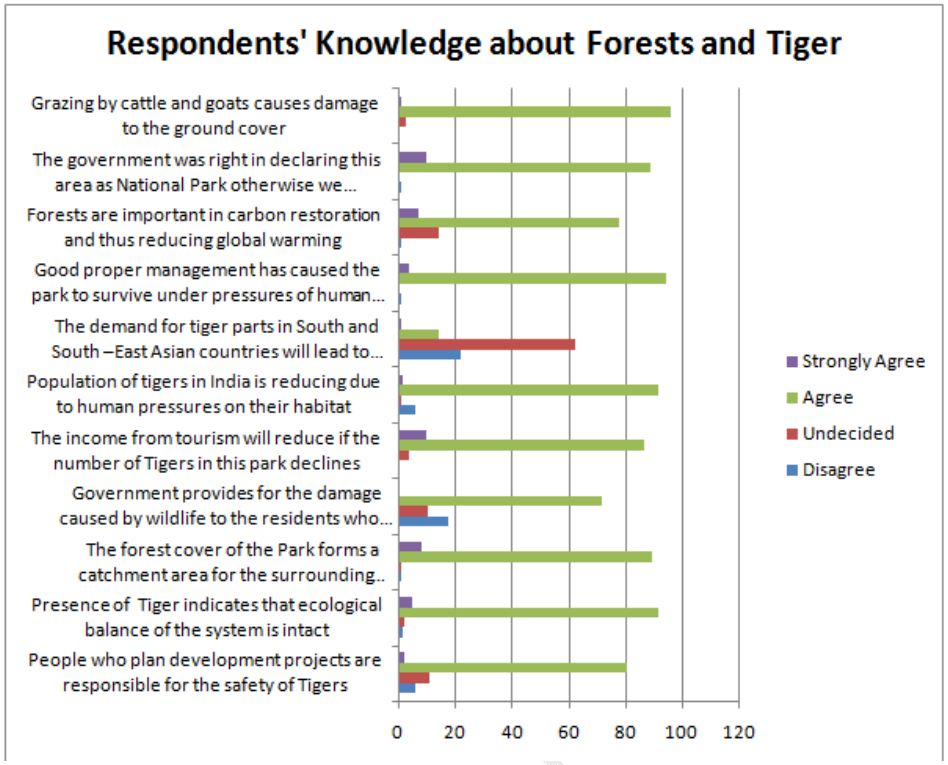
4.2 Knowledge, Attitude and Perception about Forest and wildlife availability

Most respondents perceived conservation of forests and tigers are possible. 91% agreed that Tigers which are threatened by extinction urgently need people to protect them. A general and positive perception prevailed among 89% that every other species on this Earth has the same right to live on this Earth as humans. It was agreed (by 94% of the respondents) that pressures of human populations in and around RNP had been increasing and it was due to good proper management of the Park which has survived it. The government was right in declaring this area as National Park otherwise or we would have destroyed the forests (88%).

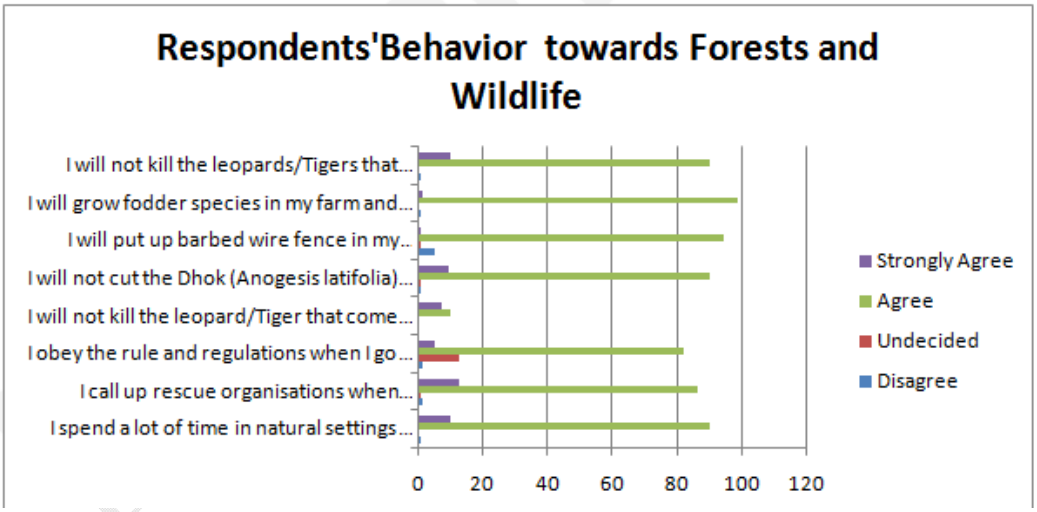
Knowledge about forests, its importance and its uses play a crucial role in framing the perceptions, attitude and behaviour. A good proportion of respondents were aware that population of tigers in India is reducing due to human pressures on their habitat (91.5%).

5. DISCUSSION

The respondents reflected their opinion on a 5-point Likert scale on the questions to probe on their knowledge, attitude and behaviour towards the conservation of forest and wildlife issues. The combined results of respondents' knowledge showed a significantly good knowledge towards conservation of forest and wild life, especially the tiger. The trend of opinion consisting of a significant level of agreement prevailed for attitude and behaviour also which indicates favourable attitude and behaviour of the respondents towards the forest and conservation.

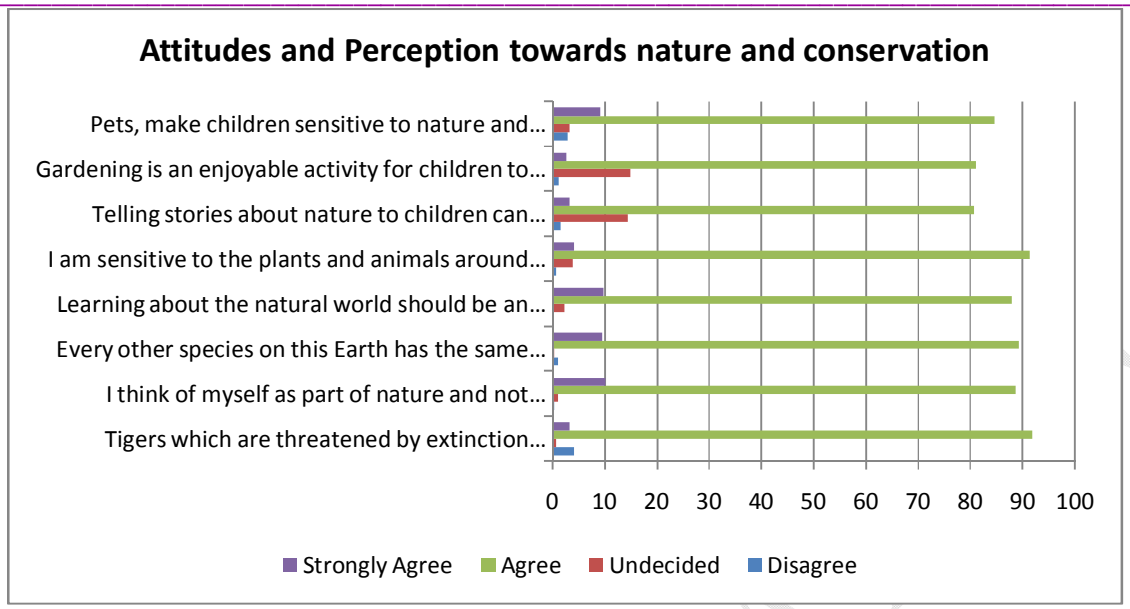


Graph-4: Respondents knowledge about Forests and Tigers



Graph-5: Respondents behavious towards Forests and Wildlife

Many communities in wildlife areas do not receive benefits and yet they bear the costs of living with wildlife. As a result, the communities develop a negative attitude towards conservation. 17.6% disagreed that the Government provides for the damage caused by wildlife to the residents who live around the RNP National Park.



Graph-6: Respondents Attitude and Perception towards Nature & Conservation

However, despite the costs of living with wildlife, some communities have retained a positive attitude towards conservation. A rapid decline of wildlife has been noted in areas where benefits are not accrued to the local community. This is because the community tries to engage in other land-use practices that are not only, detrimental to wildlife population, but also result in increased conflicts.

The RNP landscape is a typical example of such an area. This study has shown that by denying people benefits and access from natural resources, they develop negative attitudes and engage in activities that are detrimental to conservation. Therefore, the future of the wildlife becomes uncertain especially the large mammals.

94.1% considered the Nilgai and wild boars as 'vermins' and intended to keep them away. This indicates the negative attitude towards animals other than the tigers. On the contrary, 90% agreed and 9% strongly agreed that they will not uproot the "Dhok Trees (Anogesislatifolia)[8] from its roots due to its importance for various reasons.

So far World Wide fund (WWF), through the Conservation Education programme around Protected areas (PA's), has been very active and has adopted new strategies of integrating and educating the local people through the creation of a women's Self-help groups, Focus group meetings, village meetings to check the illegal poaching of endangered species and limit over hunting of other species as well as by sensitizing the Schoolchildren and youth through environmental clubs in both primary and secondary schools to raise awareness.

For a more focused approach in raising awareness and building a positive conservation attitudeamong the inhabitants of village around the protected areas, it is necessary to identify a set of well-matched target groups of population. These target groups can work as advocacy groups to foster the need to protect and conserve the forest. Such groups can also be instrumental in building pressure on the forest department, programme implementers service delivery systems that are operational within the forest and at the periphery.

[8]It is one of the most useful trees in India. Its leaves contain large amounts of gallotannins, and are used in India for tanning. The tree is the source of Indian gum, also known as ghatti gum, which is used for calico printing among other uses. The leaves are also fed on by the Antheraeapaphia moth which produces the tassar silk (Tussah), a form of wild silk of commercial importance, it also provides fodder to the herbivores.

6. CONCLUSION

The main challenge confronting the forest management is reconciling the short-term extractive needs with long term conservation interests. But in order to be successful, the cooperation and support of the local communities are needed. Understanding how local communities perceive forest management by external agencies is important for designing management policies that address the dual goal of community interest andconservation. Apart from forest management aspects, people's perceptions of conservation issues are likely to be influenced by an array of socio-economic (for example level of education, wealth status and such other) demographic (household size, age of household head etc.), and geophysical (distance of household from the forest or markets etc.) Gaining an understanding of these factors can provide information necessary for designing targeted policy measures to address people's aspirations in conservation and sustainable forest management.Environmental behaviour is different from many other behaviours that psychologists have tried to predict and influence, such as wearing a seat-belt in a car. Unlike these examples, many aspects of environmental behaviour are socially embedded, which make it particularly suited for analysis from a perspective of social groups. Hornik (1989, 1997) argues in the field of health psychology that if social forces are structured to make individual behavioural change difficult, individual cognitive changes are unlikely to be productive in eliciting behavioural change. Public, social changes must occur to accommodate behavioural change. Similarly, Ockwell, Whitmarsh, and O'Neill (2009) argue that top-down policies to force pro-environmental behaviour need to be balanced with bottom-up grass-roots movements that can provide the social support necessary for accepting top-down regulation and enduring personal behavioural change. Expanding on these ideas, there are several theoretical reasons why environmental behaviour is particularly well-suited to group-level analyses.

6.1 Recommendations

The greatest adversary to wildlife conservation is lack of knowledge as to conservation and management of natural resources. Therefore, the cooperation of all stakeholders (for example, community, government, conservationists) is crucial for long-term success in environmental protection programs. This initiative will require the adoption of conservation strategies that are proactive, mutually beneficial and environmentally friendly and sustainable. Secondly, negative attitudes and perceptions can be shifted with carefully implemented conservation programs which serve to mitigate poverty by initiating entrepreneurial activities that can generate income to the local residents to offset the costs incurred. At the same time these initiatives serve to discourage land-use strategies that are incompatible with wildlife conservation.

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