

## Pollution of Seti River in Pokhara

### *An Anthropological Perspective*

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#### **Abstract**

*Seti River is one of important components of the ecology of Pokhara so it holds a great significance for maintaining ecological balance and fulfilling different types of needs of people here. But only a few people are aware of its real value while others are pretending to be unaware of this and are accelerating its pollution. It's true that its pollution is not as devastating as the pollution of the Bagmati and the Vishnumati in Kathmandu. But its pollution is increasing, if it goes on increasing like this, it will surely reach that devastating stage in the near future which will threaten the existence of eco-system and components including human kind inhabiting around its vicinity.*

**[Key Words:** Human ecology, people-Seti interaction, anthropology of natural resources management.]

#### **Prologue**

Our environment can be compared to a cobweb in which every strand is equally important since it plays an equally important role to maintain the shape, balance and function of the web. Just like this, every component of environment plays an equally significant role to maintain the environmental balance of a place. Anything having adverse effect on any of these components ultimately threatens the environmental balance. Human beings, so called the most superior of all living beings, have been making their living more comfortable and easier by using various environmental aspects. But unfortunately, in their efforts to create comforts, they have parallelly created several problems which have been imposing great threats to the world's ecosystem and environment. Ruin and over-exploitation of world's natural resources is one of such problematic creations of man. Environmental pollution is a live example of over-exploitation of various

natural resources. This has caused havoc in many parts of the world whether they are developed or undeveloped. In this regard (Odom, 1996:432) writes

Pollution is an undesirable change in the physical, chemical or biological characteristics of our air, land and water that may or will harmfully affect human life or that of desirable species, our industrial processes, living conditions and cultural assets, or that may or will waste or deteriorate our raw material resource.

A living body is made of cells in which water is one of the basic components. Rivers are sources of water. If we go back to prehistoric period, we find that settled and civilized life had started at the banks of rivers. In this context, Hoebel (1958:195-196) describes the importance of rivers in the development of civilization as:

more important than pottery or artifacts were the new gardening techniques that were developed in the full Neolithic in the great river valleys of Mesopotamia (the Euphrates and Tigris), Egypt (the Nile) and western Pakistan (the Indus). In the flood water lowlands, it was possible to carry on intensive gardening to the extent that continuous settlements could develop along the Nile, while in Mesopotamia and Pakistan full cities emerged. The development of towns into cities changed the whole scheme of life for more and more of humanity from that time onward. Civilization means “city making” where civilization took over, the primitive tribesman moved into town and became an urbanite of whom the most sophisticated were “urbane” or he remained on his land as a satellite peasant villager.

Thus from evolutionary point of view also rivers are of great importance. Another fact is that today also almost every city or town is situated or developed at the bank of a river. This also illustrates the importance of rivers. From this point of view it can be argued that the Seti has been

playing a significant role in the development of Pokhara into a city. Various approaches have been developed on applied anthropology that has proved to be quite useful in studying and solving the contemporary human problems. Anthropology provides attention not only towards human life and culture but also towards ecology, environmental balance and environmental problems as well. In this context, Stein and Rowe (1995:319) state

anthropology is an ecological discipline and one of its main contributions has been the investigation of relationships between humans and their environment. From the studies, it has become clear that all animals must maintain a proper balance with natures. People's great potential for cultural behavior provides adaptive flexibility, but it is limited, if this potential is used carelessly, it could create a sterile environment.

Anthropology itself has also been successful in the study of natural resource management system. In fact, it has been providing important insights into the management of various natural resources. Burton et al, (1986) write that: *the study of Natural Resources Management (NRM) system is an anthropological subfield which is logically tied to anthropological traditions and which concerns an applied niche not well served by the other social sciences.* They further argue that

anthropology is relevant to NRM in two reasons. First, anthropology has a tradition of considering biological data whereas biological models are rare in other social sciences. Second, anthropology critically depends upon ethnography a tradition which is less well developed in the other social sciences. The combination allows for a unique understanding of the relationship between the natural and social environments.

Pollution decreases the use value of a river to human beings and ecosystem of a place. We must say that our ancestors were very wise to devise such strategies as worshipping rivers by assuming them holy, may be in order to

conserve them from various haphazard activities of man later it took the form of culture. We can term their beliefs and practices as the strategies of natural resources management. Thus we should always be thankful to them for such praiseworthy work. The Seti River is one of the important natural resources in Pokhara to people not only ecologically but also religiously, culturally and economically.

### The Problem

Urbanization and population growth have been common features of modern society. They naturally lead to the increase in the level of pollution of a particular area. In this regard Parajuli, (2001) states that *environmental pollution is a common feature of modern developing society*. While Gurung, (2004) writes that *the development of cities has always proved a mixed blessing. The cities on the one hand are mostly acknowledged as basic to an advanced society and civilization, which otherwise also invite innumerable complexities making the urban milieu, inhospitable to healthy and agreeable settlement*". Though it is a common feature of developing world, it should be manageable. If it reaches to the extreme from where it becomes very difficult to manage then it will gradually threaten the survival of living beings and ecological balance. According to Kannan (1997)

environmental pollution causes (1) health problems by affecting human health and lives, (2) economic problem by affecting (the value of) human property and materials, (3) ecological problems by disturbing a balanced ecosystem, interfering with the conservation of natural resources and throwing the mere existence of some species and (4) aesthetic problems by generally affecting human senses.

Like most of the other rivers in Nepal, the Seti is also originated from the Himalayas. It has possessed the ability to purify itself through physical and oxidation processes caused due to its rapid flow. But its pollution is so severe that such natural processes of purification might have been

overloaded. This river should have been used as a source for drinking and other domestic uses but people except those living at its bank do not use its water for such purposes. Rather they have been using it as a sewer for domestic and other wastes. Though this river is believed to be holy but now if we observe its condition, we will find it very difficult to believe that it is sacred and people worship it. The Seti's pollution is decreasing its use value as a natural resource and also causing health problems to people who are being compelled to use its water. But unfortunately, the ecological decline caused by this which is of the most dangerous nature in the long run has been remaining unnoticed. Spooner (1998) argues that "*ecological decline leads to impoverishment and decline in health and well-being in the immediate population as well as reduction in productivity and carrying capacity of the world as a whole*". In the context of the Seti, the immediate population can be understood as the people living at and around its bank exploiting this river's resources for survival. The impacts of this pollution on people's life ways are gradually increasing. Though concerns over it have been shown by various scholars, people, sectors, newspapers, magazines and agencies yet these impacts have not been studied systematically. So this issue deserves a careful, insightful and systematic anthropological exploration and thus this study was undertaken. To sum up, this study mainly focused on searching the main resources it provides, the cause of people's believing it as a sacred River, the causes of its pollution, the main effects of its pollution on people's culture and ecology of Pokhara, its religious and cultural importance, the changes occurred in its status from symbolic, cultural and religious point of view with increase in pollution etc.

### Conceptual Framework of the Study

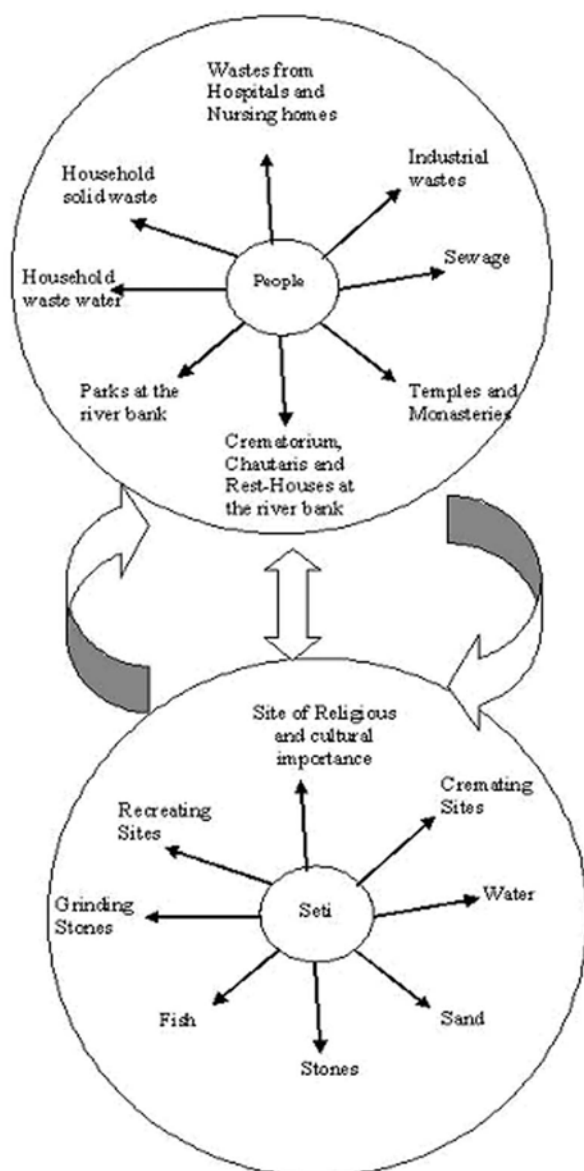


Fig 1.1: Conceptual Framework for People-Seti Interaction

## Introduction and Scope of Human Ecology

Human Ecology, in general, is the study of relationship between human beings and their environment in different cultural contexts. It investigates how human beings interact with specific natural environment through their cultural and social organizations not only in the present but also in the past. This leads to a better understanding of the factors influencing human-environmental interaction. Anthropologists make use of this approach to study the interaction of human beings with their environmental components including cultural organizations and patterns originated in the course of this interaction. Today it occupies a very important position in various social sciences such as anthropology, geography, sociology etc. Thus, it encompasses a vast range of scope.

The field of human ecology provides an integrated framework for understanding the interactions between human populations and the environment they inhabit. Humans are unique because of the plasticity of our adaptations which are manifested in physiological, behavioral, physiological and socio-cultural mechanisms for adjustment. (Anthropology, 360).

Bennett (1996:10-11) also asserts that “*human ecology studies ecosystems that include people, focusing on the ways in which use “of nature influences and is influenced by social organization and cultural value”*”. (cf. Kotak, 2000:14). While Borgatta and Montgomery, (2000:1217) write

for human ecology, the most salient aspect of the population environment relationship is the way it affects human survival and the quality of human life. Under the impact of the interlocking crises of overpopulation, resource depletion and environmental degradation, issues of sustainability and survival have come to occupy center stage

Thus we can argue that human ecology provides a perfect ground for investigating and understanding human beings as an ecological component. It not only focuses on the influences of human being on their environment but also on how a particular environment influences or constrains human activities. In other words, it believes that organisms both influence and are influenced by their environment.

### **Concept of Natural resources in Human Ecology**

Generally, a resource can be defined as any component of man's environment whether they be living or non-living things, human skills or knowledge that can be used for producing valued goods and services. Similarly, natural resources, also called as the gifts of nature, are mostly defined as any part of natural environment i.e. living or non-living by which we can produce valued goods and services. Sharma et al (1994:224) also asserts that:

in general natural resource is any component of the natural environment such as air, water, soil, forest, wildlife and minerals. Specifically, the materials of nature available for use as inputs to economic activity either by direct consumptions or by use in the production (such as oil deposits and forests) or by serving as the receptacle for arising in the activities of consumption and productions.

These days, most of the intellectual circle is indulged in such incomplete, narrow and econocentric definition of natural resources as given above. But in reality such definitions always underrate the ecological value of these resources while overestimating their economic value. In this context, Grima and Berkes (1989) argue that:

resources are assets for the creation of human satisfaction or utility, including income. However this misleadingly narrow definition of



resources ignores the interdependency of the various components of ecosystems and understates the ecological value of resources. The broader view of human nature systems or the ecosystem approach, as the basis for sustainable development broadens the definition of resources. In particular it makes their values consistent with the notion of sustainability in the long run.

Grima and Berkes (1989) further argue that:

in the ecosystem perspective resources cannot be treated as mere factors of production. While resources may be defined in terms of human wants, they cannot be treated as mere tradable assets because much of the ecological value of resources is not reflected in the short term market value. Thus the ecosystem or holistic view that takes into account of all ecosystem components and their interactions (including those involving human societies) is a realistic approach in the long run. The ecosystem view of resources makes much more sense than the more narrowly market - oriented definition of resources.

So in human ecological terms, natural resources are not only the assets to fulfill human needs; but also the assets that play an important part in making the ecosystem sustainable. Further, the ecological view of natural resources takes their holistic account of both as the component of an ecosystem as well as assets that fulfill human needs. Thus time has come for the natural resources specialists and intellectuals to redefine and broaden their reflection on natural resources and also to review the literatures on natural resources to highlight their ecological value along with economic one. Otherwise any strategy for natural resource conservation will not be effective to conserve these resources from overexploitation.

## **Human Ecology as an Approach of Natural Resources Management**

Human beings have been devising specific forms of strategies to adapt themselves in changing environmental conditions. In other words, such strategies can be labeled as the strategies for proper management of natural resources. In anthropological terms, these adaptive strategies vary culturally. Human ecology provides us with a framework for studying such adaptive strategies of natural resources management and thus about the interaction between human beings and their environment. Highlighting the scope of human ecology in the natural resources management, Gutierrez (2001) explains that: *human ecology is based on an application of systems engineering principles to social problems. Human ecologist studies man and how his human activities affect the natural resource base and usually includes aspects of rational management and development.*

Since human ecology views natural resources not only economically but also ecologically it has broadened the scope of natural resources and their conservation. In the context of management of natural resources, human ecology stresses for ecological sustainability in the long run. Due to having such distinctive vision towards natural resources and its stress on ecological sustainability, it has proved to be one of the most effective approaches in the study of management of natural resources. Thus it can prove to be successful to investigate the interaction between the Seti (a natural resource) and people living around its vicinity.

## **Area and Methods of Data Collection**

The section of Seti from Kaseri (Jaubari Dam) to Seti Pul in Prithvi Chowk was selected as the study area since this section is reflecting the most about the interrelationship of local people with this river and the reality of its pollution. Households built within about 100 m from both banks of the river formed the universe of this study which included 388 houses. These houses were enumerated in the sampling frame with the help of the house

numbers given by PSM office and 25 percent of them which equals to 97 were picked up as samples by following Systematic Random Sampling Technique. The heads of 97 households sampled were the respondents of this study. For the purpose of this study, observation, schedule and key - important interview were adopted to collect both qualitative and quantitative data. These tools were devised very carefully in order to ensure their validity. For this purpose, the schedule prepared was firstly pre-tested and the results from this were used to refine the question in the schedule. The data collected were dominantly primary in nature. Both structured and unstructured observations were made from time to time while key-informant interview which was, primarily, unstructured one was also conducted with personnel from PSM, Drinking Water Corporation, priests of the temples, environmental experts etc.

## **Findings and Discussion**

### **Pollution of the Seti River and its Causes**

It has been a harsh reality that the rivers whose banks are occupied by urban centers are becoming more and more polluted day by day by various wanton activities of the most superior of all animals. The Seti River is no longer an exception. By nature, it is lime-polluted. This is a factor for reducing its use-value. But, it is not as significant as the pollution caused by human activities. As older people here in Pokhara interpret this river had been a good source of drinking water as well as other household uses. The researcher also met some people who had used this water for such purposes extensively in the past. As one of the key-informant informed that the Seti has been losing its use-value for the last 20 or 25 years due to its increasing pollution. If observed carefully, heaps of household wastes like plastic bags and bottles, paper, glass pieces, remains of dead bodies of animals were found at various places such as KI Sing Pul, Mahendrapul and 'Ramghat ko pul'. As respondents say the disposal of wastage, sewerage disposal, washing and bathing in the river, irresponsibility of the

stakeholders, defecation in river side, disposal of remains of dead animals, cremation, washing and bathing in the river, cremation, mixing drains and dirt from sty built at its bank and washing of vehicles in river water, lack of implementation of environmental laws etc. are the main causes of polluting this river. These causes are self-evident today also.

### **Responsible for Pollution**

During observation, the researcher saw many people disposing their household wastes packed in plastic bags from KI Sing pul, Mahendra pul and 'Ramghat ko pul' in different occasions. Solid wastes disposed on riverside or into river can be observed easily but liquid wastes such as those from septic tank and drains, which are deposited into the river, cannot be seen easily. During observation, the researcher also observed outlets of toilets of the houses in Mahendrapul and KI singh pul area through which sewage is directly deposited into the river. Likewise, some houses were seen to be joining the outlets of their septic tanks into the drains built for collecting household wastewater. In some cases, drains and dirt from sty were also observed to be deposited directly into the river water while in other cases, faeces defecated on the open spaces at riverbank and dead body and parts of animals dumped at the riverbank were also observed. The natural landscape (presence of deep gorges) of the Seti is also enhancing such practices. The researcher was amazed to know the rhetoric and reality of people's awareness towards pollution. They knew polluting river was more than crime but in practice they have been continuing such acts. It seems that disposing garbage into the Seti has been an unavoidable habit that characterizes a Nepali proverb "*nani dekhi lageko bani dhoi pakhali najani*". As a result they are not being able to get rid of it. An interesting thing is that in most of the places in the study area, the garbage and waste collecting vehicles of Sub-metropolis reached to collect garbage and wastes regularly in most cases. It seemed that people find it easier to dispose garbage into the Seti rather than waiting for those vehicles for such purpose.

From this, it can be said that local people are very much responsible for increasing pollution of this river. But this is not to say that concerned agencies, mainly sub-metropolis and district development committee are not responsible for this. The garbage collecting vehicles of sub-metropolis did not reach all the areas of Pokhara such as Kaseri and Ramghat area, according to the people there. A key-informant concerned with sub-metropolis has also accepted this fact referring to an insufficiency of resources at PSM to collect garbage and wastes from all the areas of Pokhara city. It has been noticed that the sub-metropolis has set up a hotline telephone service for the people to report about the garbage problem. According to the same key-informant, if the garbage collecting vehicles do not reach any area and heaps of garbage pile up there, people can report it through the hotline. But it seems that most of the people are unaware of this facility.

Likewise, it has been recorded by the researcher that sub-metropolis has not formulated effective policies for monitoring or inspecting the pollution enhancing acts such as disposing garbage into river, mixing septic tank wastes into river etc. which can be fruitful in reducing this river pollution. Due to this, it can be said that sub-metropolis, to some extent, is also responsible for increasing pollution. The researcher also made some interesting observations in which some educational institutions which are considered as one of the main agents for creating environmental awareness, are also found to be depositing wastage into this river directly. Not only this, one of such institutions was also found to be draining off the liquid wastes to this river by constructing a canal.

### **Relationship of People with the Seti River**

Human survival is totally dependant upon the exploitation of natural resources. In the same way, people living around or near the Seti are also

more or less dependent upon it and its resources for making their living. It has been providing a variety of resources including sand, stones; concrete etc. for shelter building purposes as well as for other development activities including infrastructural development. People, mainly visit it for extracting sand and stones, for taking a sacred bath, for washing clothes and even for bathing and for cremating. Among the various places within the study area, Ramghat is the busiest place since many people go there for extracting sand and having sacred bath. In this area, one can see a large number of sacks filled with sand not only at the riverbank but on the ways to it. A large number of pits made by people during sand mining also can be seen. Except from Ramghat, sand and stones are extracted from Kaseri, Gaighat and Narayansthan as well. But important point to be mentioned here is that most of the people for whom the Seti River has been very useful are those marginal and poor people especially wage laborers, living on the river side. These people have been showing a classical example of human-ecological interrelationship.

It has also been useful for people for bathing and washing. People especially in Kaseri and Ramghat, take bath in this river which is not only sacred but also their day-to-day activity for keeping their body neat and clean ( except in rainy reason). While exploring more on this category, the researcher found one interesting inference that people of Kaseri go to the Seti for getting water for household uses. For this they dig out the sand on the riverside with their hands to make small *kuwa-like* structure. From this, they get clean water filtered by sand for various household purposes including drinking. This practice has been prevailing till now, though less than in the past, since they have made arrangement of piped drinking water themselves. This is an adaptive strategy devised by people in the course of adaptation to their adverse environmental condition.

Fishing is a less practised activity in the Seti as compared to other rivers; this must be due to the fact that there are a few fish in it. Still some people fish here. Similarly, the Hindus and Buddhists use sand from this river during '*Dashain*'- to grow *Jamara* and to perform '*Shraaddha*' of their deceased parents. Small pebbles from this river are found to be used by some of the people for the decorative purposes as well. Grinding stones are important component of Nepalese kitchen. Some people extract such stones from this river for their requirement in kitchen. Some were found to be doing so for selling purposes as well. It means that it has been their income source. For a large number of people in Pokhara, the Seti provides sites for strolling, swimming and having picnic. Especially in the morning and evening, a large number of people can be seen strolling by the riverside. Disposal of dead bodies is important not only from religious point of view but also from environmental point of view. The Seti has been providing a site for cremation for people living around its vicinity.

Some of the areas in Pokhara including Malepatan, Mate Mashina, Chhinedanda, Daduakharka (especially ward 14, 15 and 18 of PSM) have become more important than in the past after the construction of a canal from this river. Though disposing wastes into river is an irrational activity, people have been using it as a dumping site and sewer. In the real sense, it is more a misuse than its use. We can imagine how severe the problem of wastes and garbage would be in Pokhara, if there was no Seti River. In one sense; it is temporarily helping people to live comfortably. The above explanations present the ways in which the Seti has been helping Pokhareli people. But, Pokhareli people are also helping the Seti in some respects. For example, they have built some religious places such as temples, 'chautari', 'Gumba' and parks, which to some extent; have enhanced the beauty and importance of the Seti. But all these activities are over shadowed by the increasing pollution of the Seti River. The above-mentioned

interdependence and interrelationship between the Seti River and the people living around it is a vivid example of human ecology of Pokhara. But this relationship seems to be affected by its pollution.

### **Effects of Pollution**

The researcher attempted to study the main effects caused by the pollution of the Seti River on the interrelationship between people and this river. While undertaking field survey and field work, the researcher got a chance to introduce himself with the effects of this pollution on people and their social life. Though this river is flowing through the heart of the Pokhara valley, local people cannot use its water for their cooking and drinking purposes due to pollution. What other thing can be more significant than this effect? There is a huge problem of drinking water in Pokhara. But only a few people use this river water for cooking and drinking purposes. Rich people any way manage to get water for fulfilling their needs but real victims have been those poor and minor people who rely on the uncertain public taps where water comes rarely during drying seasons. In this regard some of these people are found to be buying water from the houses of richer people to make their living. So the poor people are being victimized more and more by the pollution of the Seti River for which other groups of people are more responsible than themselves. This phenomenon can be termed as a classical example of environmental injustice.

Similarly, most of the respondents whose family members visit this river for bathing and swimming reported some complaints such as irritation and itching of the skin, infection of ringworm etc. This is another effect of pollution of the Seti River. Likewise, water is the universal solvent thus it is used for most of the cleaning activities. But only a few people feel that this water is fit for washing and bathing. Those people who wash their clothes in this river water say that clothes become white and muddy. As a result of above mentioned effects of pollution the use value of the Seti has



been decreasing day by day it means the ecological relations between people and the ecology of Pokhara cannot be sustainable in the long run if the current situation persists. This is because people's perception devotion towards the Seti is changing. Despite being an important natural resource, now most people assert that its importance is decreasing. For environment to remain balanced, the ecological relationship between its components should be healthy and harmonic. But today the relationship between Pokhareli people and the Seti River has not been as harmonic as it ought to be. Thus the ecological relationship between it and people seems to be weakening as compared to that of past due to pollution.

### **Cultural, Religious and Symbolic Importance of the Seti River**

In Hindu and Buddhist cosmos, water is of enormous importance, since it is believed as the life giving substance. The Seti River is also believed as a sacred river and people carry out various religious practices here. We can see people visiting it for taking sacred bath, for conducting ritual and worshipping etc. We can find some important shrines of Hindus and Buddhists including Ramghat, Gaighat, Narayansthan, Shantighat, Tulsi ghat etc. at its bank. They also have played a significant role to highlight and strengthen the religious and symbolic beliefs towards this river. According to some respondents, and one of the key-informants, people's religious attitude towards this river is responsible for developing former jungle like Pokhara into an urban center. According to them, at first the devotees who had come to this river for religious purposes might have started settling here. As quoted by a key-informant, in the past they celebrated many religious feasts and festivals in the river though only one- *Dunge Sanghun Ko Mela* is vivid till now. Today also, in special festivals and occasions such as *Purnima*, *Aaunshi* etc. we can see a large crowd at various places within this study area such as Gaighat, Ramghat and Narayansthan. They not only take sacred bath in the river but also worship it as "A Goddess". As one of the Key-informants told that this river is explained in

*Skanda Puran* as *Dugdha Prabha Ganga* and if taken bath here, ones soul gets rid of all kinds of sins and evil - spirits.

Most of the respondents of this study were not found to be visiting it for conducting daily and occasional ritual and bathing though they consider it sacred. But they do not suggest others not to visit this polluted river. This clearly indicates that people strongly respect others religious belief. The beliefs and feelings like this have been the classical characteristics of Nepalese society and culture which have been playing a significant role to bind all Nepalese people as a cohesive unit. The Hindus and Buddhists are found to be the firm believers of the sacredness of the Seti while Christians are found to be more disagreeing on the sacredness of this river. But interestingly, some of the Christians are found to believe on its sacredness. It may be due to the fact that these Christians were former Hindus and Buddhists who later on were converted into Christians. It means though they have changed their religion still they have some influences of previous religions. Hindus and Buddhists prefer cremating in this river because they believe that by doing so; the dead personnel reach the heaven where they can remain very happy even after their death. Similarly, many people use the sand from this river in various festivals such as *Dashain*, *Shree Swasthani Brat* etc. Similarly, water of this river also carries a great religious significance because most of the people consider it as *Jal* and use it in various religious occasions and rituals for purifying their mind and soul. Now, new dimension has been added to its religious importance by the followers of 'Lord Shiva' and *Bol Bam Parba*. The month of *Shrawan* with 5 Mondays is considered holy by these people for worshipping 'Lord Shiva'. In this *Bol Bam Parba*, its followers carry *Jal* of the Seti River all the way to *Kedareshwor Mahadev Temple* in Baidam from 'Gaighat' for offering it to 'the Lord Shiva'. This activity is another evidence to show the religious and symbolic importance of this River.

### **Effect of Pollution on Sacredness of the Seti River**

Now it seems that the importance of this river is also diminishing. Just like the researcher, all people who have been living near by the Seti have been witnessing the decline in the number of devotees visiting it. During every field visit, the people living on the riverside were asserting time to time to the researcher about the gradual fall in the number of devotees visiting this river. Likewise, during the field visits on three occasions: *Shiva Ratri*, *Baisakh Purnima* and *Mata Tirtha Aaunshi*, the researcher observed only a few devotees who could be counted in the fingers. According to people living by the river side, this trend of decrease in number of devotees has been accelerating for the last 5-6 years. Now most of the people having faith on this river as holy also hesitate to take a sacred dip in it due to its pollution. The researcher made some interesting observations such as most of the devotees were just making their hair wet and sprinkling river water over their bodies without stepping on to the river water. Most of the respondents believe that pollution has affected the sacredness of the Seti. Almost all of the respondents are found to be aware of the concept of *Jal* and consider this river water as *Jal* no matter how polluted it is. But none of them were seen drinking river water as sacred *Jal*. Instead most of them have now started to question its sacredness because of increasing pollution. Most of them now believe that its sacredness has been affected by the increasing pollution and have started questioning the status of the water of this river as *Jal*. From these, it can be argued that the cultural, symbolic and religious importance of the Seti River has been declining more and more than in the past due to its increasing pollution.

### **Measure of Curbing Pollution**

Pollution is not incurable in itself. Only requirement is the increase in awareness among people about the impacts of pollution and translating that awareness into practice which has been lacking there among the people in Pokhara so far. Respondents believed that proper management of wastage, diffusion of education and awareness, developing sense of responsibility among stakeholders, realizing the sense of responsibility by

local authorities, social activism can be the effective measures for curbing this river pollution. Though people have given diversified views about the measures to curtail pollution, it is they and their activities, which can be the most effective in minimizing this pollution. They should be active seriously in this regard. Otherwise, any of the strategies to lessen this pollution cannot be successful. If people make a habit of building a sedimentation tank for waste water treatment so that the solid particles get settled there and only the treated water flows down to the river. This may reduce pollution to some extent. At the same time, if the garbage collecting mechanism of PSM becomes more equipped and effective, it may help to reduce this pollution. Likewise, if catchments traps are made at different places in the drains that flow towards the Seti River before they join it; this may help minimize the pollution of this river.

## **Epilogue**

As a natural resource, the Seti has been very useful to the people in a number of ways. It has been a source of water for washing, bathing, irrigating, generating hydroelectricity etc., and extracting sand and stones for construction work. Also it has been providing fish, recreating site, cremating site, religious site etc to the people. Due to these reasons, the survival of the local people is more or dependent on this important natural resource - the Seti. Though it is useful in many ways, people are found to be misusing this natural resource using it as a dumping site and sewer. People accept that they themselves are a lot more responsible for its pollution than any others. They are quite aware of the problems created by the pollution of the Seti River but they are irresponsible and unjust in the sense that they have failed to translate their awareness into practice. Thus, it has been concluded that creating awareness about pollution and its problem holds no significance if it cannot be reflected into the practice in day-to-day life.

People are found to be bound with dual practices. On the one hand, they still believe the Seti as sacred and holy and on the other hand, the same people are its main polluting agents. This act of people is quite amazing, unacceptable and dubious. At the same time, the apathy and failure to develop appropriate mechanism from concerned agencies is another agent, which also must be accounted while talking about the problems of pollution of this river. People's haphazard activities such as disposal of garbage and sewage into river, dumping of dead animals in the river side and cremating, to some extent, have been the main causes of the pollution of the Seti River. Now it seems that people have started to be detracted from it with increasing pollution. So, it must be accepted that the ecology of Pokhara has been degraded more and more day by day due to pollution. Thus, a proper and significant attention has to be paid towards it from all concerned parties.

Lastly, based on the basic theme of 'Human Ecology' it is argued that the relationship between the Seti and people living around is under the threat of pollution. Interaction between the Seti and people is producing more and more negative or harmful effects since we people are intensifying the misuse of the Seti by making it a sewer and dumping site ignoring its real value. It is an important common resource and its pollution has been an excellent example of mismanagement of natural resources or the tragedy of the unmanaged commons. Now, the time has come for all of us to reanalyze our acts. Otherwise environment and ecology of our place will no longer remain balanced and hospitable and we will ourselves be the victims of the mistake made by ourselves. It has been late but not too late to correct our fault. Still, we have plenty of time for doing so. Only requirement is strong commitment and transformation of that commitment into reality. If we do so, we will surely be able to handover a healthy, hospitable and balanced environment and ecology to our future generations.

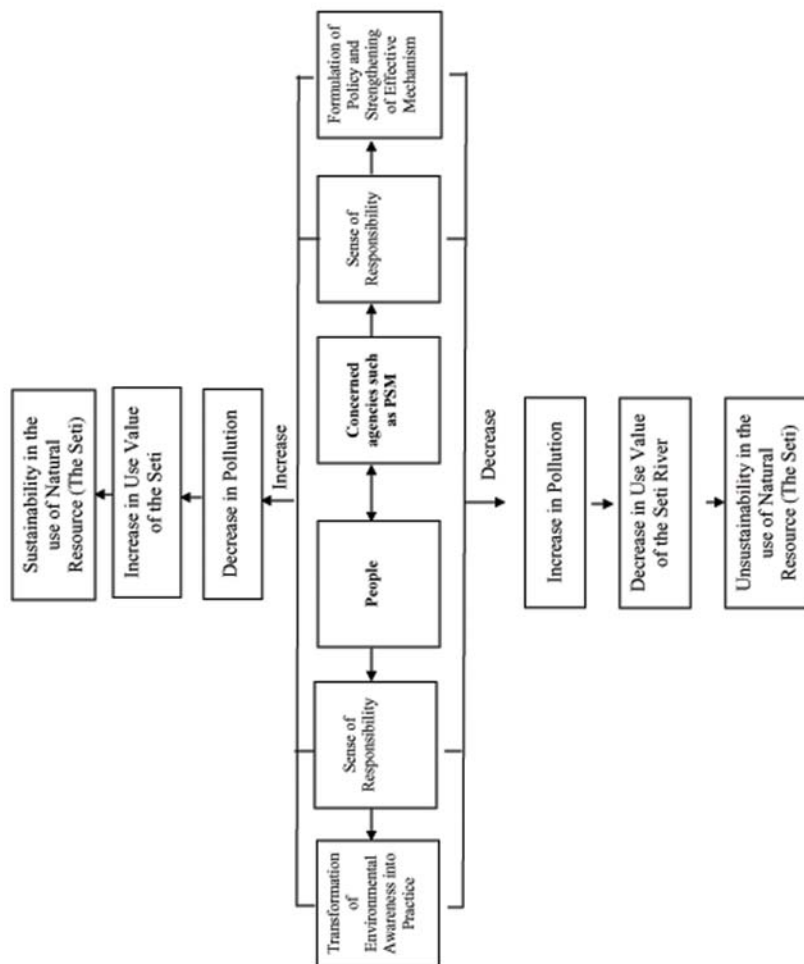


Fig 2: Conceptual Framework for Sustainable Use of Natural Resource (the Seti River)

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