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Assessment of Relationship between Visitor's Environmental Awareness and the Level of Education at the Manas Lake (Pune, India)

Environment

KEYWORDS : Environmental awareness, visitor's education level, lake conservation

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ABSTRACT

The aim of this study is to discuss the relationship between visitor's environmental awareness and the level of education in the Manas Lake. A total of 99 questionnaires were gathered for data analysis using descriptive statistics, t-testing, the results showed that most of the visitors are 23 to 35 years old with a college education. The means and standard deviations indicate that tourists express a positive degree of cognition of environmental awareness and recreational behaviors. They suggest that polluting the environment is harmful to the natural ecosystem and that the natural resources of ecotourism are fragile, as well as expressing a high degree of recognition of the need to protect the Lake There were significant differences in the degree of cognition related to the variables of age, number of visits and reasons for visiting. We found that most respondents with relatively high levels of education would like to learn more about the environment of the Lake and are supportive of its conservation.

1. Introduction:

Environment itself is very vague, complex and broad in its meaning. Therefore, in its definition, it reflects the interest, perspectives and motives of the users. Timothy 0' Riordom (1978) and Sinha (1988) wrote that the environment is to be all the things to all men. Environmental realm does not exist separate from human actions, needs and aspirations. Environment, in its quality, is one of the very significant characteristics of growing urban areas. Development of urban areas has made a significant impact on the ecological contest of their development. The definitions of environment are varied in nature. It consists of everything external to our individual, physiological and psychic organism. The human behavior is influenced by physical, biological and social-cultural environment.

Environmental pollution could eventually endanger life of present and future generations and causes instability, disorder, harm or discomfort to the ecosystem i.e. living organisms.

For many years humans have caused impacts on transformed wetlands, lakes and rivers in order to make them fit their own needs, like agriculture, waste-water discharge, navigation or fishing. In recent decades this has led to increased interest in restoring these often vulnerable ecosystems.

India has environmental degradation and has endorsed the education for sustainable life. On hindsight, there is a prescribed solution to these environmental threats. In fact, the solution was initially advocated in 1972 in Stockholm during the United Nations Conference on the Human Environment (Hawthorne & Alabaster 1999). The World recognized the importance of education, including formal education, public awareness and training (UNCED 1992). It believed that unprecedented economic growth and technological progress had benefited many but caused serious social and environmental consequences, so behavioral change would result in people taking on the responsibility as the planet's custodian and at the same time providing them with a more sustainable lifestyle (Hawthorne & Alabaster 1999). Many countries have made environmental education as part of their curriculum. This research describes experiences of effectiveness of the relationship between the level of education of visitors and environmental pollution with help of questionnaire survey.

2. Study area

Manas Lake (Bhugaon) which is situated in the vicinity of a fast growing city of Pune, in the Maharashtra, India. Pune located on Deccan plateau. It is located at 585.83m ASL and 18 32'N latitude and 78 5'E longitudes.

Manas Lake (Bhugaon) is an artificial lake. This lake located on north Pune- Paud road, on east village bhugaon-1.5 km from lake, on south-NDA, on west-village Bhugaon-1.5 km from lake. This Lake has a tropical wet and dry climate with average temperatures ranging between 20°C to 28°C.

The monsoon lasts from June to October, with moderate rainfall and temperatures ranging from 10°C to 28°C (50 °F to 82°F). Most of the 722mm of rainfall in the city fall between June and September, and July is the wettest month of the year. Pune once received rainfall on 29 consecutive days. Manas Lake (Bhugaon) with the area of 10.24km with the Volume of the tank of 1.90 million meter^2 and Length of the dam is 550 m and height of that is 21.19 m .Submerged area is 42.21ha and the channel going ahead the lake is 7 km was contracted on 1977 for irrigation of agriculture land near the lake and to provide drinking water for villages near that as Bhugaon village, Green villa, Sarovar, Matalwad, Agrewadi and Bavdhan area in Pune city. Total area that using the water from the lake id 630 ha and irrigable land is 510.40 ha.

Nowadays people going to this lake for purpose visiting, fishing, swimming, repose and even going to the restaurant and hotels near the lake.

3. Methodology

Data were collected through a face-to-face questionnaire survey from September 2008 to December 2008.

Visitors were surveyed at Bhugaon Lake, which is one of amusement place in Pune city. I systematically surveyed visitors who were visiting the study site on weekends and holydays during September 2008 to December 2008. Weekends and holydays were chosen because this was when the number of visitors was highest. The purposive sampling technique was used to collect a sample of 130 tourists. A total of 100 questionnaires were com-

pleted. The response rate was almost 81%.

The survey instrument used in this study consisted of three sections. The first section of the questionnaire focused on the tourist's environmental understanding and awareness about environmental pollution which included different separate items measured. The second section focused on tourist recreational behaviors and the third section comprised visiting purpose and travel characteristic information such as gender, age, level of education and reasons for the visit.

4. RESULTS AND DISCUSSIONS

Of the 120 questionnaires were distributed between visitors, 99 were usable and completed. The relevant information for the range of general information such as (gender, age, education,) is shown as follows: females (36%) outnumbered males (64%). Of the 99 person of the total population 23 and below, between 24 and 35, 36 and 45, 46 and 55, and 56 and above years old account for: 27, 32, 11, 18 and 12%, More than half (64%) of the respondents had attained a university level of education. The results suggest that most respondents had relatively high levels of education. Restaurant, boating and enjoyed the beautiful scenery were the major reason given for visiting.

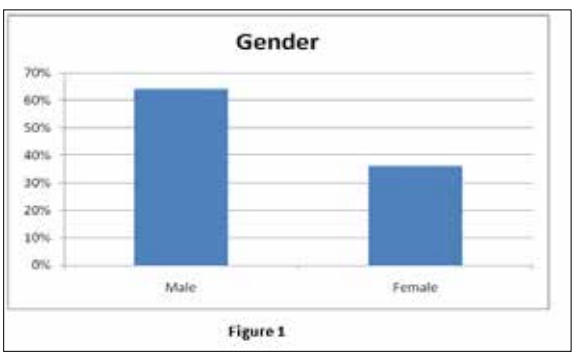

Figure 1

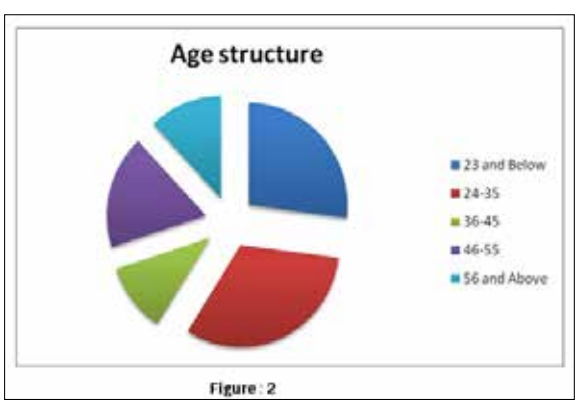

Figure : 2

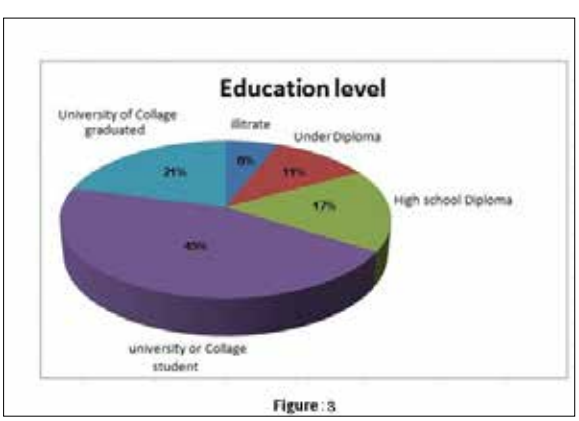

Figure : 3

The investigation showed that most of the visitors who coming to this lake are between 23-35 years old that point that most of them are young people (figure2). Even 43% of visitors aware about environmental pollution and 57% of them had less or even minimum information on it. Even 88% of residents especially who were near the Manas Lake pollute this lake by discharge sewage into this lake.

Visitors Demographic	Percentage
Awareness on pollution:	43% yes 57% No
Pollution items has more effect on environment:	
1. Sewage (Discharge from toilet, washing, ect)	33%
2. Agricultural activity	18%
3. Garbage	25%
4. noise(Disturbing animals)	5%
5. other	19%

Figure : 4

Figure 4 shows that there is no significant difference between male and female visitors. The results indicate that different ages of males and females feel the same degree of understanding of environmental pollution and recreational behaviors. Also t-test showing there are no significant different between age of despondence and their knowledge about environmental pollution.

The analysis conducted to the relationship between environmental awareness and environmental awareness cognition for the visitor's demographic variables of education, and measuring their environmental awareness. The relationship between environmental awareness and education are shown in Table 5. Table5 shows the results with regard to environmental awareness; one way ANOVA testing t shows significant differences between tourists of different education levels. Table 5 shows that the visitor's awareness about the lake environment has direct relationship with environmental pollution in the Manas Lake.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Are you thinking that visitors pollute the lake?	.172	4	.043	.174	.951
The activities (construction, waste water, agriculture) can pollute the lake water and destroy flora and fauna living around the lake.	1.774	4	.443	.229	.921
Mass tourism can have adverse impact on flora and fauna of the lake.	17.667	4	4.417	2.248	.070
The visitor activity (washing, toilet, make fire, garbage, noise) can be cause of lake pollution.	8.853	4	2.213	.374	1.074
Throw garbage in to the lake will be cause of lake pollution	17.299	4	4.325	.027	2.674

Figure 5

The information about awareness, environmental pollution and general information were collected by questionnaire. 64 percent male and 36 percent female awareness the questionnaire and the level of the education (figure 3) shows that 69% of despondence had received higher educational level and only 6% of visitor had no education.

The items to be measured by the questionnaire related to the lake are:

- Tourism attitude about general information about lake and pollution
- Measuring awareness of the visitors
- Environmental pollution

The above items were measured by five-point liked-type with different questionnaire about complementary to achieve the better result.

The SPSS program was used to analysis the data first time for conservation consider as dependent variable and awareness data as independent. The amount of R=0.855 shows positive relation between two variable and place the correlation into the "strong" category.

5. CONCLUSIONS

The means and standard deviations indicate that tourist expressed that when the education with higher education of visitors there will be more positive degree of awareness of environmental and recreational behaviors. They feel that polluting the environment is harmful to the natural ecosystem and the natural resources of ecotourism are fragile, and express a high degree of recognition of the importance of protecting the lake area. There were significant differences in degree of cognition related to the variables of age, number of visits and reasons for visiting. The visitors of the Manas Lake to learn ecological knowledge and experience the ecological resources demonstrated a higher degree of environmental awareness and recreational behaviors. The results suggest that they may be willing to accept the policies and support lake conservation. We also found that most of the respondents had relatively high levels of education and would like to learn more about the wetlands and support conservation efforts.

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