

Case Studies

Community Learning For Sustainable Development IUCN Nepal's Field Experience

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Introduction

Is sustainable development an unattainable utopia? What is it that can be done at various levels to control and eventually reverse unsustainable forces? The problems of global warming, pollution of freshwater, loss of biodiversity, desertification, build up of hazardous substances, and sharp deterioration in air quality in high density settlements appear to be almost insurmountable given the pressures of population growth, development forces and the relatively low priority accorded to environmental challenges.

Sustainability is not an easy concept to follow. It involves a process of change where society is not relatively worse off in economic, social, cultural and environmental terms compared to some earlier periods. The crucial test of sustainable development lies in making feasible gains on all fronts without making substantive tradeoffs. Past experience in development has clearly illustrated that too much sacrifice in any one component may compromise the performance of other components. Sacrificing environmental and cultural aspects for economic change has created major problems of resource degradation and loss of cultural wealth of the people. If there is one important lesson from the development

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experience of the past fifty years, it is that development is sustainable only if it stands firmly on the pillars of technology, society and the environment. To some extent it was a strong belief until recently that technology had all the answers to the problems of humanity and the environment. Unfortunately this is not so. While technology has its place, the conditions of the environment and society cannot also be neglected. Today, the impending threat to human health and survival itself is the single biggest impact of the past neglect of environmental processes. If the very survival of humanity is at stake, there is a need to reflect on the many things that have become part and parcel of our so-called modern day lives.

Changes in lifestyles to reduce the pressure on the natural resources have become urgent. There is just too much consumption of natural resources and this is unsustainable. Changes are needed in the way we value things so that conservation also figures prominently in our thinking. This is not so at present. Changes in the way we are organized where participation is limited, where access to resources are denied to some, where benefits of growth are not shared, where opportunities to improve livelihoods are too limited and narrowly distributed has become urgent, critical and indispensable.

This is a tall agenda for humanity that has a very slow record for learning when problems are not at their immediate doorsteps. However, it is now recognized that much of the challenge towards sustainable development lies in the diversity scale and intensity of efforts to implement the new sustainable vision of the society and their underlying requirements in terms of technology, lifestyles, organizations and environmental conditions.

This paper seeks to present some of the work that IUCN Nepal is doing to promote community learning for sustainable development. It focuses on the efforts being made to improve the livelihoods of the people as well as the conditions of the ecosystem in which they live. The objective of the program is to promote the wellbeing of the people by more efficient use of available ecosystem resources without degrading the environment in the process. The efforts are focused at the community level in a few locations. It is expected that these micro level partnerships will yield valuable lessons for sustainable development.

The national context

Although the country is classified as one of the poorest in the world, there are many good examples of community conservation practices. Many hill communities have quite successfully restored degraded forest areas and have instituted regulatory mechanisms for harvesting forest products. Community-based activities have expanded from forest conservation to water, livestock development and resource mobilisation. Community group formation has now become a standard practice in development projects for ensuring greater beneficiary participation, transparency and accountability in development activities.

The Government has announced the Tenth Five Year Plan (2002 – 2007) which has been developed in conjunction with the Poverty Reduction Strategy Paper (PRSP). The Plan's objective is poverty reduction through expansion of economic opportunities and employment based on efficient use of available resources. Strategies include a broad based process of economic growth, expansion of social services and infrastructure, empowerment and good governance. It further identifies areas for special attention such as sustainable management of natural resources, and conservation of biodiversity.

The country is going through a very turbulent period. The impact across the country and in particular in the rural regions has been severe in terms of direct violence, extortion, conscription, destruction of infrastructure, interruptions in services and overall fear. Loss of development support represents an additional burden on rural people. Increasing insecurity has further intensified the need for peaceful solutions to resolve differences and prevent conflict. The call for governance systems that are transparent, accountable, participatory and effective at delivering services throughout the country has never been more evident.

The conflict has also brought some unexpected positive outcomes. Security risks for project staff working in the field has resulted in a shift towards working more closely through local organisations. It has also reinforced a sense of self-reliance with more local community organisations working together. The increasing role of community-based organizations is likely to contribute to increased transparency, accountability, ownership and greater incorporation of local knowledge and experience. In spite of the many difficulties affecting fieldwork at the present, IUCN Nepal's national and local partners have demonstrated unwavering commitment to continue working together. In fact, there is demand for expansion. At the local level the community-based organisations see our joint activities as being strongly supportive of their livelihood security. The dependence of people on their local environment is now even more evident, and hence the need for sustainable use of natural resources as the livelihood base.

The varied natural environment and amazing biodiversity are Nepal's biggest assets. This diversity has played an enormously important role in livelihood support of the majority of people and will continue to do so in the future. The links between poverty and environment are complex and dynamic and require greater understanding in the context of conservation and sustainable use of natural resources.

IUCN Nepal activities

IUCN's global mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. IUCN Nepal works to further IUCN's global mission in Nepal.

Vision

In line with the global vision of the Union, IUCN Nepal's vision is "a just Nepal that values and conserves nature".

Overall goal

The overall goal is "an economically prosperous, socially just, environmentally conscious and ecologically sustainable Nepal".

Approach

IUCN has pledged itself to the people of Nepal with a long-term vision and goal. IUCN is committed to assist Nepal in its endeavour to alleviate poverty and

promote equity and social justice through the sustainable use of natural resources. IUCN's niche is described in Figure 1. Its major focus will be as follows.

Knowledge

Generating, integrating, managing and disseminating knowledge for the conservation, sustainable and equitable use of natural resources in Nepal. Field projects are crucial sites for generating knowledge, as are learning platforms and action research.

Empowerment

Enhancing the willingness, responsibility, capacity and skills of Nepalese people and institutions to plan, manage, conserve and use natural resources in an equitable and sustainable manner. This is achieved through policy strengthening, advocacy and capacity building.

Governance

Achieving systemic improvement of, and coherence between Nepalese law, policy, institutions and economic instruments through decentralisation and devolution for the conservation and equitable and sustainable use of natural resources.

In the pursuit of its mission and goal, IUCN Nepal continues to build strategic alliances with key Nepalese development organisations both in the government and civil society as well as bi/multilateral organisations. These partnerships are realised through the implementation of joint programs to contribute to the national poverty reduction agenda and to promote conservation and sustainable use of natural resources.

IUCN Nepal's Niche:

IUCN works globally to promote the wellbeing of ecosystems and people.

Our entry point for making change is where people and ecosystems interact.

Our intent is to influence people's attitudes and behaviours on how they interact with the natural environment. By changing people's actions, IUCN extends its impact to improving people's livelihoods and supporting environmental sustainability.

Wellbeing of people	Area of overlap	Ecosystem condition
Food, shelter, education, health, income, spiritual- ity, security, voice, dignity, equity Ability to use assets Capacity to adapt Perintance to subprability	People's actions impacting on ecosystems Ecosystems' impacts on people	Food, shelter, education, health, income, spiritual- ity, security, voice, dignity, equity Ability to use assets Capacity to adapt Periotance to unperchility

The area of overlap between ecosystem wellbeing and human wellbeing in Nepal is great due to high dependence on natural resources for most people's livelihoods.

IUCN Nepal main contributions include:

Building knowledge - promoting better understanding of the linkages

I. How do natural resources contribute to human well being? How can people conserve and sustainably use natural resources? How do these relationships change in different ecological and socio-economic and cultural settings?

Enhancing people's contribution to biodiversity conservation and sustainable use of natural resources

- I. Learning, strengthening, replicating existing best practices.
- 2. Where people are interested but do not know how to contribute:
 - Support them to access resources (human, financial, natural) and build capacity (tools, techniques, methodologies).
- 3. Where people's actions are incompatible with natural resource conservation:
 - · Understand why these actions are done.
 - · Provide incentives, remove perverse incentives, and promote alternative livelihoods.
 - · Raise awareness, build capacity, and demonstrate good practices.
- 4. Strengthening the enabling environment:
 - Working with the government, private sector and the community for human and ecosystem wellbeing.

Figure 1: IUCN Nepal's niche

Underlying priorities and operating principles

IUCN Nepal emphasises the need to sustain people's livelihoods as the central purpose of promoting conservation and sustainable use of natural resources. People should benefit from conservation and sustainable practices if these are to be internalised by households in their day-to-day concerns. Related issues are those of gender, equity, peace and security. As resources are lost and degraded there are enormous impacts on livelihood security with implications for distribution of work and inter and intra community conflicts. The following priorities will guide IUCN Nepal's conservation activities.

Poverty alleviation and equity

Enhancing IUCN Nepal's understanding and capacity to deal with poverty and equity issues will receive a high priority over the next five years. IUCN will take a two-pronged approach to poverty and equity. On the one hand it will constantly gather more intelligence about poverty and equity in relation to conservation and sustainable use of natural resources. On the other hand, IUCN will be constantly utilising its knowledge and skills to address poverty and equity issues at all levels of its work, especially field projects, advocacy and strengthening of environmental policies and laws.

Programme Development and Learning Group (PDLG) will be given the lead responsibility to initiate, coordinate, facilitate and oversee the organisational actions to make poverty alleviation and equity in the use of natural resources a cornerstone of the IUCN Nepal Program. Resources made available to different sub-programs will be used to enhance the organisational understanding and capacities for addressing poverty and equity issues as they pertain to natural resources and conservation.

Incorporating gender concerns into the program

The promotion of gender equality will continue to receive priority attention. A systematic effort will be made to influence the IUCN Program at the design stages to take account of gender-based differences. It will include, *inter alia*, sensitisation and capacity building of IUCN and key partners in the application of gender analysis to project development and implementation. IUCN will promote actions to overcome gender-based inequities in all its projects and will encourage its members and partners to do the same.

Sub-programme resources will be accessed to sensitise the staff and provide assistance for the incorporation of gender dimension into various programs and projects. Program Development and Learning Group will assume the overall responsibility with the support of a gender specialist if needed. Initially the priority gender needs of the organisation will be identified and a six-monthly work plan will be developed.

Sustainability

IUCN Nepal's program focus is on conservation of natural resources and improved human wellbeing through the sustainable use of natural resources. Sustainability is a very dynamic process involving multiple sectors and forces, many of which may not be under local control or influence. Strategies to support sustainability will be pursued from various perspectives: institutional, social, economic and ecological. The ultimate goal of fostering sustainability is to develop processes of self reliance so that the community is willing and has the necessary wherewithal to make desired and needed changes for conservation of natural resources and improvement of human welfare.

Peace and security

Rural areas of Nepal have been facing increasing insecurity because of Maoist insurgency and the subsequent military response. All aspects of rural life have been affected by the breakdown in local government, enforcement of Maoist activities and subsequent army operations. Under such circumstances all development activities have been disrupted. Even the security of project staff has become a matter of serious concern. Many people have been dislocated from their farms and families and have become refugees. While it is absolutely critical that peace is restored for security of all, this is going to take time and is beyond the influence of IUCN.

IUCN is responding to the security situation in several ways. First, IUCN Nepal keeps the situation under constant surveillance in order to avoid exposing anyone to unnecessary risk. Communication, risk assessment and response strategies are in place. Second, a more adaptive and flexible management approach is being used, whereby project interventions can be modified as required. This has been possible through greater emphasis on annual workplans and quarterly progress review, as well as through active communication. Third, programming is increasingly being planned, implemented and monitored through local organisations. The increased local engagement and ownership also strengthens sustainability and models effective governance systems. Fourth, the content of programming remains balanced on meeting immediate needs and changing people's behaviour for the long term regarding natural resource use. The link between environmental sustainability and livelihood security is very evident in the rural areas where we are working. Finally, additional activities such as rights-based awareness raising and conflict resolution training are planned to facilitate the restoration of peace and security.

There are a number of practical considerations that need to be kept in mind in planning and implementing programs.

Building on past achievement

This program cycle is a natural progression from the previous phase. It is recognised that many of the activities undertaken in the earlier phase have yet to show concrete benefits for people and improvement in ecosystem conditions. There are indeed many positive signs both at the household level as well as in the overall environmental conditions but these are at very early stages and relatively fragile.

The focus of the new cycle will be to continue to further consolidate the gains made in the earlier phase in all the demonstration areas as well as in matters of policy work, sensitisation and capacity building.

One of the reasons for IUCN entering fieldwork with its limited scale demonstration activities was to promote people-based innovation in resource conservation and to identify processes for upscaling these to wider levels. The field projects also serve as a testing ground for policy development. The demonstration of concrete results in the field is a necessary precursor to influence national policy and programs. IUCN Nepal will continue to have its feet on the ground in order to ensure our national actions are rooted in reality.

Participatory planning and implementation

As in the past phase, IUCN will adopt a participatory planning and implementation process for identifying and implementing project activities. Without ownership by the people many activities are just not sustainable. With ownership come many different types of commitment and resources far in excess of the Project's limited resources. This has been well demonstrated in our field partnerships to date. By providing people an opportunity to articulate their needs and priorities, as well as potential options to address these challenges, there are better assessments of the problems and constraints as well as careful identification of feasible opportunities and solutions. Obviously a certain degree of care is necessary to ensure that marginalized voices are heard and that benefits are not cornered by a few. IUCN will extend its use of participatory processes to monitoring, learning and reflection.

Capacity building and partnerships

One of the key operating principles of IUCN is enabling key members and partners to carry on the conservation and development work both at the policy and practice levels. Accordingly, IUCN Nepal will make systematic and concerted efforts with three basic purposes. The first is to develop the capability of member and partner NGOs and other institutions to take a more active role in the program and in project design and delivery. The second is to facilitate the acquisition of skills by IUCN staff in order to adapt to the needs of a changing program in the new millennium. The third is to partner with like-minded projects and organisations to enhance our collective impact in Nepal.

Conservation and sustainable use: three years in the field

How do we translate concepts of conservation and sustainable use into practice?

IUCN attempted to promote this principle in three project areas, namely the Ilam Siwaliks, the TMJ Rhododendron area and the promotion of NTFP in Doti. The problem identified was that forest resources were being lost and degraded in these areas. It was argued that by working closely with the community in certain areas it would be feasible to reduce the pressures on the forests and this would promote conservation. With increasing conservation one could assume that communities would gradually move towards sustainable use in the future.

A number of interventions were identified by the local community as their priority in the conservation of the forests and land resources in the area. A few more was added by experts and the overall package consisted of new plantations, some construction related with conservation and protection, awareness raising, environmental education, social mobilization for group formation and group activities to reduce pressures either directly or indirectly on critical environmental resources, capacity building at the local level, provision of improved technology in selected areas affecting the environment, etc.

It was believed that whatever could be done with the available resources in selected areas and groups within the broadly identified project activities would be desirable - contribute towards conservation and sustainable use. As there were few other development activities in the area, whatever was done was to be seen as a positive sum game even if this was based only on fairly limited assessments about challenges, response and impacts. The key factor however, was that the local stakeholders made most of the decisions.

Based on the experience so far, and given the limited time for activities to come to fruition what are some of the emerging signals on the ground? What can we say about conservation and sustainable use from the point of view of the community? Are we seeing any changes or the likelihood of changes because of our interventions?

Focus on community assets

Communities are still very much dependent on available natural resources for sustaining their livelihood activities. Preservation and sustainable use principles are readily accepted especially in the case of forest and water resources. These are seen by all as important community assets with continuing value for all members of the community. It is for this reason that people identified development of different types of community assets as high priority for partnership with IUCN Nepal. One of the interesting areas of cooperation has been the construction of spurs. Flooding is mainly a downstream problem. In the past years, floods had threatened and actually damaged agricultural land. Some of the settlements were also at risk. The spurs emerged as a priority of the community and work was jointly supported After one year the lands protected by the spurs, had a fairly rich natural growth of kans – a type of hardy grass that had good market value. Also, the spurs have provided some protection to the neighboring areas. It cannot be said how long these spurs will last but for the present they appear to have fulfilled their purpose quite well. Similarly other activities related with forest conservation also focused on the downstream groups.

Given the fact that Siwalik conservation should focus on both downstream and upstream activities, stronger efforts will be made to move activities to upstream areas in the future.

Organizations at the grassroots level

IUCN decided to work with the community groups. While it was not the intention to bypass the local government in anyway, the nature and scale of activities necessitated the actual users be involved in the identification and implementation of the activities. The local government has been kept fully informed and even been convinced to put up some of their own resources to support community activities in the Siwaliks.

The active role of women in all aspects of Siwalik conservation has been a most encouraging part of the Siwalik experience. Women in the Siwaliks had been organized into groups by some previous development activity but had become dormant after the project pulled out. The groups were revived and when the women groups were introduced to conservation, they found this as a strong rallying point to deal with many of the environment degradation related hardships they were facing. With little motivation, they came together and developed a strong agenda on conservation of forests within their group area. They have made much contribution to the protection of the forests – sometimes at great risks to their safety. A few years of protection and nature is already bestowing its bounty in terms of a rich growth of biomass. They decided to implement:

Strict protection through rotational guarding of selected areas

- Control of all grazing in the area
- Selective harvesting of forest products

The most important lesson here was the development of strong women organization and the strength of the organization came from the willingness of its members to enforce its decisions. It is not so much the specific decisions, which were well known but could never be implemented. Another minor point could be the need for a facilitator – a catalyst that can lend a helping hand in some ways.

Appropriate technology support

Environmental conservation in the long run must be sustainable on its own merit because people value environmental resources. It will not be sustainable if people are not able to benefit from it. However, in the early stages of development when much of livelihood resources must come from the environment, technology to improve efficiency and / or to reduce natural resources can play an important role. In the area of forest conservation, IUCN has played a key role in promoting ICS and biogas to reduce the demand for firewood. As the initial investments are quite high a revolving fund has been developed jointly by different partners including the women groups. Repayments to the funds have been almost full and on target.

Better ways of improving productivity of very scarce resources that households have access to is a high priority. The need for more improved and appropriate technology is very great. Better practices in the use of available natural resources, new crops that increase incomes but do not damage the environment, and other devices that save resources, reduce drudgery of women and relieve children from household chores need to be introduced. Production efficiency also gets transferred to better use of natural resources and therefore should be seen as an integral part of the conservation and sustainable use of natural resources.

Community conservation and learning

There are many more examples that can be given to show how working together with the community can create many locally acceptable examples of change that benefit both the people and the ecosystems. We have talked about community assets, improved technologies, getting organized and a common theme in all these is awareness generating and communication. Had IUCN Nepal moved in with blue prints prepared somewhere else, some of this might have worked but most of it would not have been relevant because so much of the work on conservation and sustainable use is about getting started almost not knowing where it will end and makes adjustments as people see fit along the way.

A large number of opportunities present themselves when we proceed without any prior ideas and have a willingness to listen to the other side. If the other side understands that we are not the *Kalpa Briksha* (a tree that endows whatever one wishes) and realizes that much of the work can and has to be done by the locals, a very practical basis is established. Obviously there are local constraints, and some of these may be cash related while others are related with external linkages or intra group conflicts where an outside facilitator can play a constructive role. Unless we are prepared to listen to all sides, they will listen to us only as long as the cookies are there. There are areas where it takes time to develop an understanding and issues like equity must be introduced so that all sides have an understanding of what it implies. There must always be value added to ideas from the outside and this is what demonstration of best practices should do. They need not always come from the outside. Some innovations may have already started and need to be extended far enough.

We are slowly understanding the need to move away from compartmentalized knowledge and learning. A new type of integration based on real life conditions is needed in all types of teaching. More basically teaching and learning can no longer be confined just to the classrooms. Sustainability must be practiced by all at all levels. There must be better synergy between indigenous traditions and modern ones. The focus must be on making sustainable what is already on the ground and not so much on transplanting things from the outside. There must be greater diversity on all fronts if sustainability, stability and efficiency are to be maintained in our ecosystems and livelihood activities.

I wish to add a few words about mountain areas. Although mountain societies have had a rich tradition and have survived in these very difficult terrains for thousands of years, the discovery of development appears to be making them and their environments more unsustainable. First, there are very few educational institutions in the mountain areas. Second, even the few that exist do not teach mountain related issues although this is changing to some extent more recently. There is no way sustainable solutions can come from these limited educational organizations and consequently the relevance of community-based learning becomes even greater if we are to find all the solutions needed to improve the quality of livelihood and the ecosystems in the mountain areas.

References

IUCN Nepal's, "Partnerships in Conservation" and IUCN Nepal's "People and Conservation: Improving Livelihoods and Ecosystems – proposed five year programme 2003–2007"

School-based Environmental Clubs An Initiative Towards Education for Sustainable Development in Nepal

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Background

Chinese proverb: "If you want I year of prosperity grow grains. If you want 10 years of prosperity grow trees. If you want 100 years of prosperity grow people - educate them."

The present generation, to some extent is aware about the importance of conservation and sustainable development. But what is more important for everyone to know is how to conserve Nepal's biological diversity in a way that is ecologically viable, economically beneficial and socially equitable. Thus, education is very essential to enable the society to better understand their intrinsic relationship with and dependency on the natural and cultural environment and to empower them to play a pivotal role in conserving the natural and cultural environment for sustainable development so as to improve their standard of living. In this regard, conservation education has been an integral part of WWF Nepal Program's activities since its inception in 1993. WWF Nepal Program operates many conservation awareness programs for different target groups to help them understand, how by conserving the biodiversity and using the resources sustainably

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will benefit them and the future generations. Conservation awareness programs run by WWF NP are as follows:

School-based environmental clubs–Eco Clubs

WWF Nepal Program and its conservation partners have jointly implemented school based environmental education programs through the formation of Eco Clubs in Nepal since 1994. There are currently around 228 Eco Clubs formed under WWF NP and its partners in 16 differnt districts of Nepal namely, Banke, Bardiya, Bhaktapur, Chitwan, Dang, Dolpa, Jhapa, Kailali, Kanchanpur, Kathmandu, Lalitpur, Morang, Palpa, Solukhumbu, Sunsari and Taplejung with over 30,000 members.

The objectives of Eco Club are:

- to raise conservation awareness among the students, teachers and youths
- to encourage them to participate in the conservation of natural and cultural environment at local and national levels and
- to mobilize those students, teachers and youth to raise conservation awareness in the communities

The Eco Club members carry out various curricular and extra curricular activities to enhance their knowledge on environment and its conservation namely, study tours, plantation, cleanup campaigns, awareness campaigns in the locality, recycling and reuse of waste materials, various competitions like essay, quiz, poetry, sports, song, etc.

Environmental awareness programs

Various environmental awareness programs like Community Mobile Education and Extension, Audio/Visual Programs, Campaigns, Boards with Conservation Messages and Street Theatre are organized at local levels to create awareness on conservation issues among the local communities. Environmental awareness programs are more frequently organized on the World Environment Day, World Forestry Day, World Wetlands Day, Wildlife Week, etc.

Capacity building programs

Various capacity building programs are organized for local staffs, teachers, local leaders etc. to develop their understanding and skills in order to make them more capable to work towards conservation and sustainable development.

All the above mentioned programs are directed towards creating a better understanding among the society about their interdependence on the natural and cultural environment so that they are aware and have increased capacities to conserve Nepal's biological diversity in a way that is ecologically viable, economically beneficial and socially equitable.

Purpose

The purpose of this paper is to explore possibilities to promote the same through curricular and extra curricular activities in schools in line with His Majesty's Government Nepal's (HMG/N) school course on Environment, Health and Population. The opportunities and findings written down in the concept paper is based on the experience and findings of WWF Nepal Program and its partners namely, schoolteachers, school students, both government and non-government organizations working towards improving the environmental education in Nepal.

Opportunities to promote ESD

Over the years, WWF Nepal Program and its partners through experience have realized that the school students can also do much more outside the school to raise awareness among the community members about conservation and sustainable development. By instilling the importance of conservation and sustainable development in the youth's mind, we can look forward to get their support even after they grow up and leave Eco Clubs. The values of conservation would still be ingrained in their minds and they would think twice before doing anything that is harmful to the environment. The main purpose of education is to bring changes in attitudes and behaviors of the youths through the school-based environment clubs so that they become the catalysts to raise voice to support conservation of the biological diversity, natural and cultural environment and sustainable development in which our lives are interdependent. Educating the students means creating a radiation effect in the community, for example, if a conservation message is conveyed to one student, s/he would pass on the message to at least two people in her/his home (father and mother), through the father and mother, the message would pass on to the communities, hence creating a radiation effect.

The Eco Club activities are being much appreciated in the schools by the teachers, students and even parents. The activities have given the students and teachers the opportunity to better understand the environment in which they live. The activities help the students to practically understand the course of Environment, Health and Population. It has also been observed that the members of the school-based environmental clubs show more responsibility towards the environment.

However, this initiative is not free of problems. Some of the problems faced by the teachers and students are as follows:

- 1. Eco Club teachers lack adequate knowledge and skills on conservation and sustainable development
- 2. Eco Clubs do not have sufficient resources/educational materials on conservation and sustainable development
- Eco Club students do not have strong knowledge base on conservation and sustainable development
- 4. Eco Clubs do not have sufficient budget to carry out desired activities
- 5. Eco Club teachers have time constraint to properly guide the members
- 6. Constrain in coordination with the school management and the Eco Clubs
- Few of the Eco Club teachers and members tend to be inactive if they are not regularly monitored and guided
- 8. Internal conflict among the Eco Club teacher and other teachers of the school as the Eco Club teachers get more exposure and opportunities

With proper training, guidance and inspiration the teachers and students can be mobilized to raise awareness conservation and sustainable development in their respective areas.

- They can become the major supporters of conservation and sustainable development to raise awareness against poaching, illegal logging, illegal harvesting, collection of medicinal plants, unsustainable use of resources, etc.
- They can also be mobilized to gain public attention on the environmental and sustainable development issues that needs to be addressed at present to conserve the biological diversity and to acquire sustainable development.

The main objective of conservation education is to bring changes in attitudes and behaviors of the youths through the school-based environment clubs so that they become the catalysts to raise voice to support conservation of the biological diversity, natural and cultural environment in which our lives are much interdependent. Conservation and sustainable use of resources begins at home. Thus, knowing about sustainable use of resources is as important for everyone as knowing the importance to eat and to keep oneself clean. Hence, through the school based environmental clubs WWF Nepal Program and its partners are promoting the basic required knowledge about conservation and sustainable development among the students and teachers and through them to the community members.

Strategies to promote ESD

Alliance with partners

There are a number of organizations both government and non-government striving towards achieving the educational goal to develop skills and attitudes necessary to understand and appreciate the interrelation among the human beings, its culture and biophysical surroundings to entail practice in decision making and formulating code of behaviors about issues concerning environmental quality. Hence, these organizations should come together and work collectively to achieve the goals of conservation and sustainable development more effectively and efficiently.

Revising the HMG/N curriculum

The HMG/N's course on Environment, Health and Population should be revised to see if it incorporates the issues related to conservation and sustainable

development so that the practice can be integrated in the education system. Experts' guidance, help and assistance should be sought in this regard.

Training the concerned authorities

Since the teachers lack teaching skills and adequate knowledge, the teachers needs to be trained and educational resource materials should be developed to support the education for conservation and sustainable development.

Implementing guidelines for the modified curriculum

Once the curriculum has been revised, proper guidelines should be developed for its implementation.

Developing strong supervision and monitoring mechanism

Strong supervision and monitoring mechanism is very necessary for effective implementation of the program.

Conclusion

In conclusion, "Many present efforts to guard and maintain human progress to meet human needs, and to realize human ambitions are simply unsustainable - in both the rich and poor nations. They draw too heavily and too quickly on already overdrawn environment resource accounts ... They may show profits on the balance sheets of our generations, but our children will inherit losses" (World Commission on Environment and Development, 2002). Therefore, organizations both government and nongovernment should work collectively to promote education for sustainable development.

Making Education Responsive to the Local Context Experience from Bungamati

Dr. Hridaya R. Bajracharya

Intorduction

Education commissions constituted at different times ever since 1954 emphasised on the need for providing basic and primary education for all citizens. All the changes on the basic policy has remained the same: universal access to quality basic and primary education, vocational and skill-oriented secondary education and academically competent and development oriented tertiary education.

Since 1990, after the restoration of multi-party democracy, educational development efforts have become more consistent. More emphasis is given to the needs of the disadvantaged communities. Democratic norms and values, decentralization, local self-governance, participatory action and collaborations have become central theme in policy and programme planning. In this decade, some important national and international thrusts such as Basic and Primary Education Development Program and the global campaign for EFA (Education for All) were given at the highest level.

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National development programmes

In Nepal, medium and long-term goals and targets of developments, including those of educational development, are reflected in the national development plans, which cover mostly a period of five years. In the earlier plans as well as in the current national plan, the following areas have been focussed.

- Human resources development, in view of the situation that a large number of populations are illiterate and unskilled.
- Sustainable development, poverty alleviation and reduction of regional disparities in view of the existing subsistence agriculture-based economy, lack of alternatives and disparities among different region and communities.
- Enhancement of the quality of education in view of the still underdeveloped educational provisions.
- Developing literacy education for adults directed to poverty alleviation
- Enhancing gender and social equity regarding access to quality basic education
- Meeting the appropriate learning and life skills needs of all young people and adults to enable them socially and economically.

Investments in education

In Nepal, education budget has been always inadequate and remains a difficult challenge despite continued expansion. The table below shows that the percentage of total budget on education has increased from 10% level to 12% in 1991/92 and has stabilised at about 13% in the 1990s. Currently it is about 15%².

The sub-sector data indicate that there has been steady increase in allocation to primary education sub-sector (see Table 1). Basic and primary education has been prioritised as the key element of educational development. Accordingly, there has been a steady increase in the share of budget for basic and primary education (see Table 1).

² 1997/98 Revised Budget Estimates; 1998/99 Budget Estimates. Source: Red Book (Ministry of Finance) of different years.

S.N. Sub-sector	1991	2001/02			
	Sub-sector	Amount	%	Amount	%
1.	Primary education	1,588.4	48.6	7790.9	55.4
2.	Secondary education	424.6	13.0	2971.0	21.1
3	Higher secondary education	0.0	0.0	48. I	0.3
4	Technical and vocational education	54.3	1.07	193.2	1.4
5	Higher education	902.2	27.6	1680.4	11.9
6	Non-formal education	19.7	0.6	133.5	0.9
7	Others	277.8	8.5	1255.5	8.9
	Total	3,268.0	100.0	8,114.9	100

Table 1: Education budget by sub-sector (in millions of rupees)

Source: MOE, and Educational Statistics of Nepal (1991-1997)

The expenditure trend shows a steady progress in the financing of education from the pre-1992 to post-1992 periods. This progress corresponds to two important national projects—the Basic and Primary Education Project (BPEP) and the Primary Education Development Project (PEDP). These projects were supported by international aid in the form of grants and loans.

There has been a growing trend in international assistance to educational development in Nepal. In 1990/91, the percentage of international assistance to education was less than 10% of the total educational expenditure. This figure reached about 25% in 1995/96³.

The total financial cost of the Basic and Primary Education Project (BPEP I) in 1992–1997 was about US \$ 230 million. The combined financial support of the World Bank, DANIDA, JICA and UNICEF to the Project was US \$ 70 million. The BPEP II Programme (1999-2004) is jointly supported by DANIDA, IDA, NORAD, EC, FINIDA, UNICEF and JICA, and utilises a 'basket approach' to financing. The total donor financing under the Five-Year Program Implementation Plan was US \$106 million.

The efforts on the part of the government to bring improvement in basic and primary education are reflected by the national budget expenditure⁴. In 1991 the public expenditure on primary education as a percentage of GNP was 0.8%. Presently the percentage has increased to 1.4%. The public expenditure on

³ Source: Economic Survey (2002), MOF

⁴ The World Bank (2001). Nepal: Priorities and Strategies for Education Reform

primary education per pupil as a percentage of per capita GNP in 1991 was 5.1 (Currently it is about 8.8). The expenditure on primary education, as percentage of GNP in other SAARC countries ranges from 1.1% in Pakistan to 2.4% in Maldives. In Bangladesh it is 1.3%, Bhutan 1.9% and India 1.2%. The expenditure as the percentage of GNP per capita in the region ranges from 8.8% in Nepal and Bangladesh to 15.6% in Bhutan. In India it is 9.9%, Pakistan 11.6%, and Maldives 12.1%.

Free education

Primary education, as basic education, has been made free since 1975 up to Grade 3, and from 1981 up to Grade 5. In 1992, the government declared free education up to secondary level (Grade 10). These commitments have proven to be too difficult for the government to meet even to ensure the bare minimum required to keep the schools operating. In the year 1997, the government spent NRs. 4,155 million on 3,460,756 primary school students, resulting in a per capita student expenditure of NRs. 1,200. Most of the government support (95%) goes for the teachers' salaries alone. The government support in many cases could not even cover minimum number of teachers needed to operate the schools. Most of the schools were therefore forced to raise money from the parents to keep the schools operating. It has given rise to the issue of breaching the commitments. Consequently, the free secondary education decree has been revoked. The issue at primary level still remains unsettled. Over the past several decades, there has been steady development in the number of schools, students enroled to schools, teachers and the literacy percentage of the population. The details figure in Table 2.

The trends of development in terms of the number of schools, the student enrolment and the teachers involved clearly show a steady development in Nepal. The National EFA Assessment 2000⁵ using 18 indicators of basic and primary education also indicated steady development in Nepal. However the assessments also clearly point out that the conditions are far from even being desirable minimum expected by the EFA campaign. Critiques also argue that this

⁵ In 2000 national assessments were carried out world wide to take the stock of the impact of the decade long effort in the form of the EFA campaign started in 1990 by the World Conference in Jomtien Thailand.

development cannot and should not overshadow the critical problems and issues of educational development in the country.

Year	1976	1981	1991	1996/97	2001
Total no. of schools	-	-	-	22372	25194
Primary	8768	10628	18694	22,218	24943
Lower secondary	2289	2786	4045	5506	7340
Secondary	520	918	2079	2903	4113
Total students	907000	1701896	3658083	4568942	5361362
Primary	644000	1388001	2884275	3447607	3853618
Lower secondary	189000	169564	378478	791502	1058448
Secondary	74000	144331	395330	329833	449296
Total teachers	32146	46288	99127	125505	142183
Primary	20775	29134	74495	89378	96659
Lower secondary	7932	12245	13005	19704	26678
Secondary	3439	4909	11627	16423	18846
Net enrolment (primary l	evel)			67.5 / 69.4	81.1
Literacy rate 6+		25	39.6	48	54
Literacy rate 15+			33.0	44.8* (1997)	44
Literacy 15-24			49.6	67.4*(1997)	74

Table 2: The school level education at a glance

Sources: Educational Statistics, MOE, 1999

Major issues and challenges

The current high Gross Enrolment Rate (GER) of 124.7% indicate that there is high proportion of children who are either under or over age. The age specific enrolment, Net Enrolment Ratio (NER) is 81%, i.e. about 19% of the primary school age children are still outside the school. There are differences in NER as well as other educational indicators by districts, ecological regions and ethnicity. Although 14 of the 75 districts have been found close to 100% NER, 48 districts remain behind the national average.

Quality and efficiency of education is still a major issue as the following efficiency indicators show. Grade repetition is still a problem, particularly at Grade I which is 38.7%. The survival rate to Grade 5 is about 65%. About 14% of the children drop out from school at Grade 1.

Further, a national assessment study of learning achievement of Grade 5 children shows that mean scores in Nepali Language, Social Studies and Mathematics are low, 51%, 42% and 29% respectively. The efficiency and the achievement indicators reflect the poor quality and efficiency of primary school education in Nepal.

Illiteracy is still a major problem in Nepal, particularly among the adults. The current status of literacy of 6+ year age group is 54%. The adult literacy rate (of the 15+ year population group) is about 48%.

	Poor		Non poor	
	Rural	Urban	Rural	Urban
Percentage of school age children out of school	49.49	42.52	32.81	13.54
Total		49.27		31.02
Adult literacy	26.31	41.34	38.41	68.00
Total		26.71		41.64

Table 3: Adult literacy by place of residence

Source: Nepal Human Development Report, Nepal South Asia Centre, 1998.

The issue of social disparity is rather significant and persistent in terms of school enrolment as well as in terms of literacy. Illiteracy is a major problem especially among disadvantaged communities.

Table 4: Social groups and their literacy level

Social group	Literacy level
61 Social group	• 39% (average)
41 Groups	• Below 39%
26 Groups	• Below 30%
10 Groups	Below 15%

Source: Statistics Year Book 2000. CBS (2000).

The problem of access and social equity in the case of secondary and higher education is rather more prominent than in the primary level. The attainments of higher education by different communities are highly disproportionate.

The issue of relevance: The issue of educational attainment directly relates to accessibility to educational facilities. This, however, should be interpreted in

terms of physical access as well as social access. Social access pertains to the ability of different communities to find meaning in the educational provision as well as be confident in using the educational opportunities and facilities. A social assessment of educationally disadvantaged communities indicates that some people in some communities (Rana Tharus) tended to see education as irrelevant to their socio-economic conditions and therefore it is counter-productive for them (See Box I for an example). Similarly, communities like Mushahar from Terai as well as Chepang from the hills do not feel confident to use the educational provisions for their advantage.

Box 1: Relevance of Education - the story of Gyani Lal

Gyani Lal is a seasonal construction worker in Kathmandu. Gyani Lal is from the Tharu community of Sarlahi district in eastern Terai. His family consisting of his mother, one brother and two sisters live in his family house in the village. He is now 15 years old and the eldest among five brothers and sisters. The eldest of the sister who is now 14 was married at the age 11 years. His father passed away two years ago. He has been working as the wage earning construction worker ever since. He now earns Rs. 100 per day on wage basis. During the construction season he could get almost one to two months of work at a stretch. He is very much grateful to his uncle who has helped him get in this work. Earlier he was a household servant where he would be getting only a small and irregular pocket money.

He had joined primary school at the age of 8. But nobody in his family considered his education as priority. Every body in the family had to work hard to get food and clothing. Even health care is difficult for them, so his mother has to live with her illness that could not be cured by the local healer. Passing away of his father was a disaster, as the debt incurred to get his sister married has not been paid yet. Besides he has the immediate responsibility to get his 12 year old sister married soon. She has never been enroled to a school. Gyani feels that the important thing for his sister is to learn how to look after kitchen and household rather than going to school. His younger brother who is now 10 years old works as "household servant". He is registered to a school but he is very irregular and is likely to drop out from the school.

Reflection

Reflection on the efforts, achievements and the issues of educational development discussed above clearly indicate that policy, progress and resources can bring development in quantitative aspects such as number of schools, students and teachers. But bringing qualitative changes in the quality of education; making education relevant to the daily lives of people and supportive to poverty alleviation and thereby contributing to sustainable development of community, village, district is hard to achieve. There is, therefore, a need to develop basic education focused on sustainable development with direct relevance to the local contexts. Experiences show that functional education and incomes generating educational activities are essential for economic empowerment of the rural people. Such activities not only provide occupational and vocational skills but also develop creativity and entrepreneurial skills. More importantly, people need place to try their skills and build confidence in the market system. At the same time the needs of at least, basic and primary education for all should be emphasised. School age children should be engaged in school in meaningful learning activities. Experiences also show that school transformation can take place from within the school with initiatives of individual people involved in the school, not from outside. Outside factors such as policy, system and mechanism if positively oriented and operated, can support transformation in a faster way.

Implications for educational reform

- Transform the school into the community centre by involving children in community development work and by allowing community participation in educational reform.
- Make school curriculum flexible at the local level to facilitate the use of local tools, resources and techniques. Encourage schools to generate resources for undertaking social activities such as school fair, school-based community undertakings, and research.
- 3. Provide occupational skills and market entrepreneur skill through non-formal education for the needy youths. This should be focused because they are likely to discontinue education at the secondary level.
- 4. Develop strong linkage between the formal and non-formal education to help disadvantaged children get to the school without much hindrance. Ensure provisions to reduce dropout, increase enrolment and enhance overall standard of education.
- 5. Develop the NFE curricula addressed for the out of school youths. Develop functional co-ordination among school/NFE and vocational training whereby

children could be first inducted to school/NFE for functional literacy and basic education that opens doors for higher level vocational skill.

- 6. Mobilise and empower local CBOs, NGOs, and local government to keep record of data and information at VDC.
- 7. Develop co-ordination among the government, NGOs, and CBOs, for the development of local communities..

Participatory action research at Bungmati

As an experimental approach to make education responsive to the local contexts basically to help the local youths get connected to broader context and enhance the strengths and potentials of the inherited traditions and culture of the area, CERID initiated a snowball project in the Bungamati Village Development Committee. The purpose of this project was to initiate school-based educational activities for local youths, especially those who are dropouts or are likely to drop out of the school, to provide better life skills suitable for their real world. The overall goal is to develop education that will be instrumental to initiate the process of sustainable development.

This initiative is based on the following assumptions, which are discussed elsewhere.

- Schools could be transformed into centres for community development It could be a common place for people, a resource centre and professional anchor point.
- Schools have potential for providing life skill education to the local community— The infrastructure and human resource of the schools could be mobilized to provide life skill education for youths.
- Schools can play the coordinating role for mobilizing and networking of youths for economic activities.

The setting

Bungamati is a village located in the south-west corner of the Kathmandu valley at the Mahabharat range facing the north. It is perhaps the oldest settlement

in Nepal. The existence of Bungamati is made prominent by the temple of *Bungadyo*, also known as the *Matsyendra Nath*. Much of the social activities are associated with the Matsyendra Nath. There are special chariot festival days associated with the Matsyendra Nath. Every year the god is brought to Lalitpur city for chariot festival. This festival is enjoyed and revered by people on the days decided by the royal astrologer. The festival is graced by the King and the members of the royal families. This day is also designated as the national holiday in the valley.

Farming is the main traditional occupation in Bungamati in which whole family is engaged in the jobs suitable to their age and physical conditions. The other occupations are metal work, pottery, woodwork, house building, etc. Even the religious, cultural and social services exist as occupations for some, for example the priest, the artist, the mason worker, the goldsmith, the metal worker, etc. But agriculture remains as the primary occupation, hence residents are either tillers or tenants, or even both.

Agricultural activities and the social activities are linked to the movements of stars, the moon, and the planet, giving life a mystic existence. There is always anxiety for rain in the hot and dry seasons. This is when the local people summon the god of rain, prosperity and compassion – the Karunamaya for Buddhists and Matshendra Nath for Hindus – for rain. The Newars call them *Janbaha dyo* or *Bunga dyo* and celebrate the chariot festival.

Soon after the festival is over people prepare for rice plantation. The drums would be set aside with respect and traditional ritual offering. All the celebration and festivities start again after the rice plantation is over, i.e. in the month of Shrawan. The cultural calendar lists the festivals and social activities for the whole year, and also projects the activities to a twelve-year cycle. People are organized in Guthis to render different services to the community.

Seemingly, in the traditional way of life people depend much on the judicious and sustainable use of natural resources. Cultural activities and engagement in arts and crafts enriches the life of the people in this village. However, a family would look like socially backward if there is no modern amenities such as radio, TV, watch, fan, regrigerator, motorbikes, if not a car. For most of the people in Bungamati (who are peasants), there is no scope for them to acquire these amenities with their dependence on traditional economy. One has to seek employment to earn cash money. Education is viewed as the means to move to other job, from the traditional farming to the modern job.

Bridging school and community

There is a need for critical awareness of the trends of social and economic development in a situation like Bungamati. On the other hand, it would be unrealistic and radical to think that the tradition and culture should continue as it had been. On the other it would be unrealistic and unwise to get swept by the "modern" amenities forgetting the very social and cultural roots. Therefore, there is a need of critical awareness education that helps analyse the social and cultural development. Also, there is need to prepare youths for the modern realities. The youth should be be creative and acquire entrepreneurial skills and the skill of critical social and economic analysis. On the whole, there is a scope for a comprehensive life skill education in the context of the village like Bungamati.

Also, life skill education is a fundamental human rights recognized by United Nations. The World Conference at Jomtein (1990) and the World Forum on Education for All at Dakar (2000) emphasized the need to take actions that enhance life skill of the people. One of the important life skills is to understand the social, cultural and physical environment. Such approach is not a one-time action, but is perennial and thereby requiring the sustained efforts.

In order to address this need CERID along with collaborating partners started this long-term project titled Interfacing the School and Community for Responsive Education for the Conservation of Cultural Heritage. The Project has three phases: 1) community assessment, 2) preparation of action plan and training/orientation for implementation of the plan, and 3) implementation of plan with appropriate activities and social dynamics for ensuring continuation and sustainability of the process. The main aim of this project is to develop ways to empower the rural community to take their own initiatives to make school education responsive to the local norms, values and way of life to harmonize school education with the local social events. The specific objectives of the Project are:

- To provide school-based skill training programme for the students who are likely to drop out from the school. The skill training emphasizes on the vitalization of the traditional/local skills.
- To develop network of schools, local community, the business and professional institutions and organizations to provide experiences to income generating activities for the youths. (Connect to the industrial/business organizations and marketing bodies).
- To harmonize school education and calendar with the local social and cultural events. (Increase active participation of the youths in the local social events to take ownership and to innovate for making it fit and beneficial for the changed contexts).

Conclusions

This project emphasizes on Participatory Action Research (PAR) method. Central to the PAR technique is to have faith in people and in their abilities to find solutions. The role of professional institution like CERID is only to facilitate the process. This approach has special importance in Nepal which is at the moment facing social issues that have cropped up due to defective practices, shortcoming and others. Building trust and mutual confidence which this method emphasizes, is the primary step to learn and experience for institutions like CERID and the community together, i.e. build trust and work together for betterment of the environment.

The main strategic approach of the Project are;

- I. Forming a stakeholder group/facilitating team
- 2. Developing key contacts in the village through local community organizations
- 3. Conducting regular group meetings with the community people to identify topics for discussion, research and action
- 4. Orienting/enabling the community to express their concerns, needs and development
- 5. Taking meaningful initiatives
This Project is an ongoing attempt to understand the community dynamics in Bungamati, i.e. the dilemma of living traditional way of life in a modern day. It also attempts to understand the educational needs of the youths so that they can take up the challenges of living in the modern world with dignity based on their social and environmental reality. Ultimately the Project aims to evolve education for sustainable development. The Project is run under the leadership of CERID and the Industrial Entrepreneurial Development Institution with support from the Bungamati Co-operative Society, the Tri-Ratna Co-operative School, and the Bungamati Village Development Committee and other industrial and commercial organizations. The Project brings the school and community together through activities such as blending nature and culture at their real life situation.

Sustainable Community Development and Education

Mr. Hum Bahadur Gurung¹

The emerging concept of ESD

Environmental education was widely used since the late sixties. The historic Earth Summit of 1992 endorsed Agenda 21, a blueprint for sustainable development in the 21st century. In Chapter 36 of Agenda 21, it has called countries to reorient their education system to incorporate environment and development issues (United Nations, 2002). However, progress towards reforming the education systems by countries both developed and developing, is still a long way to go.

The international debate on education for sustainable development (ESD) was organized by the IUCN–Commission on Education and Communication in 2000. A number of views were expressed in the debate that there are relationships between Environmental Education (EE) and ESD. "Despite the differences in opinion about the relationship between EE and ESD most participants appear to regard ESD as the next evolutionary stage or new generation of EE" (IUCN, 2000:12). Many participants were quite comfortable with ESD as a tool to develop norms and values and change practices and lifestyles. However, some participants were quite uncomfortable with ESD as a tool to change behavior. They argue that

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ESD should enable people to determine their own pathways towards sustainable living. Wagle (2003:182) states that "ESD enables people to develop the knowledge, values and skills to participate in decisions about the way we do things individually and collectively, both locally and globally, which will improve the quality of life now without damaging the planet for the future".

It is important to realize that ESD is an evolving concept that has grown and developed in the years since the Earth Summit. A series of United Nations conferences helped to further develop the concept of sustainable development and sustainability (Hopkins and McKeown, 2002:14) and stressed that the major UN conferences also added to the conceptual framework of ESD, some of which are as follows.

- stressed the need for social and human development along with economic development and environmental concern;
- called for the advancement and empowerment of women;
- demanded basic social services for all;
- recognized the critical importance of sustainable livelihoods;
- cited the necessity of broad environment for social and economic development;
- sought to sustain the environment and natural resources on which all people depend.

ESD and sustainable community development

The Brundtland Commission defined sustainable development as "development that meets the needs of present without compromising the ability of future generations to meet their own needs" (WCED, 1987). In the context of Nepal, the sustainable development is defined broadly. "The over-arching goal of sustainable development in Nepal is to expedite the process that provides to its citizens and successive generations at least the basic means of livelihood with the broadest of opportunities in the field of social, economic, political, cultural, and ecological aspects of their lives (NPC/MOPE: 2003:1)". A wide range of choices can only be achieved to integrate social, economic and environmental considerations by enhancing their management capacities.

The perspective on sustainable communities could be different from one country to another based on the social and cultural values. Generally, sustainable communities can be defined as those communities that have managed their wellbeing by maintaining their harmony with the natural environment. John Fien and Daniella Tilbury (2002) defined that: "Sustainable community development is a process of local empowerment that enhances the ability of people to control their own lives and the conditions under which they live. This involves learning and action to ensure that as many people as possible participate in making decisions about the issues and problems that need addressing and work collaboratively to implement them. Sustainable community development means taking action to ensure that poverty is addressed by actions that both redistribute wealth appropriately and generate productive and stable employment."

As stated above the heart of sustainable community development is people and their ability to manage their own development and environmental affairs. It is a people-centered development. The three Ps – policies, programs and processes– for implementation of the community led initiatives are discussed in support of creating sustainable communities. Sustainable community development program (SCDP) is one of the best practices that use education as a means to achieve sustainable development. ESD has been regarded as a crosscutting tool to respond the local challenges of sustainable development.

The SCDP model

Nepal's Sustainable Community Development Program (SCDP) aims to reduce human poverty. "When Capacity 21 support became available, it was logical to look at the participatory community development model to improve socio-economic conditions that would directly result in environmental protection" (Dixit, 2002 29). Thus, SCDP promotes environmental sustainability by helping reverse the resource degradation that undermines the rural communities. It starts with social mobilization, helping communities take control of their development and offering training to help them build their social, economic and environmental capital. SCDP builds on important trends in Nepal—decentralization, democratization and economic integration. When SCDP was planned, Nepal already had good national policies, but needed more initiatives defining what sustainable development should look like in rural communities. The SCDP design reflects models emerging in Nepal in the mid-1990s. Some focused on social development, some on micro-economic development and some on environmental management. The best ones converged over time, moving towards sustainable community development.

SCDP is a joint undertaking of the National Planning Commission (NPC) and United Nations Development Programmed (UNDP) aimed at building local capacities to integrate the principles of Agenda 21 into national development. SCDP was launched at the end of 1996 and initially worked in Kailali, Surkhet and Dang districts. In 2000, SCDP was expanded to Humla, Myagdi and Okhaldhunga districts.

SCDP has promoted three pillars of sustainable development- social development, economic development and environmental management through an integrated and holistic approach. It attempts to combine increased stakeholder participation, information sharing and the integration of economic, social and environmental priorities. The fundamental principles of the SCDP model to development are:

- Participation of all stakeholders from national to local levels
- Integration of environmental sustainability into development plans and activities and,
- Information sharing to ease adaptation/replication of the experiences of the Program, both within the country and abroad

Since the beginning of the SCDP implementation, a social mobilization process was adopted for building local institutions, mobilizing local capital and resources, and improving skills to reduce poverty and enhancing environmental quality. It is believed that ESD becomes a promise when there is no alternative to poor people. Educating the local communities about sustainable development with opportunities and alternatives is a practical strategy. It is also important to recognize that people are agents of change. To make them an agent of change they should have opportunities for their participation in three ways. First, build self-governing local institutions so that people can get organized into groups. Second, enhance their skills through training and education. Third, mobilize financial resources internally and externally to undertake social, economic and environmental activities. Local institutions such as Community-based Organizations (CBOs) were formed in order to undertake these activities in six districts in Nepal: Surkhet, Dang, Kailali, Humla, Myagdi and Okhaldhunga. Sustainable development requires a

strong partnership with stakeholders. In the SCDP district, it adopted a strategic process to ensure sustainability where education plays a vital role in ensuring and strengthening such process.

In three districts, CBOs in partnership with the District Development Committees (DDCs) and Village Development Committees (VDCs), identified one of the three dimensions of sustainable development as a starting point for development activities. For example, Surkhet district began with an environmental management program as its initial entry point. On the basis of the priorities of Dang and Kailali districts selected economic and social development programs respectively. A review workshop of each districts' initial efforts was organized with the participation of all concerned stakeholders. Based on the feedback information from this workshop, the second phase of development was initiated in each district. The last component was added after a review of the integration of the first two developmental components. Experience has shown that the integration of environmental management, social development and economic development builds synergetic impacts while addressing common problems (See Figure 1).



» Figure 1: SCDP approaches and process for sustainable development

SCDP has developed an integrated and holistic community-based sustainable development program that has catalyzed the rural communities to be organized in self-governing local institutions. The watershed communities have a lead role in identifying their socio-economic and environmental problems, designing and implementing them. A number of practical lessons and experiences were gained during the course of implementation. ESD links social and economic issues with environmental conservation. The following are the major activities to achieve sustainable development.

Socio- economic development for poverty reduction

The long term development focuses of the Tenth Five Year Plan (2002-2007) includes nine areas including poverty reduction, sustainable economic growth, community-based sustainable development and integration of environment and population management in all sectoral programs (HMG/NPC, 2003). SCDP is one of the best initiatives that has been reflected in the Ninth Plan in community development, resource conservation and uplift of the living standard of villagers. It has created a mechanism to support the rural poor communities in their efforts to overcome the vicious cycle of poverty. A Sustainable Development Facility Fund (SDFF) has been set up to provide a credit facility to the CBOs and their households based upon their enterprise and plans. CBOs have generated community funds of over Rs. 23 million to support their income generating activities. This helped promote communities' self-help activities and opened the door to income generation activities. SDFF increased the access of rural poor to the micro credit facilities regardless of collateral system of the financial institutions. Over 94 million rupees has been mobilized in six districts as loans to support the micro-enterprises such as non-timber forest products, livestock raising, vegetable farming, retail shops and seasonal business.

The SDFF credit fund has already generated approximately 4 million rupees as interest. The interest generated is also added in the principal capital that had increased the investment. However, the interest is arranged to meet the cost of operation of NGO/Support Organization so that SDFF could sustain in the future. CBOs have supported the following activities to ensure social sustainability.

- Health and sanitation awareness, and toilet construction.
- Improved drinking water supply to ensure clean water and reduce the labor of village women.
- · Scholarships for girls and children of indigenous Raji communities.

- Non-formal adult literacy classes, often focused on women in the community and usually linked with practical training.
- Community-based child development centers, ensuring proper care and nurturing of pre-school children during periods when parents are busy with agricultural works.
- School infrastructure support to repair old schools and build new ones.
- Mobile health clinics to reach rural populations otherwise beyond the reach of trained medical professionals.
- Training of traditional birth attendants, who provide the only support to most women giving birth in remote villages.

Micro-economic development has been promoted through:

- Construction of irrigation ponds to retain waters from monsoon for the dry season.
- Green enterprise development, such as commercial plantations to produce bamboo, napier grass and valuable cash crops that also serve to protect vulnerable micro-watersheds.
- Micro-credits for enterprises harvesting non-timber forest products, cooperative mills, animal husbandry, fruit vegetable, fish farming and village shops.
- Training in primary veterinary care, apiculture, community forest management and horticulture to create capacities of villagers and provide services at community level.

Sustainable use and management of natural resources

The mission of SCDP is to support the government's efforts in building local institutions' capacity to manage environment and natural resources integrating socio-economic development. SCDP has promoted integrated and holistic community development in the program areas by addressing local environmental issues that are closely associated with the issues of poverty. SCDP is supporting the initiatives of CBOs, NGOs/SOs and the local governments in environmental and natural resource management through encouraging collaboration among the stakeholders and introducing alternative energy like improved cooking stoves, solar

power and bio-gas. As a result, pressure on the forests is reduced, women's and children's chances of inhalation of smoke improved, and the level of awareness to conserve, protect and use the forest resources in a sustainable manner increased. To promote environmental sustainability, the CBOs have developed:

- Multi-purpose nurseries for trees and shrubs to supply fuel wood, fodder, fruit and medicines.
- Community plantations in micro-watersheds to improve soil management, as well as increase the supplies of wood, fuel and fodder for the community.
- Community forest-users groups prepare management plans resulting in stewardship certificates from the concerned line agency giving them legal rights.
- Promotion of alternative energy and efficient stoves, including the training in their manufacture and repair.
- Wetland management and ecotourism development
- Environmental adult literacy classes, mainly for illiterate women.

Capacity building for sustainable development

As aimed to build local capacities, SCDP facilitate various training activity related to sustainable human development in collaboration with other agencies. Over 1352 CBOs are closely working with SCDP to strengthen their management capabilities. SCDP has been supporting CBOs to train their members as Sustainable Development Village Specialists to support their development initiatives. A wide range of practical strategies and linkages are necessary to make development environmentally sustainable, socially equitable and economically sound (see Figure 2).



» Figure 2: Practical strategies and linkages for sustainable development

Sustainable development policies and strategies

SCDP with support of, and collaboration from, UNDP's Capacity 21, World Wildlife Fund (WWF) and IUCN–The World Conservation Union assisted the National Planning Commission and the Ministry of Population and Environment to formulate the Sustainable Development Agenda for Nepal (SDAN) after a series of consultations with a various stakeholders. SDAN has been recently approved by His Majesty's Government. Nepal's SDAN aims to guide and influence national level planning and policies up to 2017. Its agenda draws upon, and is in conformity with, the long term goals envisaged in Tenth Five Year Plan (2002-2007), Millennium Development Goals, Poverty Reduction Paper and commitments made by the country in various international forums (HMG/NPC/MoPE, 2003). SDAN stresses a major departure from the current education system to ensure happy and healthy society that leads toward a sustainable society.

Challenges for ESD

The major challenge for ESD in the context of SCDP is to demonstrate sustainable, viable and alternative approaches to making implementation of sustainable development effective through decentralized management and local initiatives. The immediate challenges are:

- ESD has not yet been reflected in the formal education system. Local efforts and initiatives in isolated areas may require more time and resources for promotion in schools.
- To train local communities in non- formal sector and teachers in formal sectors requires more time as the term "sustainable development" is not common and well-understood by the communities. Some aspects of environment are provided in the national curriculum, but the approach is not coherent and does not cover the wider range of sustainable development. In the SCDP districts, eco schools have promoted ESD but its replication in other schools is a major challenge.
- To develop local capacities and demonstrate sustainable development principles in action through an integrated approach, incorporating gendersensitive social, economic and environment linkages.
- To develop partnerships amongst the major stakeholder organizations (central governments, local governments, NGOs and CBOs) and to reinvent their roles so that CBOs function as planners and implementers of their own sustainable development program.
- To demonstrate viable options for sustenance and adaptation of sustainable development approaches.
- To document and disseminate knowledge from successful experiences and to link the use of local knowledge to support district and national level sustainable development policies.

Conclusion

ESD is a life long process. It is a driving force in mobilizing the local communities and a tool for ensuring sustainability. Capacity building of the local communities through various educational programs is essential to enhance their ability to manage their resources. In the SCDP program areas, it helps the community to understand the process of achieving sustainability through sound management of their ecology and environment. Development becomes sustainable when people develop the sense of ownership and fulfill their needs without destroying the resource base. SCDP is a good example of how local initiatives can lead to a society that can sustain itself through environmentally sustainable local development efforts (UNDP/Capacity 21: 2001). It is important that these initiatives have long-term support, but to obtain this commitment is a slow process. Local communities must put their trust in the program before they make such commitment. However, the success so far demonstrates that biodiversity conservation and sustainable development combined with ESD can generate sustainable actions to help communities and safeguard their environment. The support of UNDP and Capacity 21 in Nepal has reached into rural communities where the nexus between poverty and the environment is very strong. SCDP was able to mobilize the rural communities. The ability of managing the environment for sustainable development by the people of the SCDP area is perhaps one of the greatest impacts of ESD. However, ESD is an emerging paradigm and more constructive debates is to make it every body's agenda and concerns.

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Education for Cooperation and Benefit Sharing in Conservation and Development

Ukesh Raj Bhuju¹

Introduction

Education has been a key factor of conservation success in Nepal. Since the establishment of the first national park in Chitwan in 1973, His Majesty's Government has considered public awareness and education as an indispensable tool for the active participation of the local communities in the management of the protected areas. Conservation education is one of the major programs launched by the government in the protected areas management and wildlife conservation. During the initial years of protected areas establishment, although the Royal Nepal Army was engaged in the protection along with the promulgation of the 1973 National Parks and Wildlife Conservation Act and the regulations, long-term conservation education programs were launched in the protected areas in 1975 and 1983. The major international affiliations and commitments that prompted conservation Union in 1974, ratification and signing of conventions such as CITES (Convention on the International Trade in Endangered Species of Wild Fauna and Flora) in 1975, World Heritage Convention in 1978, Ramsar Convention in 1987 and Convention on Biological Diversity in 1992.

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At the time of nomination of the Royal Chitwan National Park for the World Heritage Site in 1984, the IUCN team observed that the government had promoted public awareness programs to resolve the issues of wildlife damage in Chitwan. The driving force of the Annapurna Conservation Area Project (ACAP) that was launched in 1985 and the Parks and People Program (1994-2001) launched in 7 protected areas was primarily conservation awareness and benefit sharing at the community level. The projects supported by World Wildlife Fund (WWF) since 1967 have a component of education directly or indirectly. Following its permanent office establishment in Kathmandu in 1992, WWF Nepal Program promoted eco clubs in schools around the protected areas and in the Kathmandu valley. The climax of its program was realized in 2000 when the Eco Walk was organized in Kathmandu. Over 2,500 students and teachers (including some from abroad), leaders and celebrities participated in the walk.

The Master Plan for the Forestry Sector outlined high priority to human interests while developing protected areas. One of the objectives of the Plan for the conservation of ecosystems and genetic resources is "to enhance education in resource and protected area management and in people-park relations" (HMG/MFSC 1988 p58). Conservation awareness was a major highlight of the National Conservation Strategy (NCS) for Nepal. It outlined eight resolutions pertinent to conservation awareness, such as national coordination, public education system focusing on students and teachers, in-service training, agricultural extension service training, developing technical capacity, resource conservation and Tribhuvan University, women and conservation education, and nongovernmental organizations and private sector. In its sectoral analysis, the NCS states, "Conservation - the wise-use of natural resources and the preservation of cultural heritage – begins with improved understanding" (HMG/IUCN 1988 p27). In 1991, the National Environment Education Guidelines was drafted out for the promotion of environmental education in the formal, nonformal and informal education systems of the country.

The two main streams of education that played significant roles in the current conservation history of Nepal are school-based eco clubs and community oriented public awareness campaigns. Various conservation organizations ranging from grassroots community-based organizations, private voluntary organizations, national and international nongovernmental organizations, donors and the government line agencies have contributed to education from their respective capacities. The leading organizations include the Association for the Preservation of Environment and Culture (APEC), Environmental Camps for Conservation Awareness (ECCA), Food and Agriculture Organization (FAO), Green Camp Nepal, Himalayan Trust, IUCN, Kathmandu Environmental Education Project (KEEP), King Mahendra Trust for Nature Conservation (KMTNC), Nepal Heritage Society (NHS), Research Center for Educational Innovation and Development (CERID), Sagarmatha Pollution Control Committee (SPCC), UNESCO, United Development Programs (UNDP), WWF, and others. The schools, village development committees and social clubs also have contributed to environmental education in and around the protected areas.

The global strategies that influenced environmental education in Nepal are the guiding principles for environmental education endorsed in the Intergovernmental Conference on Environmental Education in Tbilisi in 1977, education strategies outlined in the Our Common Future 1987, the Caring for Earth - A Strategy for Sustainable Living 1991, and Agenda 21.

Eco clubs: A mode of cooperation

Background

In 1995, the District Education Office of Kathmandu, Goethe-Institut, and WWF Nepal Program jointly celebrated the World Environment Day by organizing a workshop for the 32 teachers/students representing 16 schools from the Kathmandu valley. The Sharada Madhyamik Vidyalaya from Bhaktapur presented a case study of their eco club. Similarly, Friends of Shuvatara School from Lalitpur displayed their materials (Nepal, Ashoke 1995). Following a brain storming session, the participants outlined a list of 40 different activities for eco clubs. With the implementation of the Bardia Integrated Conservation Project (1995-2001), eco clubs have been expanded into 51 schools in the Buffer Zone of the Royal Bardia National Park (WWF Nepal Program 2001). APEC promoted eco clubs in over 125 schools in 6 districts in East Nepal. KMTNC promoted eco clubs as a part of its zoo education program. The number of schools having eco clubs is estimated to be over 500 in the country today. Some examples are given in the boxes.

Objectives

The three initial objectives of eco clubs in schools are:

- Encourage students to study, practice and undertake environmental activities;
- ii. Encourage students to share their knowledge, concepts, skills among their peers in country and abroad; and
- iii. Enhance students' networking for the cause of environmental conservation, peace and harmony.

Box 1. Budhanilkantha Environment Club

The club has been instrumental in activating eco clubs in other schools. The members visited places like Bardia and Bhaktapur, and share their knowledge and skill in organizing educational activities. The club initiated a system of organizing annual competition of school environmental projects in the Kathmandu Valley. The members promoted environmental quiz contest in Bardia by donating a running shield. Being senior students (Grade XI and XII, and A and O Levels), the Budhanilkantha environment club has been in the forefront in organizing environmental activities.

Impacts

Eco club has become a regular extra-curricular activity in the schools (public and private). The favorable conditions were created by the NCS Implementation Project during 1989-1997. Coincidently, the Royal Commission on Education recommended environmental education in the formal school system (Grade I through X) in 1992. By the end of the NCS implementation in 1997, students at Grades I through VII were fully exposed with environmental education in their formal education. For the development and implementation of the environmental education components of NCS, over 25 different organizations (10 government and 15 others) were involved in the process (NPC/IUCN NCS Implementation Project 1998).

With the renewal of membership and leadership every new academic year, the eco clubs activate new batches of students to learn and act for environmental conservation. One of the exciting activities is a green gift exchange that has been initiated since their creation in 1994. The club members prepare a package of materials (handicrafts, pictures, report, etc.) based on their environmental activities, and send them out to other schools both in country and abroad. The Nepalese schools have exchanged their green gifts with schools in several countries like India, Bhutan, Pakistan, Thailand, Malaysia, Hong Kong, Japan and USA. The message of the gifts is primarily on conservation. Encouraged with their school activities, students who were once involved in eco clubs have formed environmental groups after they have graduated from schools.

Box 2. Jagadamba Eco Club

Aggressive and active since the formation of eco club in Jagadamba High School in 1996, the members have established tree plantation and fruit orchard in the school premise. They have led the rest 50 schools in the Buffer Zone of the Royal Bardia National Park in eco club campaign. Their members have demonstrated high skills in street theater, recycling of paper, reuse of plastic wrappers, public awareness programs, and cleaning of heritage sites. The members are invited as resource persons on various functions.

In 1998, they organized letter-writing campaign to mark the Year for the Tiger Campaign. The essence of the 500 letters was that the people of Bardia had sacrificed their properties for the sake of tiger conservation, although they had suffered from the increasing wildlife populations. The letters appealed the people to give up drug containing tiger parts. The letters were sent out to schools in Hong Kong, Japan, and Malaysia.

Synergy

Eco clubs have become a major component of conservation and development programs launched jointly by WWF and the Department of National Parks and Wildlife Conservation (DNPWC) in Kangchenjunga Conservation Area, Sagarmatha National Park and Buffer Zone, and Shey Phoksundo National Park and Buffer Zone. Eco clubs have also been adopted in the UNDP projects in western Nepal. Several education organizations have promoted eco clubs, though under different names. For example, the School Partnership Worldwide organized Green Clubs; the ECCA formed Nature Clubs; the Kathmandu Metropolitan City promoted BaBa (Batabaran ra Balak - Children and Environment); Prakriti Clubs, and Nepal Heritage Society campaigned "One school one heritage" program.

By 2000, eco club has become a popular educational movement in the country. Upon the appeal of the Ministry of Population and Environment and WWF Nepal Program, over 2,000 students from various parts of the country and abroad joined for the historical Eco Walk in Kathmandu on the occasion of the World Environment Day in 2000. Over 500 teachers, journalists, educators, leaders and celebrities followed the students in the walk.

Box 3. Sharada Eco Club

The Sharada Madhyamik Vidyalaya of Bhaktapur has become a focal point for disseminating the idea of eco clubs in the country. Teachers from various districts such as Makwanpur, Bardia, Solukhumbu, Taplejung and others have visited there to acquire information and knowledge about eco club establishment and operation. They received celebrities like a world cyclist from the Netherlands. They organized regular Friday activities, and invited celebrities like a Sagarmatha summiteer. They take pride in exchanging green gifts with schools in country and abroad. Its club members have participated in the special heritage march to welcome the delegates to the "Journey to Kathmandu: Bhaktapur Festival" organized by WWF Nepal Program in November 2000. Its members have traveled abroad and disseminated conservation message in the global forums.

With the enthusiasm gathered from various events, WWF Nepal Program, CERID, Nepal Scout and Nepal Red Cross Society developed a long-term strategy of eco club promotion in the country in 2002. The vision is to expand a national network of eco clubs in all the secondary schools (nearly 5,000) in 5 years by using the existing organizational structures of Scouts and Red Cross.

Eco club heritage quiz launched since 2000, has been a fine example of how over a dozen of organizations cooperate for the cause of environment. The Radio Sagarmatha – FM 102.4 MHz, a community radio program managed by the Nepal Forum of Environmental Journalists (NEFEJ), conducts the quiz contest among the schools using its children broadcasts on Saturdays and Sundays. The final round is held after a completion of 16 rounds of contests. On the World Heritage Day (April 18), Nepal Heritage Society organizes a public platform for the final contest that goes on the air. Celebrities are invited as "quiz master" for public awareness. Along with the 16 participating schools in one cycle of contest, over a dozen of organizations contribute to various capacities, such as financial, technical, material and volunteers. Over 100 schools have participated in the quiz.

Eco clubs have also generated synergy at the environmental education forum conducted by CERID. In 2001-2002, CERID facilitated 9 forums among educators, teachers, students and experts to discuss various aspects of eco clubs (TU/CERID 2002). Recently, the educators involved in eco clubs have been exchanging their views on how to strengthen eco clubs at the national level. The idea is to organize national level activities such as exhibitions of achievements, competitions of environmental projects, recognition awards and incentives for the best eco clubs, and so on.

Buffer zones: A mechanism of benefit sharing

Background

Ever since the establishment of the protected areas, there has been a conflict between the local communities and the protected area authorities over the priority issues. For the local communities, the use of natural resources has been a major priority, and is facing the wildlife related human casualties and property damage a major issue. For the authorities, protection of wildlife and their habitats is a number one priority, and poaching problems and encroachments a major challenge. In 2001-2002, there were 31 wildlife incidents around the protected areas in which a total of 19 persons were killed (9 in encounters). In 2000-2001, of the 39 wildlife accidents, 34 persons were killed (11 in encounters).

During the popular movement in the country in 1990, local communities living around the protected areas especially in Chitwan and Langtang intensified their voice on sufferings from wildlife damage including human casualty. However, the local communities did not undermine the values of the wildlife. Conservation education campaigns of the Department of National Parks and Wildlife Conservation (DNPWC) using audio-visuals had created positive impacts. Over a dozen of wildlife documentary films that were produced and screened publicly in the 1970s were educative, motivating and entertaining for the local people (Box 4).

Box 4. Documentary films on wildlife and conservation

- I. A Fragile Mountain (30 minutes)
- 2. An Elephant's Eye View (30 minutes)
- Elephant Polo Tiger Tops 1991 (60 minutes)
- 4. Follow that Tiger (30 minutes)
- Great One Horned Rhinoceros (30 minutes)
- 6. Hunting the Hunter (30 minutes)
- 7. Living in Harmony (37 minutes)
- 8. Marshes of Bharatpur (30 minutes)
- 9. Nepal the Land of Adventures (20 minutes)

- 10. Pity the Poor Crocodile (30 minutes)
- II. Resolving Conflict (9 minutes)
- 12. Rhino Translocation (30 minutes)
- Star Himalayan Balloon Over Everest Expedition 1991
- 14. The Living Planet (60 minutes)
- 15. Tiger Tiger (60 minutes)
- 16. Tiger Tops Elephant Breeding
- 17. Tough Near the Top (30 minutes)
- 18. Wildlife of Nepal (30 minutes)

Legislation

In response to the people's voice, the government formulated the buffer zone policy by amending the National Parks and Wildlife Conservation Act in 1993 (HMG 1993). The 4th amendment of the Act introduced buffer zone policy. One of the articles of the Act states, "30 to 50% of the of the income generated by the national parks, reserves or conservation areas can be spent for the community development of the local people by coordination with local agencies (HMG 1993 p39)."

The Buffer Zone Management Regulations 1996 and Buffer Zone Management Guidelines 1999 made provisions of institutional structure, program planning, resource mobilization and funds management. With the promulgation of the regulations in 1996, buffer zones have been declared in Bardia and Chitwan. By 2002, buffer zones have been declared in six national parks (see in Table 1). The six buffer zones cover the total area of 3,941 Km in 109 Village Development Committees and 2 municipalities. There are over 160 User Committees and over 2,000 User Groups representing over 400,000 populations. With a view of furthering the coordination as well as competition among the Buffer Zone Management Committees, a Buffer Zone Forum was launched in 2002. The Forum will also help the government in revision of the buffer zone related policies and programs.

Buffer Zone	Year	Area	Population	LG	UC	UG
	Declared	Km ²				
I. Langtang National Park	1998	420	40,000	34	21	315
2. Makalu Barun National Park	1999	830	32,000	12	NA	NA
3. Royal Bardia National Park	1996	328	69,000	17	83	178
4. Royal Chitwan National Park	1996	750	242,000	37	37	1,541
5. Sagarmatha National Park	2002	275	13,000	3	3	28
6. Shey Phoksundo National Park	1998	449	9,000	8	17	NA
7. Koshitappu Wildlife Reserve*		136	172,000	13	NA	NA
8. Parsa Wildlife Reserve *		367	126,000	17	NA	NA
9. Royal Shuklaphanta Wildlife		153	74,000	11	NA	NA
Reserve *						
Total		3,708	777,000	152	161	2,062

Table 1. Buffer zone status

(* Proposed)

LG: Local government (Village Development Committee and Municipality) UC: User Committee; UG: User Group Source: DNPWC/PCP 2002. and HMGN/MFSC 2002.

Public voice

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There are some remarkable public initiatives that complemented DNPWC's buffer zone policy. The three cases from Bardia, Langtang and Sagarmatha are worth mentioning here. The Bardia workshop supported the MFSC officials to put the process of formulating buffer zone regulations in a fast track. The Langtang discussion program helped the DNPWC officials to recommend for 50% revenue allocation for the buffer zone programs in Langtang. The Sagarmatha event helped declare the buffer zone by including the Pharak region.

Box 5. Bardia buffer zone

Nepal Forum for Environmental Journalists (NEFEJ), Royal Bardia National Park and WWF Nepal Program jointly organized an interactive workshop on "Park People: Interrelation and Interdependence" in Thakurdwara, Bardia on May I and 2, 1995. The workshop passed a resolution that people's participation was a must in conservation efforts, and the 4th amendment of the buffer zone policy should be implemented without delay. Following the workshop, the facilitators approached the Ministry of Forests and Soil Conservation (MFSC) officials to put the buffer zone regulations in a fast track, for without the regulations the buffer zone policy would remain inactive. The Workshop was a positive thrust to the officials of DNPWC and MFSC to bring the regulations out in a gazette in 1996 (NEFEJ 1995, Personal communications with Mr Bhairav Risal, and personal observations).

With the technical and financial supports of various donor agencies, the government launched conservation and development programs in and around the protected areas. The programs included public awareness as a main activity. Annual public coordination meetings and the occasional stakeholders meetings were the main platforms where circulars and information of public interest were disseminated. The level of participation in terms of inputs was significant in these forums. Using the stakeholders' forums, DNPWC received inputs for strategic frameworks of 8 protected areas namely Bardia, Chitwan, Khaptad, Koshitappu, Parsa, Rara, Sagarmatha and Shuklaphanta.

Awareness efforts

The most exciting event that DNPWC and its protected area offices observe is the celebration of the Nepali New Year (second week of April) by organizing a nation-wide Wildlife Week. Hundreds of students are invited to participate in various contests and activities such as art drawing and essay writing. The celebration includes bird watching, exhibition, seminar, rally and other awareness activities. Similarly, the World Environment Day (June 5), the World Heritage Day (April 18) and the other national and international days are observed widely.

Box 6. Langtang buffer zone

NEFEJ and the Langtang National Park with the assistance of Friedrich Naumann Stiftung organized a district level discussion program in Dhunche, Rasuwa in 1998 on the relationship between the inhabitants of Rasuwa district and the Langtang National Park. Men and women from all the 26 Village Development Committees of the district participated in the program. The district leaders enthusiastically mobilized the local people for cooperating with the park administration, and demanded for the maximum ceiling that is 50% park revenue to be recycled in the buffer zone. The interactive meeting was instrumental in helping the park authorities for the recommendation to the DNPWC/MFSC (NEFEJ 1995, Personal communications with Mr Bhairav Risal)

DNPWC runs a weekly program on conservation called "Naso" in the national broadcast of the Radio Nepal. DNPWC regularly publishes promotional and educational materials, such as brochures for each of the protected areas. These materials are distributed to the visitors, students and other interested people. On various occasions, DNPWC has published a series of posters and charts especially useful for the students and general public. Along with the annual progress reports since 1993, DNPWC brings out Samrakshan Samachar, a bi-monthly newsletter in Nepali (published since 1980), and Wildlife Nepal, a bi-monthly newsletter in English (published since 1988).

DNPWC coordinates with the Nepal Rastra Bank to ensure correct pictures of wildlife on the currency notes. Similarly there are commemorative coins carrying the pictures of various wildlife species. Occasionally the notes are referred to the name of a wildlife species, such as the Rs100 note is often called a Rhino note. The pictures of wildlife species and their corresponding notes are listed (Box 7 Currency Notes and Wildlife Pictures).

Box 7. Currency Notes and Wildlife			
١.	Rs. I	Musk Deer (Moschus chrisogaster)	
2.	Rs. 2	Common Leopard (Panthera pardus)	
3.	Rs. 5	Yak (Bos grunniens)	
4.	Rs. 10	Black Buck (Antilope cervicapra)	
5.	Rs. 20	Swamp Deer (Cervus duvaceli)	
6.	Rs. 25	(National Animal: Cow)	
7.	Rs. 50	Himalayan Tahr (Hemitragus jemlahicus)	
8.	Rs. 100	Rhinoceros (Rhinoceros unicornis)	
9.	Rs. 250	(National Animal: cow)	
10.	Rs. 500	Tiger (Panthera tigris)	
11.	Rs. 1,000	Elephant (Elephas maximus)	

The Department of Postal Services publishes postage stamps depicting wildlife, plants, landscapes and other features of the country. The Nepalese currency notes and the postal stamps of Nepal are popular for their wildlife pictures.

Box 8. Sagarmatha Buffer Zone

To mark the 25th anniversary of the Sagarmatha National Park and the International Year of Mountains 2002, His Majesty's Government of Nepal declared Buffer Zone in the Sagarmatha National Park on January 1, 2002.

In the first week of November 2002, Minister of Forests and Soil Conservation, Mr Gopal Man Shrestha, escorted by the senior officials made a special visit to the Sagarmatha National Park and the project area of Sagarmatha Community Agroforestry Project launched by the Department of Forests and WWF. On the occasion, the local women working for the community forestry program gave impressive presentation and briefings to the minister and the officials on their contributions in forestry and fuel saving programs. They strongly lobbied for the buffer zone declaration in Sagarmatha by including the Chaurikharka Village Development Committee (VDC). Till then, buffer zone declaration in Sagarmatha was pending for years due to indecisiveness to whether include Chaurikharka VDC or not (http://www.wwfnepal.org.np/scafp.htm and Personal observation).

Attitudinal change

In the three decades of conservation history, public support for conservation has been significant. Once hostile to the national parks system and the authorities, local communities have become good friends with their hospitality in the recent years. Under the Buffer Zone policy, DNPWC has been able to bring over 737,000 buffer zone residents in the mainstream of conservation campaign.

Under the conservation and development projects in the protected areas, eco clubs have been formed and strengthened in hundreds of schools along with public awareness campaigns. With a purpose of enhancing park-people relations, each protected area office annually conducts public coordination meetings in the field.

Box 7. Sagarmatha pollution control

Garbage was the number one environmental pressure in the Sagarmatha National Park and Buffer Zone in the early 1990s. There were news articles defaming the park that the Khumbu region was the "highest trash pit" in the world, or "you could follow tin cans and toilet papers and reach the top of the mountain!" Shocked by the news, His Holiness Rimpoche of Tengboche, Ngawang Tenzing Jangpo, took initiative and mobilised the local people to clean up their backyards. The initiative gave birth to the organisation, Sagarmatha Pollution Control Committee (SPCC) in 1991.

During the 3 years period from 1994-95 to 1997-98, SPCC managed 767,776kg of garbage. Amount of garbage collection has increased over the years. In 2000-01 alone, the committee collected 217,238 kg of garbage. The figures indicate that garbage deposits in the region have also increased. The buffer zone residents suggest that the garbage management should be directly under the park administration.

The two major sources of funding SPCC's activities were His Majesty's Government of Nepal and WWF. Under the policy of recycling peak fees generated from the Khumbu region, His Majesty's Government of Nepal has been providing the SPCC with approximately Rs2.5 million per year since 1993. WWF provided matching grants to SPCC. To implement the SPCC operational plan, a tripartite agreement was signed in 1993 between the Ministry of Tourism and Civil Aviation (then without the portfolio of Culture), WWF and SPCC. The Himalayan Adventure Trust of Japan has separately provided support to SPCC for apple tree plantation and garbage incinerator at Lukla.

(Source: SPCC Annual Progress Reports; personal observations, communications with SPCC staff)

Conclusion

On one hand, the school-based eco clubs have been instrumental in disseminating strong message of CITES and species conservation across the country and abroad. The clubs have become a good medium of peer learning and knowing each other at the participant level. The clubs have created synergy among organizations for enhanced cooperation for conservation.

Public awareness programs have been a major force in buffer zone declarations. Men and women have realized the importance of protected areas and biodiversity conservation for their better future. With increased awareness, public attitude has changed from hostility to hospitality. The communities have also raised voice against the government policy to hand over management responsibilities to the nongovernmental and other organizations. Their suggestions have been to retain the management responsibilities with the government and open up an avenue for the community involvement. Realizing the importance of environmental education, the Nepal Biodiversity Strategy 2002 has outlined two main strategies on education. They are:

- i. Endorsing indigenous knowledge and innovations, and
- ii. Increasing conservation awareness.

The other strategies that also reflects the value of education are; Integrating Local Participation, Enhancing National Capacity, Securing Intellectual Property and Farmer Property Rights, and Women in Biodiversity Conservation (HMGN/MFSC 2002).

Nepal's recent conservation efforts have been geared towards ecoregionbased conservation at the landscape level focusing on biodiversity conservation and poverty alleviation. There is a vision of linking the existing protected areas by maintaining the forest corridors where activities on biodiversity conservation and poverty alleviation will be considered. Such visions encompass millions of people living in the biological corridors. Naturally, the vision will be materialized only when the local communities, the main stakeholders, participate in the program for which intensive environmental education coupled with cooperation and benefit sharing will be a driving force.

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Community Managed Schools in Nepal

Dr. Badri Dev Pande¹

Background

Nepal can take pride in her glorious history of community support to schools. Communities throughout the country have placed high value on education. Schools have been perceived as symbol of prestige for a village or a community. Community leaders, therefore, have endeavored to get a school established in their door steps. Initially, teachers were well paid by the communities and through their contribution of land, cash, materials and labor, school buildings were erected. Although many schools received lump sum grant to pay for teachers' salary, maintenance of support proved to be a burden for many communities. As a result, it was common for teachers not to receive their salaries for many months.

The government takeover of schools with the advent of the National Education System Plan in 1971 was a relief both for the communities and the teachers with regard to financing of education. However, it also drastically curtailed the community's authority to manage their schools. School Management Committee (SMC) was restructured as School Cooperation Committee. This change shifted almost entire burden of financing schools and managing them to the Government through district education offices.

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Since 1971 the number of schools has increased by over three folds and the number of students has increased by almost four folds. In 2001 the government expenses in education sub-sector reached 15.6% of the total national budget. Educational quality has not kept in pace with the increase in government expenditures.

More recently, the government has adopted a policy of letting the communities manage their schools on a voluntary basis. Applications are invited through advertisements in the leading newspapers. Schools meeting the criteria set for eligibility enter into agreement with District Education Office or municipality. A school to qualify for the transfer of management must be a community school receiving government grant, should have SMC in place duly formed as per The Education Act; must submit approval of the Village Development Committee, municipality or SMC in writing; a meeting of parents/guardians must give its consent for management of schools by the community.

During the fiscal year 2002/2003 management of nearly 100 schools was transferred to communities. Additional schools are being handed over to communities during the current fiscal year. In addition to management responsibility, schools receive a one-time incentive grant of Rs.100, 000 for each level of management takeover. An agreement was signed between His Majesty's Government and The World Bank for a loan of US\$50 million to provide incentive grant to 1500 schools over a period of two years. A total of 250 of these schools will receive block and performance grants, scholarships and technical assistance for capacity building.

Current status of the community managed schools

The author in connection with a World Bank mission recently visited 55 community managed schools in six districts to assess their status with regard to changes after management takeover. Except in a few schools where both teachers and students seemed conscious of the need for greenery and environmental sanitation, most schools were devoid of flowerbeds, trees and other forms of greenery. Toilets in most schools were not clean and classrooms and playgrounds were far from being clean and pleasant. Although environmental education and

sustainable development (SD) concepts are introduced from Grade I, they seemed to have been limited to theoretical instructions.

Schools managed by communities offer good opportunity for promotion of education for sustainable development (ESD) in their schools. Thus far SMCs seem to be engrossed primarily in improving physical facilities of their schools, supporting additional teachers with their own resources and trying to secure government approval for next grade or next level of schooling. Improving educational quality and promotion of ESD do not seem to be their priority concerns.

Schools where management has been transferred to communities benefit both from additional financial resources and increased involvement of communities in school affairs. Incentive grants and performance grants from the government and technical assistance for capacity building of school communities open up new avenues of resource mobilization. The guidelines prepared for communities taking over management of their schools suggests SMCs to form a resource mobilization sub-committee. Likewise, the guidelines also suggests for formulation of a sub-committee on educational quality. Each school is also to organize a Parents Teachers Association (PTA). Other sub-committees are also proposed involving parents, teachers and other members of the school communities. Thus a good platform for SD will be in place when schools handed over to communities are fully functional as per the guidelines given to them.

ESD strategy

In a school community the stakeholders include students, teachers, SMC and parents/ guardians. These stakeholders can draw upon resources from local NGOs, CBOs and other infrastructures and natural resources of the community. Here a broad strategy is proposed for each group of stakeholders towards realizing ESD.

Students

In a formal school setting students have the opportunity to gain theoretical knowledge on environment and population from the curriculum and textbooks prescribed for them. However, they have had little or no opportunity to apply their theoretical knowledge in practice or to gain in-depth insight into the concepts introduced to them. Moreover, the students are not used to relating their education to their surroundings and everyday living.

Some schools have formed eco clubs/nature clubs with lead initiatives of students and with guidance from teachers. Such clubs are reported to have positive impact on students' understanding of SD concepts. These clubs have also significantly contributed to environmental sanitation and beautification of school premises. Because it provides students to develop leadership qualities, conserve nature and better understand the consequences of unsustainable practices of human beings, nature clubs or eco clubs should be made mandatory in all community managed schools.

Teachers

Teachers can play a crucial role in promoting ESD principles and practices not only among their students but also among their community people as a whole. In teaching the teachers should endeavor to engage their students in discussion inside classrooms; adopt demonstration methods whenever feasible and try to take their students out of classrooms for practical observation and work as far as possible.

Teachers should actively involve themselves in SMC meetings, parents / teachers meetings and other community gatherings and share their ESD knowledge at the same time encourageing their audience to follow SD practices. They should always be ready and willing to serve as resource persons to events organized by their students and in community events. By providing guidance to eco clubs of their schools, the teachers will be enhancing their own capacity on the promotion of SD concepts.

School management committees

Since SMC comprises of school headmaster, teacher, student guardians, community leaders, local government representative and donor, it represents a resourceful and powerful school community body. SMC should provide every encouragement to nature club of their school and to teachers in their efforts to promote ESD. The SMC members should themselves be open to learn about and practice sustainable living. They should try to provide financial and other

community-based resources at their disposal to assist with the learning and innovative activities of students and teachers.

As SMC establishes linkage with the District Education Office and other agencies outside of school communities, it should try to arrange human and material resources from these agencies. There are many agencies in districts, regional headquarters and municipalities engaged in various activities contributing to SD (e.g. solar energy set ups, development and processing of medicinal plants, bio-gas support agencies and so on).

SMC should chalk out an annual plan for school specifically aimed at promoting SD. In doing this inputs from students, teachers and parents should be sought. The plan should include organization of debates, interaction programs, workshops and seminars.

Parents/guardians

In community managed schools parents/guardians are expected to play a more active role in ensuring quality education for their children and in supporting their schools as per their skills and abilities. By playing active role in PTA they can be informed about and encouraged to help their children and community to lead sustainable lifestyle. Parents/ guardians should also involve themselves in other activities organized by nature club, school and community organizations.

Though not directly associated with schools, local NGOs and CBOs should play a role in capacity building and facilitating SD endeavors of students, teachers and parents. By accessing and developing awareness raising and educational materials and organizing training for the SMC members they can equip influential members of their community to adopt favorable policies and programs towards converting the school into a learning centre for the community as a whole.

Conclusion

All public schools are now considered as community schools. Apparently, private schools have done more than community schools in making their students aware and skilled about sustainable development practices. With the transfer of management to communities opting to run the schools are now equipped with

additional financial resources and opportunity to enhance capacity for sustainable way of living. The number of such schools is on the increase as more communities have applied for management takeover of their schools. These schools can be exemplary by having their own strategies based on local needs and resources. Government agencies, local NGOs/CBOs can and should play the role of resource providers and facilitators in the efforts of students, teachers, SMC members and parents/guardians towards realization of sustainable livelihood.

Parental Participation in Children's Learning Process

Uddhab Karki¹

Introduction

Teaching learning process includes several factors. Though educationists may have different opinion on these factors, they can be classified into context factor, input factor, process factor and output factor. The context factor contains a number of variables such as educational policy, home and school characteristics whereas the input factor encompasses teacher characteristics, student characteristics and others. The process factor includes characteristics of teacher and student, teaching-learning activities and other factors and the output factor leads to the performance of learners, change in behavior and practices, both tangible and intangible. There is close interrelationship among these factors and one influences another in the teaching learning process. Among these factors the roles of the school management, parents and students are more important in learning process. When school works together with parents, children are likely to succeed in their present and future life. Research studies show that parental participation in schooling improves student's learning. The studies further state that parental participation is essential not only in the very beginning of educational process, but throughout the child's academic career. In this regard, sustainable development

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of education is possible if we can increase the parental participation in teaching learning process.

In the context of Nepal there is a gradual increase of the need of parental participation in school education. The community school must form a management committee in which there is a representation from the parent. There should be a representative from educationists, too (Education Act, 2001). Educationists and parent representatives have the role in managing the school but it is questionable what will be the roles of other parents. The policy documents have not mentioned specifically how and in what programs the parents will be involved. However, there is a consensus that there should be parental participation in the school education together with educationists and policy makers. It will certainly take some years to translate this thinking into policy and action. Under this circumstance, this study has been conducted to explain the status, extent of initiatives and the level of involvement of the parents in the teaching learning process at the public school.

Methodology

This study was conducted in three public secondary schools and one lower secondary school. They are two secondary schools from Lalitpur district (Adarsh Saral Secondary School, Patakdhoka, Gambhir Samundra Setu Seconday School, Imadol); and one secondary school (Baba Batika Secondary School, Tilganga) and one lower secondary school (Sarada Lower Secondary School, Tilganga) from Kathmandu district. One of the sample schools of Latitpure district is situated at the core city area whereas another is far from the city. In the case of Kathmandu district both are situated at the periphery of the core city area.

Informant

The key informants of the study are head teachers, teachers, students and parents of the sample schools. The head teachers and teachers were taken irrespective of the level they are teaching and their interest to participate in the discussion. Four head teachers (male) and eighteen teachers (5 female teachers) participated in the discussion. The students were of classes 8, 9 and 10 as they can participate in the discussion. Altogether 65 students (boy 53% and girl 47%)
were interviewed and took part in the discussion. Regarding the parents, those who were nearest from the school within 1.5 kilometers were contacted. Only 21 parents (6 females) were met at their home or at workplace to discuss the issues.

Instrument

The researcher used an open-ended structure interview schedule. It is for the facilitation of discussion only. It is a flexible tool to collect information from the informant.

Modality

The researcher contacted head teachers at his office and explained the purpose of the study. He discussed separately with head teachers, and teachers about the parental participation in children's teaching learning process.

He visited the classes 8, 9 and 10 and then explained the purpose of the visit. Then he discussed with the students how the parents have been facilitating them to support their learning process. Altogether 65 students participated in the discussion. Some questions were flexible and asked the researcher for clarification. The discussion was held for 40 minutes for each class.

Analysis and synthesis

Data and information were analyzed and then inferences, drawn in an integrated form to trace the present situation of parental participation in children's teachinglearning process. The major findings of the study are presented as follows.

Need

The school management perceives the need of parental participation in the teaching-learning process. They recognize that parental participation contribute to the following:

- improvement in the teaching-learning process at school by correcting their mistakes
- facilitation of the school management to teach students effectively

- solving the learning difficulties of students in time
- improvement in the misconduct of the students through the parental support
- effective management of the school for improving teaching-learning situation
- sharing the problems and constraints of the school

The parents do not disagree with the need of their participation in the teaching-learning process of their children though they cannot specify how they can assist the school management. The students also expect support of their parents to their learning process. It is found that there is an agreement of the school management, parents and students on the need of parental participation in children's teaching-learning process.

Contact

Only 30% parents contact the head teachers to know the progress and the problem of learning difficulties of their children. Among them the contact of the parents of upper level (classes 6-10) is very low (10%). They seldom contact with the class teachers and the subject teacher unless they are invited to discuss on a specific problems. During the contact parents are concerned with the child's regularity at the class not on details of their children's learning progress.

The contact of the parents of the primary level is comparatively higher (15%) than those of the upper level (classes 6-10). It is because some of the parents of primary level come to drop their children at school. At that time they sometimes meet the head teacher and other teachers and ask the progress of their children or to inform some difficulties such as reason of absenteeism, conflict with their classmates, sickness, difficulty to do homework, etc. All the parents feel that once their children enrol at the school, it is the responsibility of the school to teach their children.

Support

The school management has been responding to the parental concern on the student's learning. They discuss with them about attendance record, the progress report, and learning difficulties in the subjects. They also request the parents to

contact the school management frequently and the subject teachers to know the progress and problems of their children. The parents opined that they are getting the information from the school management on the activities of their children. They know that their children are going to school to study but do not know the details except the names of some subjects.

Effort

The school management has been trying its best to increase the parental participation in children's teaching learning process. The efforts made by them are;

- i) Parental meeting: The school management has been organizing meeting three times in an academic year. They conduct examination three times at an interval of three months. After each examination they invite the parents to the meeting. The purpose of the meeting is to present the progress report of their children, difficulties faced in the teaching learning process (especially, on the subject in which the child is weak), need of parental cooperation to improve the learning of their children and informing the forthcoming school program, etc.
- ii) Attendance: The overall attendance of the parents at the meeting is very low (30%). Especially, the parents (25%) of primary classes (1-5) attend the meeting. The attendance of the parents of the upper class (6-10) is very low (5%). The reasons of higher participation of parents of primary level compared to the upper level are that primary children need more care and they do not know the progress of the study. According to them the children of the upper classes (6-10) should take the responsibility of their education and they should know their progress by themselves. It suggests that parents want to give more responsibility to their children studying at the secondary level.
- iii) Discussion meeting: Though one-third of the parents attend the meeting every three months to know the progress of their children, their participation is also low in the discussion meeting. They read the progress report and get information on learning difficulties from the class teachers. Whatever they were told about their children they listen and agree to follow the suggestions to improve their children's learning process. Ultimately they say, "School should force their children to study".

- iv) Suggestions: The parents seem very helpful when they attend the meeting. They accept to assist their children in the learning process either coaching by themselves at home or through organizing tuition on the weak subjects. But it is found that rarely parents bring the suggestions into action after returning home. Because of this situation it is very difficult to improve the teaching-learning process of the weak students.
- v) Follow-up: The school management does not do any follow-up of the parental meeting. It is because of difficulty to contact them. The parents also do not come to know the improvement and difficulties after the meeting. There is no communication between the school management and parents before and after quarterly meeting, even for those parents who attend the formal meeting.
- vi) **Request to attend the school:** The school management sometimes contacts the parents through telephone and letters to attend the school. The purpose is to discuss with them about some special issues like irregularity of students, misconduct, failures in the examination. In this case some parents attend the school, while others do not. It is found that it has affected the teaching learning process of non-attending parents.

The school management organizes annual day of the school. They present the progress report of the school and problems to the parents to encourage them to participate in the school program. The attendance of the parents is 55% in this program, which is satisfactory.

vii) Non-attending parents: In the case of parents who do not attend the meeting their contact point is very far. A few of them enter into the school at their convenience to know the progress of their children. Otherwise, they contact the management body, when they have serious problem such as irregularity, misconduct, failure in the final examination, need of the transfer certificate, etc.

Kinds of participation

Participation in the teaching-learning process can be viewed from three dimensions; school management, student and parents.

School Management

The school management expects the parental support in the following ways:

- visiting the school frequently
- giving instruction to the children to attend the school regularly
- checking the children's work at home
- guiding the children in the weak subjects
- informing the learning difficulties to school in time
- attending the school meeting to review the progress
- providing the feedback to the school
- informing the student's study at home

The parental involvement in the activities is very low though the management has been requesting them to support them. It means that the school management is not satisfied with the parental participation at present.

Student

The students as learners expect support of the parents in different ways which include:

- guidance in the weak subjects or providing tuition
- encouragement to study at home
- correcting the mistakes on subject
- providing the favorable environment at home
- not forcing them to study
- understanding the problems and providing guidance accordingly
- visiting school to know the progress

The students are getting the following type of general support from the parents.

textbooks and stationary in time

- teaching-learning material
- provision of tuition in the weak subjects
- encouragement to study at home

The students are satisfied with the support they are receiving from the parents. But they feel that they are not getting proper guidance to improve their learning. It is because their parents cannot help them in the academic matters. Some of the students are getting the facility of tuition to improve their weak subjects, which is not possible to many students. The school management also has the similar opinion that the parents have not been participating in the learning process of their children.

Parents

The parents expressed their view on the kinds of their participation in the teaching-learning process. They wish to participate in the following ways to facilitate the learning of their children:

- providing the textbooks and other references
- making tuition facility available
- visiting the school to know the progress of their children
- guiding their children for the future
- making the children disciplined
- providing a better learning environment at home
- meeting the school management

The expression of the parents indicates that they are interested in participating in the teaching-learning process of their children. Their suggested types of participation are supportive to facilitate the teaching learning process. But these are contributing less to the academic improvement as expressed by the school management and students. It means that there is a gap between the expected participation of the school management, students and parent. The expectations of school management and students are above the parental thought.

Causes of low participation

There are different causes of low participation of parents in the children's learning process. They are;

- busy with work
- lack of time
- lack of awareness
- negligence
- lack of knowledge in the subject

Methods of increasing participation

The school management suggests different methods to increase parental participation in children's learning process. The methods are improving awareness of the parents on the need and types of their participation, designing and implementation of action plan and mobilization of the students.

Awareness raising program

There is a need of improving awareness of the parents to increase their participation in the learning process. They should be aware about the need of their participation in making better learning process. They should be familiar with the school program and kinds of participation required in the school program.

Action plan

The school management should develop an action plan to involve the parents in the learning process. The plan should include the activities in which parents should participate and be made in cooperation with the parents. Some of the discussion topics should include the school annual program, subjects to be taught, the performance of students, quarterly meeting on the student's progress, meeting on the learning difficulties on specific subject, discipline of the students, support on the physical facility development, etc. The school management should prioritize the activities in accordance with their needs.

Mobilization of student

The students are the good medium for bringing their parents to school. They can play a major role to reduce the communication gap between the school management and the parents. The school management can convince the need of the parental participation in the teaching and learning process. This will encourage them to push their parents from home to school to make query about the performance and learning of their children.

Conclusion

- The parental participation in the learning process is low because of their busy schedule, lack of awareness of the need of their participation and not being clear of their roles.
- The parental participation in the teaching learning process at primary level is better compared to the upper level of school (classes 6-10).
- The school management has been making different efforts to increase the parental participation in the teaching learning process inviting the parents at least every three-month to discuss the progress of their children, requesting them to attend school to discuss on children's learning difficulties.
- There are variations on the kinds of the parental participation expected from the school management, students and parents themselves. The parental participation as expected by the school management and the student is towards improving the learning process whereas parents think of the general support to the school and children.
- There is need of designing specific programs on increasing the parental participation in the learning process, especially improving the level of their awareness, getting students' support to involve the parents in the school program. The school management can develop action plan for parents on the basis of their needs and thereby increasing parental participation in the learning process.

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Sustainable Ecotourism in the Tonle Sap Lake in Cambodia

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Cambodia, a small country in the ASEAN region is a new ecotourism destination, after the long civil war and excesses of the Khmer Rogue. The country emphasizes on the development of resources for raising people's lifestyle and livelihood, together with tourism industry, particularly heritage tourism at Angkor Wat in Siem Reap Province. Since ecotourism is fairly a new thing in Cambodia, a lot of things need to be done, particularly improvements on the existing physical facilities, renovating sites, initiating tourism business for the environment, and overcoming obstacles. Its amazing natural resources and its unique environment must be managed so as to attract tourists. For this purpose, raising awareness of stakeholders and local communities about nature conservation as well as that of potential visitors are indispensable and urgently needed. Taking these points into consideration, the paper intends to give a brief overview, prospects and potentials of the Tonle Sap Lake for eco-tourism.

The setting

In order to protect the rich biodiversity of the lake, the Royal Government of Cambodia established the Tonle Sap Biosphere Reserve through the promulgation

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of royal decree in 1997. The Decree has divided the lake management into three zones; core areas, buffer zone and transition zone. The criteria such as the land use patterns, vegetation and biological hotspots were used for this purpose. Prek Toal, one of the three core areas, is a floating village situated at the Southwest shore of the Tonle Sap Lake in Ek Phnom district, Battambang Province. Most of the Prek Toal area consists of seasonally flooded forests and treasures a high biodiversity. Dense and tall trees are the most remarkable characteristics of the area and provide important nesting place for colonial waterfowls. Primary school and temples are the only buildings which are built on the land; the rest are on the water. Some floating restaurants and shops are run by local peoples. The vendors pedal from house to house on boats to sell their goods.

It is believed that most of the floating villages in the Tonle Sap Lake area were established hundred years ago. The rich natural resources especially fish were the principal attraction for the people to settle in this inundated area. Since then, the traditional way of life and the people's lifestyles have not changed much. Fishing and fishery-related activities are the major source of income for the local people even these days.

Access to Prek Toal is possible only by boat at any time of the year, either from Siem Reap or from Battambang towns. It takes one and a half hours from Chong Kneas, a boat park at lakeside in Siem Reap province. A narrow access lane between the two fishing lots, No. 2 and 3 provides the navigational route to Prek Toal. Prek Toal is at diagonally opposite side to this small floating town. Ferrying from Battambang provincial town takes about 4 hours by a speedboat and during the dry season it takes about seven hours to reach there through a shallow and narrow winding channel.

The core area covers the fishing Lot No.2 of Battambang province and is the largest and the most productive fishing lot in the lake. Three main streams, namely Prek Da, Prek Spot and Prek Daem Chheu flow across Prek Toal and join the lake.

Status of ecotourism in Prek Toal

The Tonle Sap Lake with its flooded forests, magnificent flocks of waterfowls and unique floating villages offers a unique attraction for ecotourism and a significant source of foreign currency for the local economy.

According to Nadeco and Midas (1998) there is a high potentials for developing ecotourism. The local communities would gain benefits of between US \$ 100,000-200,000 annually if the 10% of visitors to Siem Reap were to visit Prek Toal and each visitor is to pay US \$ 60. This initial investment of US \$160,000 is done for ecotourism in the Tonle Sap Biosphere Reserve. This would result in a gross annual income of around US \$ 1-2 million.

Though the distribution of benefits would be a complicated problem in a local community, there are opportunities for local people to benefit directly and indirectly from eco-tourism-related activities and selling of local products. The possible income opportunities indicated by Nadeco and Midas (1998) are; (1) boat and canoe operators, (2) local guides, (3) sale of handicrafts, drinks and snacks (4) guards, (5) traditional performances and shows, (6) low-cost accommodations, (7) entry and administration fees, and (8) concession fees from private eco-lodge shareholders outsides the community

Nadeco and Midas (1998) estimate that 50 people would get full or partial employment, if 76 tourists are to visit the area in a day. In addition, the income from visitors would also bring multiplier effects in the community and widen its local market networks. For this to happen, more things need to be in place such as minimum infrastructures, local participation and eco-tourism business.

These days the number of tourists who visit Angkor Wat ranges from 800-1,200 a day. Compared to this number the number of tourists who visit the natural heritage of Prek Toal is perhaps, on an average, 1-3 a day, which is nothing.

Facilities in Prek Toal

Under the Tonle Sap Biosphere Reserve Program, the Ministry of Environment has been initiating several pilot projects to generate alternative incomes for local communities. Ecotourism development project is as one of these projects. Although the numbers of visitors are still small the tourism in Prek Toal is getting attention these days. According to the statistics recorded in the Environmental Station, 372 tourists visited the Reserve in 2002. The numbers of visitors continue to increase steadily.

The Environmental Station began its ecotourism activities in collaboration with an NGO since 1999. According to the Ministry, current ecotourism activities in Prek Toal are as follows:

- walking in the wilderness (untouched beauty and wetland vegetation)
- watching small and large water birds
- relaxed paddle boating inside the pristine flooded forest and
- learning about the culture and tradition of the floating village

Some of the facilities in Prek Toal are as follows.

Bird watching

The major ecotourism activity in Prek Toal is bird watching. Prek Toal is an outstanding site for birdwatchers and is often referred to as the "bird sanctuary". Just behind the Prek Toal there are flooded forests with bird sanctuary. Every year between December and March, thousands of birds come to fish and breed here. The breeding colonies of Prek Toal are one of the largest colonies in Southeast Asia. Every year from January to June flocks of Storks, Adjutants, Pelicans, Ibises, Cormorants and other birds come to nest in these flooded forests.

The population of endangered waterfowls in Prek Toal during the dry season is so high that it is unrivalled in Cambodia and even in Southeast Asia. Eleven globally threatened or near-threatened species have been recorded. Even on a regular day-trip, visitors can watch not only half of these waterfowls but also feeding or circling flocks all over the place. From January to May, large numbers of Cormorants, Storks and Pelicans are guaranteed to be seen at any time. Prek Toal makes a good place for bird watching and meets the needs and interests of bird watching. The number of common birds like herons, egrets, and terns are so many that they literally fill up the space.

Research Station

The Ministry of Environment is engaged in the overall management of Prek Toal. The first one was started in 1997 with the assistance of the European Commission. These program of activities aim at promoting environmental education and awareness at the grassroots level, conducting research and monitoring, promoting conservation of flooded forest and wildlife, identifying alternative livelihoods and incentive for local community, and exploring potentials for ecotourism and community participation. The Station provides accommodation and food for tourists and receives entrance fee from them.

To carry out conservation activities, the Ministry with support from UNESCO has set up an Environmental Research Station. The Station is administered by the senior staff of the Ministry with support from two full-time staff-members. It has also employed 12 field staff, who are the locals.

Bird watching platform

Several bird watching platforms have been built on the top of the tree in the flooded forest. These platforms were built for conducting research on waterfowls (such as making observation of birds, especially their breeding behavior). But the visitors can go to the top of the platform if accompanied by the ranger.

Community involvement and benefits

Bird collection used to be a way of life for the people of Prek Toal but not any more because it is prohibited now. Instead these people are provided with alternative jobs in the Station. They conduct regular patrolling, bird counting, and conducting conservation activities inside the Reserve. Their experience has been useful in conservation and management of the Reserve in the area.

Also, the Environmental Station employs boat paddlers. About 50 villagers are registered as boat paddlers. They take the tourists on boat to the flooded forest and receive a fee of US\$5. They work on rotation.

Visitors must pay the entrance fee to enter the core area of the Biosphere Reserve. At present, the entrance fee ranges between US \$ 10 and US \$ 30 per person according to group size, travel distance and type of transportation (such as speedboat, paddle boat, personal boat). The transportation to the core area is included in the entrance fee. The revenue from the entrance fee is used for supporting the protection and conservation activities, research works, community development, and awareness programs. The Ministry has, with resources from the revenue, built floating houses for the poorest families, bird watching platforms and others in the community. This revenue is also used to expanding other facilities such as the purchase of new speedboat and others.

Analysis and discussion

The Tonle Sap Lake is rich in natural and cultural resources; eco-tourism development started only recently. It can be a sustainable and reliable way to raise the income of local communities as well as promoting conservation of the environment. Although ecotourism is in the jurisdiction of the Ministry of Tourism, it has been initiated in Prek Toal by the Ministry of Environment in collaboration with local stakeholders and the foreign NGOs. As of now, three key players are active in the Tonle Sap Lake; the Ministry of Environment, the Ministry of Tourism, and the Fishery Department. For developing any management plan, or guidelines for ecotourism, these three actors needs to be involved and consulted, along with local stakeholders. The first and foremost thing in this regards would be the setting up of the task force and defining the roles to coordinate their activities in the area.

According to the Royal Decree, the Ministry of Environment is responsible for the overall management of the Tonle Sap Biosphere Reserve, hence conducting research, controlling access, monitoring and impact assessment, etc. The Ministry is also responsible for providing guides and interpreters to the tourists. The Ministry of Tourism is responsible for campaigning and social marketing, communicating with private sectors and developing transportation facilities, etc. Fishery Department should oversee all fishing activities in the Tonle Sap Lake. It should make arrangement for tourists to go through fishing lots and ensure fishermen's benefits from ecotourism activities without jeopardizing their livelihoods.

Although the Prek Toal area does not have any geographical advantage, it has a potential to be an ecotourism destination. The waterfowls, the flooded forests, unique wetland vegetation and the floating village could attract tourists, scientists, naturalists, especially birdwatchers. Yet, it has to go a long way to be the final destination.

The lodging facilities provided by the research station could accommodate a few tourists but are not enough to meet needs and demands of tourists. There are not many accommodations in the community, which makes visiting to Prek Toal very difficult and only for a limited number of tourists. Local people have hospitality but do not have infrastructures and capacity to cater to the needs of foreign tourists.

The Research Station provides employment opportunities for local community as rangers, guides and boat paddlers but the scope of the employment is still limited to a few people and is not full time.

In stead of outstanding natural resources and the unique environment of the lake, there are a few organized activities for tourists and scientists particularly for bird watching. Organizing group tour, producing local products (postcards, photos, T-shirts, local handicrafts) and developing facilities and opportunities for tourists are still lacking. This is the area that warrants immediate attention. This should receive the topmost priority because eco-tourism provides a twopronged benefits to local communities; one is local employment and the other is nature conservation for their livelihoods and survival. This may allow them to link themselves to the broader picture of the lake ecosystem and so on. Likewise, there is little information (such as brochures, boards, maps, pamphlets, etc.) for tourists. This kind of information is requisite for the development of ecotourism in the area.

Conclusion

Ecotourism is different from just the nature-based tourism or mass tourism. The basic concept of ecotourism includes low-scale and low-impact tourism which benefits conservation of the area and the local community through activities such as entrance fee, food, accommodation, sale, guide, etc. Then ecotourism could show local community that a well-conserved environment is an asset for local development, local employment, local opportunities and local innovation.

Presently, the income from ecotourism is small compared to that from fisheries. Yet, ecotourism has a great potential in the future if administration and regulations are developed well at the outset. It is, therefore, necessary to build the capacities of the staff in the Environmental Station as well as running ecotourism activities in the area.

In the future, ecotourism is expected to play a significant role in Prek Toal. But the rampant destruction, people's short-sightedness for immediate and high profit, illegal activities, etc. needs to be controlled for the sake of the overall environment. Otherwise nature conservation and ecotourism will be in jeopardy.

Also equally important is the fact that every efforts should be taken to avoid the threat caused by the ecotourism activities, for which it is necessary to establish the institutions and rules in the area to reduce the impact of ecotourism on the natural resources and redistribute benefits equitably in the village, especially bird collectors and the poorest members of the villages, who are dependent upon the natural resources for their livelihoods. It should be made sure that direct beneficiary of the natural resources such as bird collectors do not resume the illegal bird collecting and hunting activities. Despite hurdles and constraints, limited ecotourism has shown some positive impact in the community. After all ecotourism is tourism for the environment.

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A Glimpse at Environmental Education Activities in Japan

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Environmental education policy in Japan

In Japan, the Basic Environmental Law was enacted in 1993. In this Law, three articles, 25, 26 and 27 are particularly related to environmental education and capacity building activities. Article 25 deals with education and learning on environmental conservation, whereas Article 26 is concerned with measures to promote voluntary activities by private organizations. Article 27 is about provision of information. This law is the beginning of the formal environmental education policy in Japan.

Environmental education in School

Within the framework of the environmental education policy, Japan tried to formulate environmental education in the school education. In the Japanese school education curriculum, there are two courses, in which the topics of environment are dealt with. One is the course Life Environmental Studies and the other is Period of the Integrated Studies.

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Life Environmental Studies: In the 1989-revised course of study, Life Environmental Studies was added as a new course for the early years of the elementary school. This course is intended to develop interests in students to link the relationship between oneself and the environment, and also develop the habits and attitudes conductive to an appropriate lifestyle through hands-on experiences. Importance is also attached on fostering abilities needed to solve environmental problems and, in the revision, emphasis was placed on fostering abilities and attitudes appropriate to responding positively to social change and on developing experience-based learning and problem-solving ability.

Period of the Integrated Studies: The Period of the Integrated Study was established in order for an individual school to be able to develop distinctive education activities and to make efforts to conduct interdisciplinary and comprehensive teaching activities, particularly, in response to the local environmental issues.

Children are given opportunity to deepen their understanding of the environment and energy issues and develop respect for the environment. They are encouraged to develop practical skills and abilities to take actions voluntarily on the conservation of the environment and make it better. Thus, great emphasis is placed on problem-solving and hands-on learning approaches.

The course Period of the Integrated Study aims at helping children to develop capability and ability to discover problems by themselves and solve those problems collaboratively. Interdisciplinary and comprehensive approaches, which reflect each individual school's activities and children's own interests are emphasized.

Individual schools are expected to develop activities for the Period of the Integrated Study. Its contents are interdisciplinary and comprehensive in nature and include international understanding, information, environment, welfare and health. Students select any of these contents based on their interests and the activities closely related to those of the school and the community.

Annually, around 110 school hours will be allocated to the Period of the Integrated Study for the third graders and older at elementary school and more than 70 school hours annually for lower secondary school students. The upper secondary school students will have 105-210 credit hours in this course depending on their schools.

Experience of Kowgai Education

Background

The early history of environmental education started in the 1960's as a concrete practical activity to improve the serious situation of the environmental deterioration and then recover the degraded environment. In other words, the history of the environmental education in Japan has started from the Kowgai education, which was one of the bottoms up approaches in educational movement related to the environmental reforms. The word "Kowgai" means the status of "pollution" or "public nuisance". Every Japanese knows that the word Kowgai means serious environmental situation.

In Japan, during the 1960s and the 1970s, there were four big pollution problems. It is said that those problems occurred in the process of industrial production activities. Pollution was related positively to economic growth in Japan. There were four-big-scale pollutions and were very miserable. People's health was affected by air or water pollution and many people, sometime, became pollution patients. The people who became patients or teachers who lived in the affected communities raised strong objections to pollution. They started many actions against pollution. Thus Kowgai education started as one of the movements in the 1960's.

Kowgai education started at the grassroots as one of learning processes of the pollution issues. And, it had a great influence on pollution control. The Kowgai education was active during the 1960's and the 1970's. The reason is that many issues related to pollution occurred in Japan during that time. Learning of the Kowgai education was related to the Japanese economic development, which caused inappropriate situations like pollution, and it was the one of critical influence to Japanese productive and economic systems.

Foot print of Kowgai education: Figure I shows the data of the air pollution and the number of complaints in Japan. There are two peaks in the figure. One is the peak of the pollution, and the other is that of complaints, which is thought to be the amount of people's awareness rising for air pollution. Why these two peak separate like this? Someone might think that at the time of peak of the pollution, the awareness also rose up as well. However, by this figure, these two peaks are



separate like this. This trend is not only seen in whole Japan, but also seen in the rural region like Yokkaichi. Peaks of pollution and awareness are separate.

It can be said that during the period between 1969 to early 1970's, Kowgai education played a great role to enhance awareness on Kowgai. Line is rising up rapidly in the figure, because the movement of Kowgai education made complaints and criticized the environmental degradation which were accepted by many of the Japanese people as a "public nuisance". So, the level awareness against pollution grew rapidly and air pollution went down.

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