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Public Perception of Environmental Issues: An Evidence from Nepal

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Abstract

Given the resource-dependence of many populations in developing countries, natural environments and habitats are declining in these countries. Still, little empirical evidence has been brought to bear on the priority given to environmental issues among residents of developing countries. This study presents analyses of data collected from a field survey with 200 residents of Kirtipur, Kathmandu Nepal, with an aim of better understanding the public perception of environment and degree of seriousness possessed by them on different environmental threats. Our analyses reveal a moderate level of familiarity about the environmental issues and the knowledge of protecting environment with education consistently and significantly predicting higher level of environmental concerns. Still, substantially a great number of people believe in maintaining mutual relationship between human and environment and are more concerned and serious about issues which are locally more relevant. At the end, important policy implications are discussed.

Key Words: Environmental information; environmental threat; environmental seriousness; human-environment relationship; Nepal; public perception.

I. Introduction: Societies everywhere are closely and inextricably linked to the natural environment in which they are embedded. The interrelationships between society and nature, and the importance of environmental health to social health, have recently become widely acknowledged [1]. Environmental change holds tremendous potential to impact livelihoods. In addition, the local environment also offers potential means of generating income and/or meeting dietary needs [2]. Economies of the most developing countries, and certainly the majority of the populations living within them, depend directly on natural resources [3]. In particular, poorer rural populations tend to be more dependent on their natural resource environment and therefore are more vulnerable to changes in their environment, whether it be as a result of climate change or as a result of a locally felt phenomena [4]. Therefore the potential economic and social impacts of environmental degradation are particularly serious for developing countries given their dependence on natural resources for economic growth and to meet their own subsistence requirements and their vulnerability to energy, food, water security, climate change and extreme weather risks. Thus, given the resource-dependence of many populations in developing countries,

natural environments and habitats are declining in these countries. In this regard, World Commission on Environment and Development (1987) [3] states that poor people are forced to overuse environmental resources to survive from day to day, and their impoverishment of their environment further impoverishes them, making their survival ever more uncertain and difficult.

Very few studies have been undertaken at local and individual level about the perception of low-income nationals like Nepal with regard to environmental issues. Indeed, questions remain as to how local people view environment, human-environment relationship and perceive environmental problems around them and the relative seriousness placed on these. This paper presents results from field survey data that assessed environmental perceptions of residents of Kathmandu, Nepal. The paper thus looks at general perceptions of environmental issues at local level.

Today, it is widely agreed by the scientific community that climate change is already a reality and developing countries are the most vulnerable to climate change impacts because they have fewer resources to adapt socially, technologically and financially [5]. Nepal, being least developed country, is facing climate change-induced consequences in many spheres of society and development. The situation aggravates also due to poverty, population pressures, land degradation, food insecurity and deforestation. In order to improve the ability of communities and households to adjust to ongoing and future climate change, we need to improve the understanding of the risk they are facing [6].

The share of Nepal in the global emission of GHGs is negligible (0.025%) [7] and is one of the lowest emitters in the world. Yet Nepal ranks fourth among 170 countries rated for vulnerability to climate change in Maplecroft's Climate Change Vulnerability Index [8]. Atmospheric temperature in Nepal is rising at a rate higher than the global average, with a 1.8 ^{0}C increase between 1975 and 2006 [8]. So, it has to face the consequences of global warming which is raising temperature in the Nepalese sky. In this regard, the chairperson of the IPCC (Intergovernmental Panel on Climate Change), Dr. Rajenda Pachauri, has said, "It is the poorest of the poor in the world, and this includes poor people even in prosperous societies, who are going to be the worst hit" [9]. In the words of Jim Yong Kim, the president of the World Bank, "the poor will be hit first and hardest. This means that the people who are least responsible for raising the Earth's temperature may suffer the gravest consequences from global warming. That is fundamentally unfair" [10].

Despite broad public education campaigns, many people still do not understand the basic causal drivers of climate change [11], and remain unclear of how particular actions connect to the issue [12]. Thus, understanding the local people's perceptions of environmental issues, it is possible to develop methods which can allow the people themselves to provide the solutions to their environmental problems. It is also crucial in order to craft communication that motivates people to take action to improve their lives. Understanding the local people's perceptions on environmental issues is thus a prerequisite in making successful and sustainable environmental management strategies.

Perceptions of the environment depend on the social context, and on the observer's position within his or her society [1]. How do local people make sense of the environmental issues around them in their social context? Are the local people of the study area aware of the environmental changes? The goal of this research is, thus, to provide a snapshot of public understanding and perception of the environmental issues at local level.

II. Research Methodology: The research utilized a mixed method design to ensure that any biases inherent in any single approach were neutralized. This research is primarily based on the primary data collected through field survey with the help of questionnaire, interview with key informants, and focused group discussion (FGD). Quantitative data was collected using structured interview schedules through face to face interviews with respondents. Qualitative data was collected from FGD and key informants using discussion guides. The Statistical Package for Social Sciences (SPSS Version 16) was used to analyze the quantitative data. Qualitative data was organized into themes, summarized and then interpreted.

2.1 Study Site: Fieldwork was undertaken between November and December 2012 in Kirtipur, an old settlement situated on a double hillock in the southwest of the Kathmandu Valley. It is located at an altitude ranging from 1284m to 1524m above sea level and at present has 19 wards with total 19,441 households (an average household size 3.37 persons) and covers an area of 1787 ha. Kirtipur lies in subtropical region with characteristic monsoon rainfall and three distinct seasons: hot and dry summer (February to May), hot and moist rainy season (June to September) and cold and dry winter (October to January) [13]. In recent years, modernization and urbanization, rapid increment in population density, speedy migration and unplanned and hasty construction activities have severe impact on environment creating lots of environmental problems in the city. Significant changes in land use patterns have been observed with most of the cultivable lands being occupied by huge numbers of buildings for providing rents in most of the municipal areas. There are still hectares of agricultural lands spreading in the southern part of municipality, where most of the citizens grow agricultural products throughout the year.

2.2 Sampling Design and Sample Size: The research population of the study was all the permanent residents of Kirtipur with age not less than 17 years. A representative sample was generated by multistage simple random sampling strategy. To derive the representative sample the research population was divided into two different geographical area viz. rural and urban area. Within each area two wards (ward number 7 and 8 having rural characteristic and ward number 3 and 17 having urban characteristics) were selected by a simple random sampling technique. Within each selected wards, 50 households (HHs) were selected by simple random sampling techniques from the already prepared list of the HHs and one member from each selected HHs were approached to respond to the questionnaire. Hence, the sample consisted of 200 respondents.

Four (two male and two female) key informants were chosen purposively from both rural and urban area. Four groups (two groups from both rural and urban area) were formed purposively to carry out FGD. Each group consisted of at least six people.

2.3 Data Collection Instruments: The survey instrument was confined to Key Informant Interview, FGD and one set of questionnaire consisting of two sections A and B. Section A was used to assess the demographic profile of respondents while section B was used to gather data related to familiarity about the environment, sources of environmental information, environmental protection knowledge (EPK), views on human-environment relationship, perception of environmental changes and seriousness towards different environmental parameters.

2.4 Data Collection Procedure and Analysis: In the first stage of data collection, on the basis of the interview guidelines, the researcher asked question with the key informants and wrote down the answers in their own words. The interviews were transcribed and proofed to ensure accuracy prior to thematic analysis. To get the information about how local people perceive the environment, a one-on-one questionnaire survey was conducted. The literate respondents were asked to fill the questionnaire while those not able to read and write, the researcher asked questions with them and filled the questionnaire himself. Finally, with the help of FGD guiding questions and a facilitator, the researcher conducted focused discussion among four groups. The discussion continued for about an hour in each group.

The responses obtained through questionnaire were of two types; open and closed. All response options for closed question were coded in ascending numerical order starting from one to increasing from right to left or top to bottom depending upon the format of the item. Items with an option for open responses were categorized under different themes and then classified and coded differently for further analysis. For almost all question, the option 'don't know' was rated as zero. Quantitative data was analyzed using descriptive statistics e.g. frequency count and percentage of occurrence of any variable, bar graphs and tables to depict and compare data. Statistical Package for Social Sciences (SPSS) version 16.0 was used to carry out Chi Square Test. In the use of χ^2, 5 percent level of probability was adopted as the criterion of significance. Those variables having a 'p' value less than or equal to 0.05 were identified as having a statistically significant relationship.

Qualitative data analysis involved data transcription, reduction, display, and conclusion drawing. Identifying emerging themes, categories, and patterns; data were broken into discrete units, namely words, or concepts. The initial categories were grouped, refined and themes were abstracted. Then, data were presented in the form of extended pieces of text to provide a way of conceptualizing the textually embedded data. After the analysis, interpretations of the findings were made.

III. Results and Discussion: The data was collected from 200 permanent residents of Kirtipur Municipality of Kathmandu district, Nepal. Four Focus Group Discussions (FGDs) with at least six participants in each group were held and four key informants were also included in the study in order to provide a subjective view of the participants and thus enrich

the quantitative findings. The sample was composed of respondents of different ages (≥ 17 years), gender, residential background, income levels and education.

3.1 Familiarity of Environment and Environmental Protection Knowledge (EPK): One basic question asked was about the perceived 'familiarity' with the environment and environmental issues. More than half respondents (56.5%) were found to be 'somewhat familiar' while smaller proportions was reported to be 'not familiar' (20%) or 'very familiar' (23.5%).

With regard to the familiarity about the environment, the proportion of the respondents having educational qualification above SLC (School Leaving Certificates) were found to be more familiar than those having qualification below SLC or just SLC graduate respondents. Statistically significant relationship was found between familiarity about the environment and education level of the respondents. Considering gender regarding the familiarity about the environment, a marginal difference between male and female respondents were found, and the relationship was not statistically significant. What this mean is that the differences were so small that they could be ascribed to chance rather than any real differences. Similarly when residential background is taken into consideration, urban respondents were found to be more familiar than the rural one and statistically significant relationship was established between residential background and familiarity of the environment. The degree of familiarity was also observed in terms of age and income of respondents and was found that older aged respondents (≥ 60 years) were more familiar in comparison to the younger one. Whereas, only a slight difference in the familiarity was noticed among the respondents of different income groups. And these differences, both in terms of age and income, could not establish statistically significant relationship (Table-I).

Table I: Familiarity with Environment by Demographic Variables

		Familiarity with Environmental Issues		
	Total	**Very**	**Somewhat**	**Not**
Education Level:	**200**	**47**	**113**	**40**
$\chi^2 = 45.539$; df = 4; p = 0.000, significant				
Below SLC	**55**	05	24	26
Up to SLC	**63**	11	43	09
Above SLC	**82**	31	46	05
Gender:				
$\chi^2 = 0.300$; df = 2; p = 0.861*				
Male	**100**	25	56	19
Female	**100**	22	57	21
Residential Background:				
$\chi^2 = 15.319$; df = 2; p = 0.000, significant				
Rural	**100**	19	50	31
Urban	**100**	28	63	09
Age Range (Years)**:**				
$\chi^2 = 5.366$; df = 4; p = 0.252*				
17 - 39	**81**	17	51	13
40 - 59	**89**	19	49	21
≥60	**30**	11	13	06
Income Range (Gross Monthly)**:**				
$\chi^2 = 3.185$; df = 4; p = 0.527*				
≤ NRs. 9,999	**72**	13	44	15
NRs. 10,000 - 19,999	**97**	26	50	21
≥ NRs. 20,000	**31**	08	19	04

* not significant

It was also asked to express what they know, hear, and make sense of the term environment.

> "Bhim Maharjan (pseudo name) aged 42 years is a shopkeeper by profession. He has completed MBS (Master of Business Studies). In his word, environment is the forest, plants, animals and river. He also added that these days the environment is suffering from very critical condition. He said (pointing his finger), see our surrounding, it's dirty. People don't care of it. People think that it's the duty of waste pickers to manage these wastes. He also added that people are exploiting our greenery forest. These degradations have been brought by the careless habit of people. Government should implement stricter laws to stop these irresponsible practices." (A key informant's views on environment)

Thus, the term environment is generally viewed as their surrounding habitat, plants, air and water in general which indicates natural environment only and the thought for solving environmental problem seems instructive rather than individual's own involvement.

When the respondents who were familiar about the environment, were asked what they can do to solve environmental problems, more than half of the respondents (53.75%), were not able to mention any way to solve environmental problems. More than half (58.44%) of the respondents having education above SLC, were able to mention that they could solve environmental problems. In contrast, only one third (33.33%) of the SLC graduate respondents were able to mention the way of solving environmental problems. The relationship between respondents' education and the knowledge of protecting environment was found to be statistically significant. More proportion of male respondents (50.61%) were able to mention the way of solving environmental problems than their female counter part (41.77%). However the relationship between gender and the knowledge of protecting environment was not statistically significant. Considering residential background of the respondents, greater numbers of urban respondents (50.54%) than the rural respondents (40.57%) were found to be well known about the way environmental problem could be solved. However, the relationship between residential background of the respondents and their knowledge about solving environmental problems was not statistically significant. The pattern of the response rate about the knowledge of solving environmental problems was found to be increasing with age. However, the relationship was not statistically significant. Similarly, the knowledge about solving environmental problems was found to be marginally increasing with the increase in income of the people and the relationship was also not statistically significant (Table II).

Table II: Environmental Protection Knowledge by Demographic Variables

		Environmental Protection Knowledge	
	Total	**Yes**	**No**
Education Level:	**160**	74	86
$\chi^2 = 9.035$; df = 2; p = 0.011, significant			
Below SLC	**29**	11	18
Up to SLC	**54**	18	36
Above SLC	**77**	45	32
Gender:			
$\chi^2 = 1.259$; df = 1; p = 0.262*			
Male	**81**	41	40
Female	**79**	33	46
Residential Background:			
$\chi^2 = 1.569$; df = 1; p = 0.210*			
Rural	**69**	28	41
Urban	**91**	46	45
Age Range (Years)**:**			
$\chi^2 = 0.633$; df = 2; p = 0.729*			
17 - 39	**68**	29	39
40 - 59	**68**	33	35
≥ 60	**24**	12	12
Income Range (Gross Monthly)**:**			
$\chi^2 = 6.011$; df = 2; p = 0.050*			
≤ NRs. 9,999	**57**	19	38
NRs. 10,000 - 19,999	**76**	40	36
≥ NRs. 20,000	**27**	15	12

* not significant

Irrespective of the various socio demographic variables of the respondents, the 'highly familiar' respondents were few (23.5%), but when it is summed up with the respondents who were 'somewhat familiar' (56.5%) only, the proportion becomes quite large (80%) than the 'not familiar' (20%) respondents. Hence it could be generalized that the people under study area are adequately familiar about the environment. But the result appeared slightly different than the result of proportion of familiarity when the respondents were asked about EPK. Out of 160 respondents who were familiar about the environment or environmental issues, less than half (46.25%) were only able to answer that they know how to solve environmental problems. This depicts the fact that cognition cannot only guarantee behavioral transformation.

Education vs. Familiarity and EPK: Education of people was significantly related to familiarity about the environment. Individuals having education up to SLC or above SLC expressed more familiarity than individuals with education less than SLC. This study also confirms the primary assertion of various researches that there is a positive association between education and environmental concern [14, 15]. The finding of the study also

parallels the research of citizens in Oman who with more education had greater knowledge about the environment and expressed more concern than less educated citizens [16]. A hypothesis states that as individuals become more educated, they are more concerned about environment [17]. The higher education is associated with higher concern may be it is directly related to the access to information on environment and ability to process the information into knowledge. Hence EPK was also significantly associated with education. The higher educated people were more capable of answering how to solve environmental problem than low educated people in this study.

This suggests that level of education is making a contribution to the level of environmental concern that is equipping the individual with knowledge of environmental issues. Thus, we might expect levels of environmental concern to rise as the citizens become more educated. However, caution is needed to directly link the educational level to high level of environmental concern since educational level also involves other social factors. For instance, better education generally means better job, thus having more economical surplus which may allow individuals to pay more attention to the luxury goods such as environmental quality. Also, the social background that permits individuals to have better education could have some effect on their thinking process.

Gender vs. Familiarity and EPK: Various literature on gender and environmental concern [18, 19, 20] demonstrates that females express higher levels of environmental concern than males. However, Davidson and Freudenburg [19] claim that gender differences in environmentalism are not universal. The strength of the difference varies across the literature with some researchers finding consistent differences between men's and women's environmental concern [21], other researchers reporting little or no differences between the environmental concern of men and women [22]. Studies reviewed by Van Liere and Dunlap [14] on the impact of gender on environmental concern were inconclusive, with the direction of the relationship varying among studies and weak associations reported. Jones and Dunlap [23] reported no strong relationship between gender and environmental concern when reviewing the literature from the eighties; however, they did indicate that, when differences were found, women were more environmentally concerned than men. This study established no significant relationship between familiarity of the environment and gender and is in line with the result of Slimak and Dietz [22].

The EPK was also not significantly varied among the genders in this study. Male and female both exhibit similar sorts of knowledge about the way environmental problems could be solved. Thus, it may be inferred that both gender may be sharing the same sorts of environmental role in the study area. However, some study [24] suggests that gender in conjunction with other socio-demographic characteristics has the potential to produced different effects than when gender is considered alone.

Place of Residence vs. Familiarity and EPK: Statistical analyses revealed that familiarity about environment was significantly associated with residential background of the respondents with urban respondent being more familiar than their counterpart in this study.

This parallels with the result of various researches. Environmentalism and environmental behaviors has traditionally been found higher concern among those living in urban than rural setting [25, 26]. It is also assumed that living in an urban environment is equated with higher levels of pollution and other poor environmental conditions [14]. Thus, it is theorized that these deteriorated conditions lead to greater levels of concern about environmental quality. Conversely, some researchers perceive that people living in rural areas are more environmentally friendly and have a higher environmental concern than those living in urban areas since they have to deal more directly with nature and the natural environment [27]. Thus, this is also related to the emotional response of an issue since people living in rural areas experience direct effects of environmental problems and issues are more concrete. However, knowledge of environmental protection was not significantly different among rural and urban people in this study.

Age vs. Familiarity and EPK: This study showed that the level of familiarity of the environment increases with age and contradicts the age hypothesis which proposes that younger people have a greater concern for the environment than older people [14] however, no significant relationship was established. Some findings indicate a weak relationship between age and environmental concern and a few others report no relationship. For instance Furman [28] showed only a weak relationship between environmental opinion and age in his case study of Istanbul, Turkey.

The pattern of the answer about the knowledge of solving environmental problems was found to be increasing with age in this study. The older aged people might have gone through various experiences of environmental problems and hence have more knowledge about tackling environmental problems than the younger ones. However, no significant relationship between the EPK and age was established.

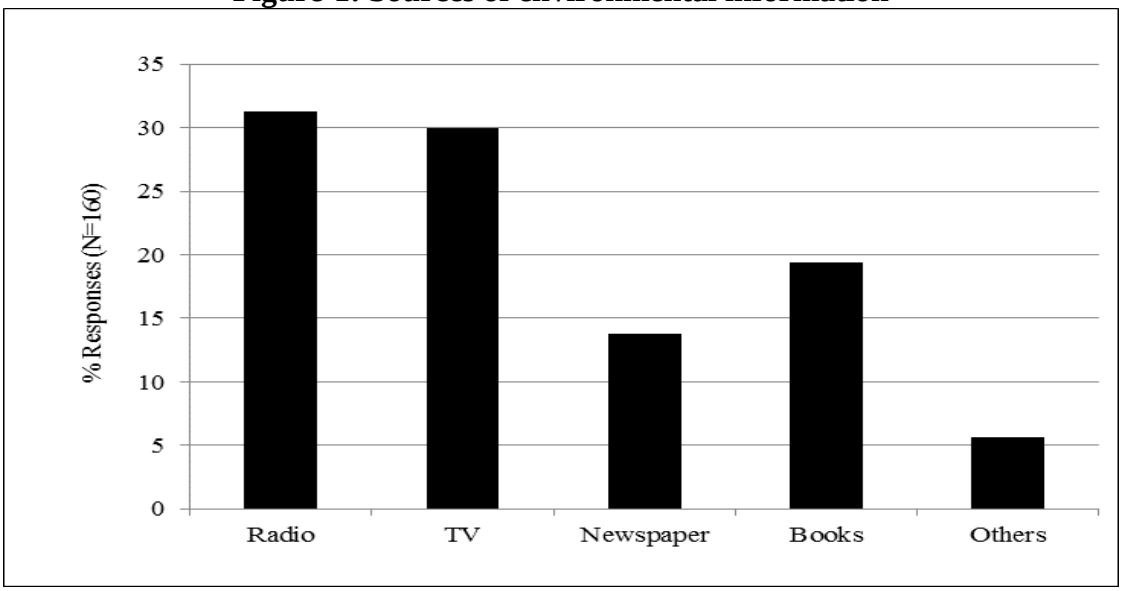
Income vs. Familiarity and EPK: Some studies [29] show that the middle and upper classes were more concerned about the environment than lower classes. Learner form higher socioeconomic backgrounds were found to be more environmentally concerned about the environment than lower socioeconomic background. According to them, there may be various explanations for these differences. For example, the difference may reflect differences in parenting influences, as higher class parents are more knowledgeable and discuss these issues with their children than parents from lower social class. However, no significant relationship was found between the familiarity of the environment and income of the respondents in this study; may be because of the less distinct stratified income groups. People of highly disproportionate income groups may show dissimilar level of environmental concerns.

The EPK was found to be significantly related with both education and income in this study. Thus, the interaction between education and income might have approached significance for the concern of the environmental expression. Individuals with higher income and some education expressed more concern for the environment than individuals with no/some education and lower income. However, Mohai [30] refutes the misconception

that income is positively related to environmental concern by showing that individuals in the lower class are just as concerned about environmental problems, but are constrained from engaging in political activism because of fewer resources and lower self-efficacy.

3.2 Sources of Environmental Information: The people who were familiar about the environment and consequences of environmental parameters were asked about the main sources from which they generally hear about environment. This information helped to understand what sources most influence their environmental knowledge and behavioral decisions.

Figure-1: Sources of environmental information

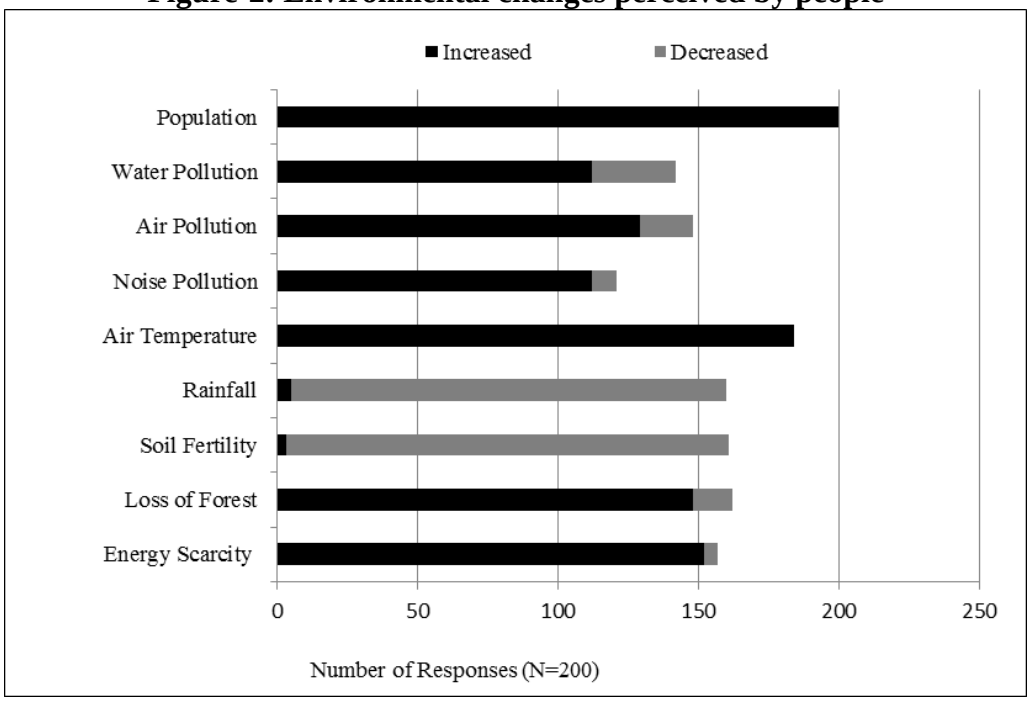


Mass media source like radio was the main source for people who were familiar about the environment followed by TV in this study. Books stood another important source that made people informed about the word environment and its consequences. Whereas for European people, TV news remains the main source of information about the environment followed by social media and the internet as the second most important information source, newspapers and radio were the other sources of information [31]. This means that the respondents in the study area are still more likely to rely on traditional media such as radio and TV while social media and internet is still not well accessible. Thus it could be understood that any environmental programs could be better spread through the use of radio or TV among the people. Also the people could be made aware of the environmental issues by educating through books.

3.3 Perceived Environmental Changes: According to Kaplan and Kaplan (1978) [32], the way people perceive and think, the way they take in and process information from the environment, are a consequence of past experiences. Through these past experiences, people develop cognitive models of their environment, which in turn, aid in the perception of future

environments. That is why, the respondents were asked about the changed patterns of different environmental phenomenon they experienced in past five years.

Figure-2: Environmental changes perceived by people



The most obvious environmental changes reported locally was an increase in population followed by air temperature, energy scarcity and loss of forest. Similarly, decrease in soil fertility was highly rated and followed by decrease in rainfall. Thus, the results indicate that people are capable of recognizing the environmental changes clearly. It was also noted that almost similar sort of environmental changes were experienced by both the rural and urban respondents. This may be due to the fact that both rural and urban area share similar sort of climate and ecology. During FGD, almost everyone agreed of facing some form of environmental problems. Some of the problems they quoted are scarcity of water supply; forest deforestation and the rapid construction of houses and dense population are the root causes of the environmental degradation in their community.

The public concern for the state of the environment have become a world-wide phenomenon as suggested by widespread participation in the 1992 Earth Summit in Rio de Janeiro [33]. Local people of the study area have also experienced some local environmental changes, which is similar to environmental changes experienced around different parts of the globe.

3.4 Perception on Human-Environment Relationship: How people consider a relationship between the environment and human is an important factor which could affect their behavior toward the environment. And the types of human-environment relationship

was assessed by asking: what sorts of relationship between the environment and human should be?

A1: We should consider a benefit of the environment first.
A2: We should develop harmonic relation between environment and human need.
A3: We should conquer the environment to meet needs of our lives.

When comparing option A_1 and A_3, of the total (160) respondents one third of the them (33.13%) chose A_1, which is about double in comparison to the option A_3 (16.25%) showing a definite inclination towards the environment with an eco-centric view. But more importantly more than half of the respondents (51.63%) chose option A_2 which depict that majority of people take the view that both the environmental protection and human needs should go together in harmonic way. Thus, the people seem to have built mutualistic relationship with the environment.

During the FGD, the participants were asked how far they agree the statement that the environment and human need should go in harmony. Almost all agreed the statement. One gentleman during FGD commented 'the excessive exploitation of environment cause various diseases, imbalance climatic condition and brings end to the world'. Similarly a 39 years old illiterate woman who was farmer by occupation mentioned that 'the over population has led to transform agricultural field into residential house and has decreased the production of crop. So the cereals are becoming expensive'. Thus, the people seem to be aware of environmental consequences and have built a good sense of consciousness towards environment irrespective of the various socio demographic variables and want to establish mutualistic relationship with environment.

Schultz [34] postulates that the human-nature relationship is not a simple dichotomy, but that connectedness to nature is better represented as a continuum of overlap between nature and self. Therefore, what types of relationship people prefer to establish between their surrounding environment and themselves, is one component by which environmental perception of local people was interpreted.

The people of the study area seem to keep mutual relationship with environment which appears to be influenced by paternalism or communalism paradigm of Pálsson (1996) [35] which is supportive for sustainable development. So the people are aware of ecological problems and seek to reach some sort of balance with the environment to avoid these. This inference can also be compared with Dunlap [33] argument that the problems faced by poor countries in terms of protecting their nation's environmental quality while pursuing economic growth is, in fact, the aspect of sustainable development. Thus the result is encouraging for achieving sustainability in developing nations like Nepal.

Similarly emphasizing more on biospheric value of nature also express the degree of people's environmentalism. The reason for their environmentalism may be because the local people might be well aware of negative consequences of the environmental threats. The result also suggests that, despite the growing recognition of the threat to human health and

welfare posed by environmental degradation, concern for environmental quality encompasses far more than a narrow concern with human welfare. Pálsson (1996) [35] also states that indigenous people and non-modern societies are considered to be closer to nature. Based on the view of Poortinga et al. [36] that people who value environmental quality more have a higher environmental concern, the local people of the study area may be supposed to be well conscious about the environment.

3.5 Perception about Environmental Threats: Interaction between human and environmental parameters is better understood in nature. Natural activities always try to balance the inter-dependence of the biotic and abiotic components. So far as the man made ecosystem is concerned, man always tries to harness and harvest the resources available in the existing environment.

Population problem has become one of the crucial factors for creating imbalance between environmental components. About half of the respondents (45.5%) feel that population pressure is not serious, while one third (30.5%) view it as very serious issue at present. Almost same proportion of respondents contrarily view population problem in future. Some (37.5%) of the respondents consider that population pressure would not be serous in future while some (35.5%) view it as more serious issue in the near future if the same rate of growth exists.

The quality of water in the study area seems satisfactory for drinking purposes. However, during FGD, most of the participant reported about the unhygienic distribution of water supply pipeline. They panic about the leakage of water pipes. More than one third (35.5%) of the respondents think that the quality of drinking water is all right at present where as 42.5% view it serious and 22% as very serious. While about one third (32%) of the respondents consider that the quality of drinking water will not degrade in near future too. Such a response may be due to the ignorance of the people about the presence of the microbes in the unhygienic water supply and reduction of the frequency of occurrence of diseases in the study area. However, 45% of the respondents believe that the situation will worsen in near future. Thus, the result suggests that most of the people are more concerned about the quality of drinking water in present as well as in future.

Decline in the agricultural productivity is a grave concern all over the country. Many of the participant during FGD agreed that the decrease in agricultural productivity is a direct cause excessive use of pesticides. The result of FGD was also complemented by the fact that about half of the respondents reckoned the loss of the soil fertility as a very serious issue in both present and future.

The urban people of the study area were not found to be much associated with forest due to less dependency on forest resources these days. However several respondents believe that the loss of forest has already gone beyond control which is a serious concern for everyone. About more than half of the respondents think that loss of forest is a serious problem in present as well as in future.

Petroleum product (e.g., Liquefied Petroleum Gas, Kerosene oil, Diesel, Petrol) is a well-known non-renewable source of energy which is a serious problem not only in the study area but also for the whole nation. Most of the participant during FGD emphasized on using the alternative source of energy (e.g. solar energy). Majority (70.5%) of the respondents think that scarcity of energy is going to be a serious problem in the near future while for most (66%) of the respondents energy scarcity is only a present problem and hope for an improvement in future. Very few respondents regard energy scarcity not as a serious problem either in present or in the future.

Sanitation may be considered as an indicator of environmental awareness of the local people. For more than half of the respondents, sanitation problem in their locality is not a serious issues either in present or in future. Thus it seems that the local environmental issues are well perceived by the people and they make sense of the situation in their local context.

Soil fertility was rated as very serious problem in present as well as in future by most of the people may be because it is more easily understood as having direct local relevance. Livelihood of most of the people depend on agriculture. While for most of the people sanitation problem was not a serious problem either in present or in future. The impact of population growth has also not been considered as serious issue either in present or in future. It is because the people might not have been exposed to the serious impact of these problems or these problems doesn't pose immediate impact.

IV. Conclusion: The people under study area have a very general interpretation of the term environment as natural environment and is also complemented by their moderate level of familiarity about environmental issues and knowledge of protecting environment. Education stood a most promising predictive factor of environmental concerns. There are still substantial numbers of people who believe in mutual relationship to be established between environment and human needs. Environmental issues are deemed important along with a desideratum for economic growth. Almost all residents have opinion about the local environment and their concerns/seriousness revolve around their livelihoods, socioeconomics and the individual experiences. Thus, individual's environmental knowledge at local level is of moderate level and are aware of the local environmental problems at least at cognitive level. Traditional media like radio and TV are still effective to broadcast any environmental programs among the people to make them aware in developing nations like Nepal. Although some scholars have argued that prioritizing concern with environmental issues represents a postmaterialist value, the analyses presented here suggest that developing nations also often prioritize environmental issues.

V. Implications: I was motivated to conduct this research by a general interest in measuring and interpreting public perceptions of environmental conditions in a developing country. Such work is important since environmental resources in many developing countries are acutely threatened, yet the need for economic growth is also clear.

The paper seeks to contribute to the understanding of environmental issues in developing nations and less affluent regions of the world. The analysis contributes to the paucity of

research on environmental perceptions in developing nations like Nepal. Environmental perceptions may serve as useful indicators of environmental degradation and biophysical change. So, merging the local environmental perspectives within the political agenda may shed valuable insight into issues that people perceive as most critical to their communities' well-being and their own livelihoods which helps in understanding the relative priority of various environmental issues. It comforts in shaping environmental policy priorities. Ultimately, the knowledge of local public's environmental concerns may result in a more sustainable approach toward mitigating local problems and help reinforce policy responses designed to cope with global environmental change.

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