

Role of Women in Reversing the Degradation of the Bagmati River

Rabin Bastola

Friends of the Bagmati, G.P.O. Box 459, Kathmandu, Nepal
(E-mail: fob@dwarikas.com)

Abstract

The Bagmati River and its tributaries have been an integral part of the Kathmandu Valley civilization. The rivers not only became a source of sustenance for the Valley's population but also gained religio-cultural significance. However, rapid urbanization and increasing industrial activities have transformed this once pristine river into an open sewer. In the upper stretches of the river at northern end of the Valley one still sees the Bagmati as it used to be. Here, the river is used for bathing, washing vegetables, clothes and utensils, irrigation etc. In most of these activities, it is the women who are involved. Local women's groups are active in Kathmandu in the areas of environmental management in general and solid waste management in particular. This paper attempts to analyse the role played by these women's groups and the prospects of these groups in reversing the degradation of the Bagmati River. A case of affirmative actions taken by one such informal group has been mentioned as an example. This paper infers that environmental management work is more effective through the involvement of non-governmental sector than direct involvement of the governmental agencies. Here, the role of women greatly enhances the efficacy of the activity.

Key words

Bagmati River, Environmental Management, Pollution, Women's Role

INTRODUCTION

The rivers of Kathmandu Valley have contributed significantly to the urbanized civilization and influenced the religious and cultural background that evolved in the Kathmandu Valley for centuries.

Bagmati is the biggest river of the Kathmandu valley. Major tributaries such as Bishnumati, Dhobikhola, Manohara and Tukuche converge with the Bagmati as it meanders through the valley. Apart from religious, social, economic, environmental and aesthetic value, the river is also the only source of water for the Valley's population of over 1.23 million.

Rapid urbanization and increasing industrial activities have transformed this once pristine river into an open sewer, unleashing epidemics and poisoning the farms downstream. The degrading quality of the Bagmati River is becoming a matter of national concern (HMGN/World Bank, 1994).

Motivation for the study

The quality of water in urban rivers is decreasing (UNEP, 2001). The water quality of Bagmati River and its tributaries are increasingly degrading and is heavily polluted especially in the section within the urban areas (ENPHO 1996a; 1996b, Pradhan 1998; CEMAT 1999) as indicated by numerous studies.

Lack of incorporating environmental factors in planning process has contributed to the deteriorating condition of the river. Furthermore, deforestation in upstream areas, dumping of solid waste in and around the vicinity of the river, lack of up stream conservation programs, growing number of illegal occupants and squatters along the river and direct mixing of the sewer/industrial effluents into rivers

have compounded the problem. However, the contribution of each source to water contamination has not been defined (HMGN/JICA, 2005) to date.

The extensive use of this river water for various purposes in daily life is a potential cause for seasonal outbreaks of water borne epidemics in the valley. In the upper stretches of the river at the northern end of the Valley, where the river is less affected by anthropogenic activities, one still sees the Bagmati as it used to be. Here, the river is used for bathing, washing of vegetables, clothes and utensils, irrigation etc. In most of these activities, it is the women who are involved.

Women's role for management of natural resources is declared in chapter 24 of "Agenda 21" which was adopted at the Rio earth summit in 1992. Also, in chapter IV, Section K, "Women and the Environment", in the Platform for Action at the Beijing Conference in 1995, it is clearly mentioned that "as consumers and producers,...,women play an important role in promoting sustainable development through their concern for the quality and sustainability of life for present and future generations".

Women are the carriers of water, as well as the caretakers of water; they perform the most basic tasks. In this sense, women are the caretakers of life (Murcott, 1999).

Local women's groups are already active in Kathmandu Valley in the areas of urban environmental management in general and solid waste management at household level in particular. To increase and strengthen this involvement, analysis of the role played by women's groups is imperative.

Experiences from around the world and even in Kathmandu Metropolitan City (KMC) indicate that Public Private Partnership (PPP) in waste management can be beneficial for the municipality, private sector as well as the public (Tuladhar, 2005). The amounts of recyclable materials that remain in Kathmandu's waste at dumping sites indicate that private sector involvement in recycling can be increased (Tuladhar et al. 1998).

Hence, this paper attempts to analyse the role played by these women's groups and the prospects of these groups in reversing the degradation of the Bagmati River.

Objective of the study

The overall objective of the study was to analyse the role played by these women's groups and the prospects of these groups in reversing the degradation of the Bagmati River.

METHOD OF STUDY

The study was conducted mainly with primary information. Secondary information were also collected to fill the data gap.

Secondary information

Secondary Information was collected from reports, research papers, books, journals and other relevant literatures. The organizational profiles of the researched organizations had been reviewed extensively.

Primary Information

Primary information was collected through field survey. The interview schedule with structured, semi-structured and open-ended questions was used for surveying. The existing women's organizations working in the areas of environmental management in Kathmandu Valley were selected for interview. Furthermore, a total of 200 individuals were asked about their perception regarding the performance of the governmental organizations and women's groups working in the

field of environmental management in Kathmandu Metropolitan City (KMC) and Lalitpur Sub-Metropolitan City (LSMC). Other questions related to the activities of the women's groups were also asked and a case study was conducted.

Study area

This study covered only the KMC (49.45 km²) and LSMC (15.15 km²) portion of the Kathmandu Valley.

RESULTS AND DISCUSSION

At present KMC and LSMC are disposing their waste mainly in and along the Bagmati River (HMGN/JICA, 2005). Due to this practice the water quality and the aesthetic value of the Bagmati River has been deteriorating day by day. Various efforts have been made by the governmental and non-governmental organizations to combat the challenges of urban river pollution in the valley. Among these attempts, an effort made to minimize the load of solid waste disposed on the Bagmati River bank is one of the major one.

Seventy percent of the waste collected every day (Table 1) in the KMC and LSMC is dumped along Bagmati River bank at Balkhu. The current situation of waste quantity of the KMC and LSMC can be summarized as below:

Table 1. Waste Generation and Collection by Municipalities

Municipalities	Households (HHs)	Waste Generation	Waste Collection (Ton/day)	HR for SWM	Annual Budget (Nepalese Rupees)	Vehicles and Equipment
KMC	152,155	308 ton/day	250	1264	149,000,000	96
LSMC	34,996	75 ton/day	52	211	25,000,000	46

Source: HMGN/JICA, 2005

Realising the urgency for overall management of the urban environment large number of non-governmental organizations emerged in the Kathmandu Valley. Women's groups themselves established more than half a dozen NGOs in order to work in the area of environmental management.

In average, 71% of respondents (Table 2) consider the role of NGO in Urban River Management and solid waste management as very important to achieve the desired goal of reducing solid waste load in the Bagmati River

Table 2. NGOs role in Urban River Management and SWM

Municipalities	Number of Respondents	Very Important	Important	Not Important
KMC	100	69%	27%	4%
LSMC	100	73%	24%	3%

Source: Field Survey, 2005.

Women's NGOs working in the field of Environment Sector in KMC and LSMC and their contribution to urban river management is considerable. Their role in addressing the pressing issues of the solid waste management problem in order to reduce the amount of solid waste dumping along the Bagmati River is substantial. They are actively engaged in solid waste composting, cleaning up campaign, tree plantation and raising awareness among the general public on proper management of garbage and reduction of solid waste at the source (Table 3).

The activities implemented by the women's groups despite very limited financial and technical resource are praiseworthy. The survey showed that the majority of households considered Non-governmental Organizations (NGOs) role regarding urban river management in general and solid waste management in particular as very important.

Table 3. Women's NGOs Contribution to Urban River Management

Area	Name of NGOs	Year of Establishment	Human Resources	Working Areas
KMC	32 Ward Women Environment Committee	2001	13 volunteers / members	Cleaning and Home Composting (32 Households)
	Bhotu Indira	1998	19 volunteers	Public awareness in women's issues and cleaning
	Jamarko	2001	10 paid staff and 3 volunteers	Waste paper recycling
	Women Entrepreneurship	2000	NA	Public awareness on women's issues and sweeping in ward no. 14
	16 Ward Women Environment Improvement Committee	1999	2 paid staff and 50 volunteers	Home composting and training
LSMC	Women Environment Group (WEG)	1997	12 paid staff and 6 volunteers	Door-to-door solid waste collection (700 HHs), composting, awareness, promotion of cloth bags, cleaning up campaign and river park development
	Women Environment Preservation Committee (WEPCO)	1996	28 paid staff and 7 volunteers	Door-to-door solid waste collection, recycling of paper, awareness campaign, sweeping, composting, trainings
	Women's Initiative for Environment and Development (WIED)	2000	3 paid and 25 volunteers	Door-to-door solid waste collection in ward 2 (300 HHs and 2 Schools)

Source: Field Study, 2005.

While asking them about the satisfaction from the activities of the women's NGOs working in the area of environmental management, in general and household solid waste collection in particular, 95% of the respondents opined that they were highly satisfied on the performance of the women's groups (Table 4).

Table 4. Women's NGOs Performance on Urban River Management and SWM

Municipalities	Number of Respondents	Very Satisfied	Satisfied	Not Satisfied
KMC	50	93%	5%	2%
LSMC	50	97%	2%	1%

Source: Field Survey, 2005.

Furthermore, almost 90% of HHs surveyed noted that they were willing to participate in Women's NGOs activities. In contrast to the above figures, dissatisfaction of the respondents regarding performance of the government agencies work on urban environmental management was very high. In total, 83% of the respondents were dissatisfied with the performance of governmental agencies work on urban environmental management.

Apart from the above-mentioned activities related to solid waste management, the women's groups are involved in activities like: educating school children on environmental issues by involving them in cleaning up of riverbanks and heritage sites as well as planting of trees alongside the river; and discussing on the pros and cons of sand mining.

According to the women's NGOs, some of the major difficulties faced by them were; lack of cooperation from the governmental agencies, and financial constraints to launch new programs.

CASE STUDY

A case of affirmative actions taken by an informal group of women (at Teku, Kathmandu), in collaboration with the Friends of the Bagmati, can be taken as a successful example of women's involvement in river conservation and solid waste management, at household level.

A group of women at Milan Marg, showed keen interest in participating in the Neighbourhood Watch Scheme project launched by the Friends of the Bagmati with funding from Alliance of Religions and Conservation (ARC), United Kingdom. Moreover, these women actively participated in the planning and implementation process.

The project was initiated with a one-day health camp organized to assess the general health status of the local inhabitants of the area. Altogether, 209 persons registered for the check up. Majority of the people living at Teku, on the banks of the Bagmati River suffered from the effects of unsafe drinking water caused by the unhygienic conditions. Almost 60% of the patients examined were suffering from Diarrhoea, Dysentery and Abdominal pain. Most people also complained of weight loss and weakness, cough and cold.

Shocked by the findings of the health camp, the women's group then organized a series of riverbank cleaning up programs. Encouraged by the success of the cleaning up programs, they initiated and were also successful in preventing local inhabitants from dumping solid waste along the riverbank. The piles of waste dumped nearby had caused much nuisance and eventually affected the health of the people. Following this, a training to make compost from household solid waste was organized.

Mrs. Rachana Shahi, a member of the group says, "I am utilizing my spare time to make compost to cultivate vegetables in my kitchen garden." She along with another member, Mrs. Gauri Bohora has been encouraging other members of the group to continue the good work. Due to their regular follow-ups and enthusiasm, they have been successful in organizing cleaning up programs, once in a month, in collaboration with the KMC and the Friends of the Bagmati.

CONCLUSION

The condition of the Bagmati River has not improved in spite of several past attempts made by governmental organizations. The local perception towards the government institutions and municipalities and their performance is unsatisfactory. According to the local people, little efforts were made to include and mobilize existing local groups and NGOs. Local people were not

included in planning and implementation process and there was a lack of transparency in financial matters. There was also a lack of continuity and follow-up to the programs. There was poor coordination and collaboration among different stakeholders.

The local people from Kathmandu and Lalitpur reported that the river environment continues to deteriorate despite an increased level of awareness. One major reason for the deteriorating environment according to them is the use of the river as a dumping site by the Government. Local people also showed interest in initiating development activities on a consultative, partnership basis.

The local women's group could play an important role in reversing the deteriorating condition of the river environment. However, lack of favourable policies, technical and financial resources is hampering local women's group from maximizing their potential to continue with their work to improve the environment as well as continue their conservation efforts.

Thus there is a need to lobby with policy makers and governmental agencies to create conducive environment for the women's group to effectively and efficiently implement their programs. Similarly, the technical and financial capacity of the women's group should be strengthened.

This paper infers that environmental management work is more effective through the involvement of civil society and non-governmental sector than direct involvement of the governmental agencies. Here, the role of women greatly enhances the efficacy of the activity.

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