Can NGOs Play a Positive Role in Involvement of Women in Conservation of Lakes? Opportunities and Constraints

Farzaneh Shaikh Khatibi¹, Sadanand M Yamakanamardi² and M.Indira³

¹Department of Studies in Environmental Science, University of Mysore, Manasagangothri, Mysore-5.
²Department of Studies in Zoology, University of Mysore, Manasagangothri, Mysore-5.
³Department of Studies in Economics and Cooperation, University of Mysore, Manasagangothri, Mysore-5.
Email:khatibi235@yahoo.com, Email:mesadamy@yahoo.com, Email: mahindira@yahoo.com

ABSTRACT

Water is a basic human need and a basic human right and one of the most important fresh water resources are lakes and women have a complex relationship with water. They play a crucial role in environmental management and protect natural resources such as lakes. For some 30 years, international and UN global conferences have repeatedly recognized that effective sustainable water resources management depends on engaging women at all levels of decision-making and implementation; but in developing countries, access of women to scientific and technological education, training and careers is limited. The fact that, women are not technically literate is particularly relevant with regard to water supply and sanitation. The Agenda21 pointed out education and training programmes for women should be launched with regard to the protection of water resources. Studies in the world about local women showed that, women who participated in many water projects, their awareness and sensitivity increases to environment and environmental challenges, and their attitudes, ability, empowerment of concern for the environment quality changed. Also, it makes them responsible to take action and acquire skills to identify and help resolve environmental problems. Education is a learning process that happened automatically during their participation on water projects.

Mysore is the second biggest city in the State of Karnataka, India. It is now the headquarters of Mysore District which has several lakes. Non Governmental Organizations (NGOs) are making efforts for the conservation of these lakes by encouraging local women. However, the efforts are not at the desired level.

The present paper makes an attempt to understand the role of NGOs in conservation of Lakes in Mysore and especially the role of women in these efforts. The paper addresses the following questions

1. What is the role of NGOs in conservation of lakes in Mysore
2. How women are involved in the conservation
3. Whether the NGOs have sufficient expertise in addressing the environmental issues Related to the conservation of lakes

It is a study based on the information collected from the NGOs located in Mysore city. Preliminary findings indicate that majority of the NGOs need training in technical and environmental aspects related to the lakes environment and methodologies for the involvement of local women. The paper concludes with suggestions to NGOs for successful involvement of women in conservation of lakes.

Keywords: Local women, NGOs role, Education, Participation, Awareness.

INTRODUCTION

Water is indispensable for human health and well-being. The United Nations General Assembly, in December 2003, proclaimed the years 2005 to 2015 as the International Decade for Action ‘Water for Life’. A decade of action! The primary goal of the ‘Water for Life’ Decade is to promote efforts to fulfill international commitments made on water and water-related issues by 2015 (UN, 2005).

Lakes are the most important storage system of ground water and in the past about conservation of lakes were emphasized only on technical details and less attention was given to local people’s participation. But today, experiences showed changing values in empowerment of local people, especially women. Women have often played a leadership role in promoting environmental ethic and they are sensitive for fresh water resource and United Nations in 2001 emphasized that a sustainable development that doesn’t involve women will not succeed in the long run.

Conservation of lakes and watershed sustainability depends on local women’s participation. Non Governmental Organizations (NGOs) mobilize local’s participation right from conception to implementation of projects and encourage them through support from either national government or some of the international agencies.

There are some NGOs in Mysore city who work on environmental issues and empowerment of women in order to attain sustainable development
While some of the NGOs are involved in conservation of lakes, some are contributing to environmental sustainability and water conservation through watershed development programmes.

OBJECTIVES AND METHODOLOGY

Important objective of this paper is to document the efforts of the NGOs working on the issues related to the conservation of lakes in Mysore City and analyze the opportunities and constraints in involvement of NGOs in conservation of lakes. The paper addresses the following questions:

1. What is the role of NGOs in conservation of lakes in Mysore
2. How women are involved in the conservation
3. Whether the NGOs have sufficient expertise in addressing the environmental issues related to the conservation of lakes

The paper is based on the published articles and personal discussions with the NGO representatives who are involved in the effort of conserving lakes. The paper first gives an introduction to the increasing role of NGOs in development. Information relating to the lakes in Mysore, NGOs involved in the conservation of Lakes in Mysore City are presented later. The paper concludes with the identification of constrains and opportunities and a few suggestions for effective involvement of NGOs.

Increasing Role of NGOs

Under the changing national and international scenario, the role played by NGOs also changes. The realization that stakeholders are to be involved in project planning, monitoring and evaluation has led to a greater involvement of NGOs in major social sector projects programmes supported by both national and international allocation/support.

Collaborative Role with the Government

Though NGOs have been existing India much before the Independence, Government’s recognition and decision to involve them in its efforts towards development started with the 7th five year plan (1985-90). The NGOs were asked to supplement the Government’s micro level poverty alleviation and basic needs programmes. A separate subsection on “Involvement of Voluntary Agencies” was included in the 7th Plan document under the chapter on Rural Development and Poverty Alleviation Programmes and Rs.100 – 150 Crores of plan expenditure was earmarked for use in active collaboration with NGOs (Planning Commission, 1985). To assist and channel the funds for this new involvement of NGOs, the Council for Advancement of People’s Action and Rural Technology (CAPART) was established in 1986. This is the beginning of the official collaboration between the Government and the NGOs. By 1990s the winds of globalization, liberalization and privatization started blowing. It brought a paradigm shift in the development strategy. Under the new market-led and export oriented growth strategy the role envisaged for NGOs also underwent a change. Government is looking up to NGOs to provide “delivery services” i.e. implement local development programmes rather than supplement Government programmes in their areas of operation (Planning Commission, 1994).

NGO Sector in Mysore District

Being a princely state, Mysore district has been in the forefront in terms of voluntary work. Community based charitable institutions have been engaged in providing education by establishing institutions, giving scholarships, providing hostel facilities and encouraging young talent. Apart from this there are literary and cultural associations for the promotion of traditional culture, arts, local form of entertainment (folk arts) etc. These organizations were supplementing the efforts of the Government, working independently only with contributions from members. Apart from this there are religious institutions promoting education and providing health services. NGOs in Mysore district can be categorized into the following groups.

1. Religious institutions of both Hindu and Christian origin.
2. Social institutions like Rotary, Lions Club etc.
3. Corporate sector based institutions involved in social service.
4. Informal local groups of professionals
5. Development oriented professional NGOs working at grassroots level in some villages or working on a specific issue (Thematic NGOs)

There are nearly 70 organizations working/registered in Mysore district. While majority of them have their administrative offices in Mysore some are located in the respective taluks. Detailed discussions with the chief functionaries of these organizations and information collected through questionnaire revealed that, while some of the NGOs are operating in various taluks within Mysore district, some have their project offices in northern Karnataka. Information collected from 25 of the 70 NGOs is presented in the following section.

Areas of Intervention

Based on the issues addressed, NGO interventions in Mysore district are classified into the following groups.

1. Consumer interests and Civil liberties
2. Environment and sustainable development
3. Rural empowerment/Development
4. Services to the physically challenged
5. Services to the socially challenged
6. Tribal welfare and their rights

As far as the issues addressed in Mysore district are concerned, there appears to be a fair distribution. The NGOs in Mysore district are able to intervene into the issues of different nature. The issues addressed are certainly outside the purview of the Government machinery because social gains are larger than economic gains in these areas e.g. the organizations engaged in tribal development, be it in the area of motivating them and empowering them (FEDINA Vikasa, DEED, Nisarga Foundation and VGKK) or in the form of providing health services (Swami Vivekananda Health Movement). Similarly, the services rendered by the organizations which came up to ease the life of the individuals and family members who are physically and mentally challenged. Institutions like JSS Polytechnic for Physically Handicapped, Rangarao Memorial School for Disabled, Swasahaya Samuchaya are providing opportunities for the disabled. Services to the socially challenging issues like counselling to HIV/AIDS patients, sex workers, jail in-mates, socially challenged children etc. are provided by NGOs like Ashakiran, Divya Deepa Charitable Trust, Enedsa, Odanadi Seva Samsthe etc.

Women and Water

Women’s water-related tasks at home are numerous. When water sources are far from their homes, unclean, or in short supplies, women are the first to suffer from the resulting fatigue and disease that inevitably affect both themselves and their families. When children or other family members are sick on account of water-borne or water related diseases which are preventable and which were widely eradicated from the developed countries during the past century, women care for those who are ill, thus having less time to care for themselves, to support their children’s schooling, to work in the field and do other activities (Rodda,1991). Women are most often the collectors, users and managers of water in households as well as the farmers of irrigated crops. For example, at least half of the world food is grown by women farmers and it amounts to 80% in some African countries (FAO, 2000). Women play a major role in domestic water management in areas where safe water and drainage are not available in the house. In these settings, women are typically responsible for collecting, storing, and using water and for disposing of wastewater (Poark, 1984). At the International Conference on Freshwater in Bonn in 2001, the policy statement emphasized the need for a gendered approach involving both men and women, while also suggesting that in order to achieve this, women’s roles in water-related issues needed strengthening (GTZ.GmbH,2001). International initiatives, such as the International Drinking Water Supply and Sanitation Decade and the United Nations Conference on Environment and Development (UNCED), have been instrumental in promoting the role of women in the protection of natural resources as well as in water management (Verhasselt, 1998). There are many reports of projects in which women appear to be participating fully and reaping the benefits of increased water supplies. Where this is happening women are learning new technical and managerial skills, being increasingly involved in decision-making at the household and community levels and turning water-related projects into income generating or development opportunities that benefit themselves and their families (Cleaver. Kessler, 2003). During the last decade, great claims have been made for both the theory and the practice of women’s increased participation in the management of domestic water resources. This is said to have contributed both to increasing project efficiency and effectiveness as well as to empowering women (Cleaver, 1997).

Self-Help Groups (SHGs) and Women’s Self-Help Groups (WSHGs) are informal groups that are formed around a felt need and are used for collective action. An SHG, both in concept and in practice, is a group of individuals who come together voluntarily for a common purpose. They are an effective strategy for poverty alleviation, human development and social empowerment. Most common SHGs are constituted of members known to each other, belonging to the same village or hamlet and community. In India SHGs were first introduced during the mid 1980s in Karnataka by Mysore Resettlement and Development Agency (MYRADA), an NGO, to get over the problem caused by an inadequate rural banking system. The Watershed Guidelines issued by the Government of India in 1994 encourage the greater participation of women and marginal groups. The management of SHGs in a sustainable manner is a challenging task. It is interesting to note that SHGs with exclusive women members are more sustainable than those of men members. In fact, more than 80 per cent SHGs in India are of women members. Further, SHGs promoted by NGOs are being recognized by financial institutions and government of India as powerful vehicles for empowerment of women through participation and employment generation (Puhazhendhi and Jayaraman, 1999). These groups were later used for planning and maintaining structures in micro watersheds. In Mysore city Some NGOs involved Women’s Self Help Group in many water projects. It is so effective for improvement women’s participation in conservation of lakes in future.

Lakes of Mysore

Mysore is the second biggest city in the State of Karnataka. (Fig 2) It lies 135kms from the State Headquarters, Bangalore. It is now the headquarters...
of Mysore District with a population of over seven Lakhs. In many years ago Mysore had more than thirty lakes but today only five lakes are left. There are 1-Karanji 2-Kukkarahalli 3-Lingambudi 4-Dalvoy 5-Devanoor (Jagannatha, Ramesh, Dharmendra, 2002). (Fig 1)

Figure 1. Indian Remote Sensing (IRS) satellite imagery of mysore Showing the location of five lakes, which are to be restored?

Figure 2. Map of Mysore city showing Location five lakes

In the meanwhile there were two small lakes one of them was Bogadi Lake that two years ago dried and other one was Hebbal Lake that is highly polluted.

Three lakes (Karanji -Kukkarahalli - Lingambudi) in Mysore figure in the list of important wetlands of the State and have been classified under Important Bird Area Network (IBAN) as priority site for conservation by Birdlife International of U.K. Spread over 100 countries, Birdlife International has included Kukkarahalli, Karanji and Lingambudhi lakes in Mysore in the list of 38 important conservation sites in the State. There are nearly a dozen sites within a few kilometers from Mysore, which harbour varied species of birds and have been declared priority conservation area sites (Kumar, 2005).

Karanj Lake: This Lake is located at the bottom of the Chamundi hills and is close to the center of the city. This lake is spread over 90 acres and is home to more than 90 species of resident and migratory birds. The lake also has India's largest walkthrough aviary. The lake has boating facilities that are available. Karanji Lake area has the Regional Museum of Natural History construction and provision of Wetlands, Bird Watch Tower, Boating Jetty, Bird Enclosure (Aviary), diversion of sewage, revetments and de-silting, etc.

Kukkarahalli Lake: This Lake is in the middle of Manasagangothri, the Mysore University campus. This beautiful and placid lake is visited by a variety of migratory birds during winter. During the winters this lake attracts a lot of bird watchers, who come, observe and enjoy the birds. The lake provides boating facilities at nominal rates. Kukkarahalli Lake comprised of widening and strengthening of existing bunds, construction of new bunds, diversion of sewage, landscaping, bund lighting, etc.

Lingambudhi Lake: This Lake is in Sriramapura and is about 8km from the center of the city. This picturesque lake also attracts numerous types of migratory birds. The lake is indeed a jewel of the city of Mysore. The lake which has been a source of sustenance for the past 150 years to Mysoreans in the area of agriculture, fisheries and other household activities. The lake has a beautiful lush green park besides it and the entire sight that is presented is one that soothes the mind and soul.

Karanji and Kukkarahalli lakes have been taken up for improvement and rehabilitation works. Remaining three lakes were dropped due to ownership and future maintenance issues. Karanji Lake belongs to Mysore Zoo Authority; and Mysore University owns the Kukkarahalli Lake.

Water supply in Mysore city

Population in Mysore city till 1860 depended on the small tanks and wells for its water supply. Construction of karanji tank and subsequently kukkarahalli tank in 1864 by Dewan poornaiah under the aegis of the then maharaja of Mysore Sri Chamarajendra Wodeyar, augmented the water supply to Mysore. Iron mains were laid to supply water from kukkarahalli tank, after 1910 with the introduction of electrification, pumped water supply from cauvery ensued. However the lake continued to provide traditional livelihood to the surrounding villages like kukkarahalli and some areas (Ravikumar. Sadananda. Guruprasad, 2000). Today
there are over 1300 bore wells with hand pumps and 580 bore wells with power pumps in the urban region alone. Even though ground water is an important and dependable source at Mysore there is no specific planning for it. Aquifer recharge facilities are thus a necessity (Jagannatha . Ramesh . Dharmendra, 2002).

The availability of water was 140 MLD and has been augmented by 50 MLD from the Cauvery River by pumping from Melapura through an 11-km long pressure line. However, there has been no planning for upgrading the distribution system within the city. Even though this was pointed out during a meeting organized by Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) in April 1998, the work proceeded. The benefit of water supply augmentation did not reach many areas of the city that had to continue to depend on low quality ground water until year 2003. As of February 2006, there have been areas in the city that have not received water from Cauvery River (ADB, 2006).

Conservation of lakes in Mysore

In 1992, sixty nine suggestions for the Mysore environment protection were given by thirty seven professionals of the city under the patronage of Mysore Heritage Trust to Mysore Urban Development Authority (MUDA). The situation would not have been so bad if the administrator’s had taken those suggestions seriously while planning the protection of lakes and tanks. There are many individuals, community based and voluntary groups who have been active in lakes conservation since a decade now at Mysore. These groups are basically wild life activists, environmental education activists and popular science groups. During the year 1999 – 2000 civic and environmental groups were active in protecting Lingambudhi lake from a ring road passing over it (Jagannatha . Ramesh . Dharmendra, 2002). Mysore witnessed yet another Public Hearing. This time it was on the Lingambudi Lake and Outer Ring Road (ORR) on Jan 12th, 2000 (MET, 2001).

The large Lingambudi Lake is part of the natural recharge and storage system of ground water that affects the water supply of the city. The Outer Ring Road (ORR) planned for execution by (MUDA) with a loan from the ADB was initially aligned such that it has been bifurcated the lake. All requests from civil society to MUDA to realign the ORR to save the lake have met with delaying tactics. When ADB officials visited Mysore repeatedly, they did not check the environmental viability of the ORR. They were unaware of the problem until a member of Mysore Grahakara Parishat (MGP) went after ADB’s Representative in India in Bangalore and forced him to hear the facts about MUDA’s violation of environmental norms. As a result, but not without a struggle involving many citizens, the alignment of ORR was changed in May 2000 and the lake was saved. But two things happened: the work on ORR was delayed with escalation of cost; and MUDA blamed civil society for the delay and cost overruns (ADB. 2006). An EIA was prepared under the ADB project to safeguard Lingambudhi Lake from a ring road (Jagannatha, Ramesh, Dharmendra, 2002).

Dhvanyaloka, Mysore Environment Trust (MET) and various social service organizations as well as departments of forest with the support of local organizations have constituted a Citizen Monitoring Committee for protection of Lingambudhi Lake. Citizen Agenda for Lakes in the district has been drafted (MET, 2001).

In 1916 saw the birth of the University of Mysore on its banks. Since then, the lake has inspired many thinker, poets, writer, and nature lovers. It has evolved an excellent habitat nurturing interesting biodiversity. In late 1960’s, the lake came under the direct custody of University of Mysore (Ravikumar, Sadananda, Guruprasad, 2000). Due to indiscriminate addition of sewage and the effluents the lake was severely polluted. Boating on the lake was like floating on pure sewage. The lake stinked during 2001-2002 and had become a victim of blooms of toxicology.

In the recent past, People Science Forum (PSF) a unit of Karnataka Rajya Vignana Parishat is one very unique group with pro-active initiatives. For over two years adjacent to Kukkarahalli Lake, 1000 houses have been visited by the PSF volunteers on a weekly basis propagating the need for segregation of domestic waste and emphasizing the need of abuse free plastic use. PSF, Dhvanya Loka and Mysore Environment Trust® with the help of villagers and civic groups and individuals have been able to actively facilitate the voluntary efforts in the cleaning of the Lake and environs.

Since September 2001, People Science Forum, Mysore Environment Trust® and Dhvanya Loka have sponsored Kukkarahalli Lake-Enviros Preservation activities with Villagers & Citizens by conducting Cultural, Literary and Creative Programme. A Field survey report/action proposal based on a field survey status of Feeder Canal (Diwan purnayya canal) to Kukkarahalli lake Mysore for about 1200 meter from the lake water body was
taken up by the volunteers and members of PSF during Sep’02. Over 19 specific problems have been identified in the PSF field survey. Base flow channel in the feeder canal for a length of 6000 m has been now considered under the restoration plan. Meanwhile MGP a local consumer action group has obtained a court order restraining the University to activities that are ecologically compatible with regards to kukkarahalli lake (Ravikumar, Sadananda, Guruprasad, 2000). A Workshop on Conservation and Management of Kukkarahalli Lake in June 2000 and an Action plan for the Kukkarahalli Lake including its environs in December 2000 is planned by MET® and Dhwanyaloka in partnership with University of Mysore(MET, 2001).

In a workshop during Jan 2001 on Vision and Agenda for the Conservation and Management of Lakes at Mysore, participation of administration, people representatives, experts, NGOs, Community Based Organizations (CBOs) took place. In the work shop many case studies on the lakes covered many issues ranging from public participation, applications of remote sensing, ground water harnessing, economical utilization such as fisheries and so on were focused (Jagannatha, Ramesh, Dharmendra, 2002).

The International Lake Environment Committee United Nations Environment Programme (UNEP) Japan is keen to support the movement of preservation of lakes and tanks at Mysore region through Kyoto University of Japan with University of Mysore and The Mysore Environment Trust® (MET, 2001).

Some of the NGOS who were involved in conservation of lakes in Mysore city:

The following NGOs were actively involved in citizen initiatives to save Kukkarahalli Lake. Various social service organizations as well as departments of forest with the support of local organizations have constituted a Citizen Monitoring Committee for protection of Lingambudhi Lake.

Mysore Grahakara Parishat (MGP) is an environmental organization working from 1989 in Mysore city, was actively involved in citizen initiatives to save Lingambudhi Lake with assistance Centre for Appropriate Rural Technology (CATR)and Mysore Amateur Naturalists (MAN).

Mysore Environment Trust (MET) is a voluntary initiative for effective public participation in sustainable development of Mysore region based on Agenda-21 guidelines.

People Science Forum (PSF) People Science Forum is a registered unit of Karnataka Rajya Vigiyan Parishat (KRVP).

Dhvanya loka Mysore Environment Foundation (DMEF) which was actively involved in citizen initiatives to save Kukkarahalli Lake.

OPPORTUNITIES:

1- Presence of several NGOs with which many professionals are involved is one important opportunity in Mysore City for people to take up lake conservation activities. NGOs like Mysore Resettlement and Development Agency (MYRADA), SUMANA [Sanskrit word meaning goodwill], Rural Literacy and Health Programme (RLHP), Organization for Development of People (ODP) etc. have been working for rural development enabling the community to become self managed and they are also working for women’s empowerment. Some of them are involved in the formation of women’s self help group (SHGs) for the implementation of watershed, water supply and the other water projects. And also Mysore Grahakara Parishat (MGP) played an important role in the conservation of Lingabudhi Lake by preventing the formation of Outer Ring Road passing through the lake. MGP participated in the public hearing and could successfully influence the decisions of the government.

2- There are some women’s organizations which work in environmental issue and women’s institution which interest for social programme in Mysore city.

3- Majority of the local NGOs has knowledge about environment and especially water related issues. For example one of the NGOs called Mysore Environment Trust (MET), is a voluntary initiative for effective public participation in sustainable development of Mysore region based on Agenda-21 guidelines. As in Agenda-21, The key strategic principles for holistic and integrated environmentally sound management of water resources in the rural context may be set forth as follows objectives and one of them is “Local communities must participate in all phases of water management, ensuring the full involvement of women in view of their crucial role in the practical day-to-day supply, management and use of water” MET also is active in conservation of lakes in Mysore city. it could provide good opportunities for involving women in conservation of lakes in Mysore city.

4- Kukkarahalli Lake belongs to the University of Mysore and many thinkers, scientists and nature lovers are involved in its conservation.

5- Mysore city has been selected as one of the heritage cities under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) with an intention to develop and maintain the city. Mysore City Corporation selected a technical consultant for preparation of a detailed project reports for
development of projects as per the JNNURM guidelines. Conservation of Lakes in Mysore is one of the important issues addressed by the JNNURM. Ward committees which is mandatory for the implementation of the much JNNURM under which Mysore city get huge amount of money for development and infrastructural works. Infrastructure Development Corporation of Karnataka is working on a project to revive lakes in and around Mysore city under JNNURM. As the ward committees comprise local communities it gives good opportunity for the NGOs working with local people and especially women to encourage their participation in the decisions relating to the conservation of lakes. Women’s Self Help Groups can be effectively involved in this effort.

6: International institutions such as the World Wide Fund (WWF), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), Asian Development Bank (ADB), World Bank, International Lake Environment Committee (ILEC), Global Environment Fund (GEF), and many other agencies are involved in providing technical and financial assistance to The Ministry of Environment and Forests (MOEF) and the State Organizations. This also provided many opportunities for NGOs in Mysore, preparing various water projects involving women.

CONSTRAINTS

1- There is always conflict among the interests and approaches of NGOs and government and Mysore City is no exception. There is no healthy collaboration among government and NGOs.

2- Only a few NGOs have proper understanding of environment and the approaches to involve women in the conservation of lakes. Even in the case of professional NGOs like MGP very few women are involved. In the case of some NGOs who are implementing Watershed programmes there is some participation of women.

3- There is no communication among NGOs who works in conservation of lakes. Each NGO work in their own way without knowing what the others are doing.

4- Awareness and knowledge of some of NGO members in Mysore city about Participatory Rural Appraisal (PRA) method is not high as involve local’s women and stakeholders in many programme such as awareness creation among stakeholders about values of the lake and it is essential to conserve them through training sensitization and mobilization.

5- NGOs and also local people in Mysore don’t have Awareness and knowledge about the role judiciary can play in conservation (the Supreme Court and the high courts) through Public Interest Litigations (PILs) seeking directives of court.

CONCLUSION

Experiences in conservation of lakes especially Lingambudhi Lake in Mysore has showed that some of NGOs with major mobilization by hundreds of citizens against MUDA’s inaction to get the outer ring road (ORR) re-aligned to save Lingambudhi Lake and also many activities for the other lakes can make a difference in the conservation of lakes. MGP was successful and the alignment of ORR was changed in May 2000, and it shows the strength of an organization in creating community awareness influence the behavior of local people towards sustaining the lake ecosystem. Although, there were many effects for conservation of lakes in Mysore, but problems can manifest themselves very slowly and any evidence after the degradation has been very severe. Creation of awareness among local people especially women about environmental effects of lakes for their sustainability, This require training and capacity building in order to design sustainable and sensitization programmes to maintain the lakes. Some of NGOs in Mysore such as (MYRADA, SUMMANA, RLHP, ODP, and etc) are working with women’s self help group, for empowerment of women in social, economical and political aspects (Fig. 3). Although social, economical, political empowerment is important to attain sustainable development, but it is not sufficient because, environmental sustainability through proper environmental Management is essential. But what is observed is that except those NGOs who are implementing Watershed Development programmes, none of the NGOs could involve women in the conservation though many NGOs are working with women groups. There is a good opportunity in India, for women’s participation in environmental management especially water resource management and watershed projects through SHGs. NGOs tried for involvement of WSHGs in environmental issue especially water resource management through watershed projects. Experiences of MYRADA in watershed projects shows that whenever women are involved in projects, they influenced in their family members so that their family participates in projects and it gets benefited. It is more important to involve women groups as they are sensitive and can play an important role. Involvement of women’s self help group and local women will make very significant contribution in raising awareness. Experiences around the world shows, that changing values and empowerment of local women over time contributes the increase in efforts to conserve lake.

SUGGESTION

1- The establishment of network for NGOs where information generated through research and monitoring actions can be collected and distributed by different media.
2- Collaboration among the government departments and NGOs is essential for people’s participation in development activities. The challenge of reaching out large number of poor people in resource poor regions has forced governments to involve NGOs, who are, hopefully, better suited for the task of mobilizing people’s participation (Arya, 1999) specially Women’s Self Help Groups.

3- Awareness creation among stakeholders about value of the lake and essential women’s participation to conserve them through training, sensitization and mobilization using Participatory Rural Appraisal (PRA) methods.

4- Communication, Education and Public Awareness (CEPA) is one of the major techniques available to Lake Basin Managers. Any effort that depends upon a change in behaviors or compliance with new legislation relies on CEPA if the change is to occur. It has been suggested that the greatest and most depressing problem in conservation is not habitat loss or overexploitation but the human indifference to such problems (Balmford, 1999). The five common objectives of a communication, education and public awareness programme are (1) to encourage a general interest in conservation (2) to generate greater awareness of conservation issues (3) to bring about a specific change in opinion (4) to disseminate specific information and (5) to build capacity (Sutherland, 2000).

5- Sensitization of local women to involve in programme about the values of lakes by PRA & CEPA method.

6- Communication of NGOs with International Institutions which cover all aspects of lakes in the name of wetlands, and Ministry of Environment and Forests (MOEF) which work in aspects of wetland (including Lakes) through community participation and it can help to formulate a comprehensive management plan and involvement of women

Figure 3. Institutional arrangement for involvement of women in conservation of lakes and its impact in Mysore City.
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