

Education and Communication For Biodiversity Conservation in Nepal

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Abstract

Conservation Education and Communication (CEC) has always been an integral part of the World Wildlife Fund (WWF) Nepal Program. The formation of Eco Clubs at schools, non formal education, students' stipends, study tours, exchange visits and the dissemination of educational material are a few ways by which conservation education is taken to students. Similarly, quarterly newsletters, annual reports, radio programs, media tours and media coverage are a few ways by which conservation messages are communicated to the communities at the local, national and international levels.

This paper examines through case studies how the CEC program of WWF Nepal Program has been playing a crucial role in bringing about positive changes in the attitude and behavior of schoolteachers, students and community members in support of conservation and Sustainable Development (SD) in Nepal. Through such programs WWF Nepal Program and its partners have been able to minimize the conflict between the park and the people by bettering understanding of the importance of conserving the natural and cultural environment. Furthermore, such efforts have been helpful in enhancing the capacities of community members to improve their livelihoods by conserving and sustainably managing Nepal's biological diversity.

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Introduction

So far over 18.33 per cent of the total area of Nepal (147,181 kms²) has been declared protected, with nine national parks, three wildlife reserves, three conservation areas and one hunting reserve, established in the three different ecological zones: the Terai, the mid-hills and the high mountains. Initially, protected areas were established in Nepal for the protection of wildlife, especially endangered wildlife. The objectives have, however, since been broadened to include the conservation of natural, historic, scenic and cultural values. Whilst the National Parks and Wildlife Conservation (NPWC) Act of 1973 provides the legal basis for the management of protected areas, a people centered management approach is needed to address the challenges faced by the protected areas today. In such a people centered approach, education and communication are key tools and have thus been an integral part of WWF Nepal Program's activities.

Ecology of Nepal

The three ecological zones in Nepal—the Terai, the mid-hills and the high mountains—possess a disproportionately rich diversity of flora and fauna at genetic species and ecosystem level because of the variation in altitude (from less than 100m to 8,848m). The forests in the Terai region support some of the highest Royal Bengal Tiger densities in the world, the second largest population of the Greater One-Horned Rhinoceros and the largest herd of Swamp Deer. It is also home to other endangered and protected species including the Asian Elephant, the Gangetic Dolphin, the *Gharial* Crocodile, the Hispid Hare, the Greater Hornbill, the Sarus Crane and the Bengal Florican. Similarly, the high mountains are home to the elusive and endangered Snow Leopard. They are also home to other rare and endangered species such as the Red Panda, Musk Deer, Tibetan Antelope, Himalayan Black Bear, Grey Wolf, Wild Yak, Impeyan Pheasant and Cheer Pheasant. Thus, proper management and conservation efforts are being made to conserve the rich biological diversity of Nepal to provide opportunities for long-term survival to large species and to improve peoples' livelihoods.

The Role of Education and Communication in Biodiversity Conservation in Nepal

Conservation education and communication have been an integral part of WWF Nepal Program's activities since its inception in 1993. WWF Nepal Program runs many conservation awareness programs for different target groups helping them understand how conservation of the natural and cultural environment, including protection of biological diversity and restoration of forest corridors enable them to meet their livelihoods resource needs sustainably. Using many tools to raise awareness, education and communication play a significant role in bettering understanding among the people living in the National Parks and the surrounding Buffer Zone, about the importance of conserving the natural and cultural environment.

In collaboration with partners—community based organizations, local non-governmental organizations, government officials, district development committees, village development committees and local leaders—WWF Nepal Program organizes various awareness and capacity building programs to increase the capacities of local people to conserve and sustainably manage Nepal's biological diversity in a way that is ecologically viable, economically beneficial and socially equitable. This is essential to increase the appreciation of the relationship with, and dependency on, the natural and cultural resources, to bring changes in attitude and behavior and enable people to cope with unexpected vulnerabilities.

Following the findings of the Tbilisi Declaration, WWF Nepal Program's conservation education and communication approaches focus on five criteria, which are:

- *Knowledge*: To provide individuals and communities with a basic knowledge and understanding of the environment, the biodiversity and their inter-relationship with humans.
- *Awareness*: To promote awareness and a sensibility in individuals and communities about the environment, the biodiversity and its problems.
- *Attitude*: To encourage individuals and communities to value the environment and consider it important in order to inspire participation in the process of improving and protecting the environment for the betterment of their own livelihoods.
- *Skills*: To provide people with skills to identify, predict, prevent and solve environmental problems and to make them capable of utilizing limited resources in a sustainable way and of coping with unexpected vulnerabilities.
- *Participation*: To provide individuals and communities with the opportunities to actively participate in solving environmental problems and to make educated decisions about biodiversity conservation and SD.

WWF Nepal Program's education and communication for biodiversity conservation and SD in Nepal include the following approaches:

1. Capacity Building Programs
2. School Based Environmental Clubs—Eco Clubs
3. Environmental Awareness and Extension Programs
4. Girl Students' Stipend
5. Non-Formal Education
6. Printed Educational Materials
7. Publications
8. Media Coverage
9. Radio Programs
10. Conservation Videos/Documentaries

Capacity Building Programs

Capacity building programs (such as training sessions, workshops, study tours, etc) are organized for local staff, teachers and local leaders, to develop their understanding, skills and capabilities in conservation and SD. Additionally, the capacity building programs help equip the local people to identify the livelihood opportunities in order to develop efficient human capital for conserving biological diversity, for the sustainable use and management of natural resources and for achieving positive livelihood outcomes.

Case Study I

The Sagarmatha National Park Buffer Zone was declared in January 2003.

The user groups and people residing around the national park had no knowledge about the potential advantages of the Buffer Zone declaration. Local residents always felt that the park rules were unfavorable for them, prohibiting the collection of firewood and other forest products.

Addressing this situation, the park and WWF Nepal Program staff provided local people with an orientation regarding the benefits of Buffer Zones, taking them on study tours in the Royal Chitwan and Royal Bardiya National Parks in the Terai Arc Landscape and their respective Buffer Zones. The participants observed and discovered various opportunities and advantages of the Buffer Zone for local residents. They learned about opportunities to promote tourism in the region and use revenues generated from the tourism industry for regional development.

Returning to their own region, residents in and around Sagarmatha National Park also received capacity building in the form of training sessions and workshops, convincing them that the Buffer Zone would be for the good of local residents thus enabling them to identify the opportunities for sustainable livelihoods and development. Hence, with help and support from the local residents, the Sagarmatha National Park Buffer Zone was declared in January 2003. The declaration would not have been possible without the help of the people residing in the national park and surrounding areas. The people residing in the buffer zone receive up to 50 per cent of the park's revenue for the development of the region and to enhance their standard of living.

School based environmental clubs—Eco Clubs

In conjunction with conservation partners, WWF Nepal Program has implemented school based Environmental Education (EE) programs through the formation of Eco Clubs. Since 1994, 245 Eco Clubs have been formed under WWF Nepal Program and its partners in 16 districts of Nepal with over 30,000 members.

Eco Club members carry out various curricular and extra curricular activities to enhance their knowledge of the environment and its conservation and to raise

environmental and conservation awareness among the students, teachers and youth, encouraging them to participate in the conservation of the natural and cultural environment at local and national levels.

The Eco Club activities include study tours, planting projects, clean-up campaigns, awareness campaigns in the locality, recycling and re-use of waste materials, and various competitions such as essay, poetry and song writing and performance, quizzes and sports. These are very helpful in developing the students' knowledge and personality as a lot of preparation is required before writing an essay, poem or song. These activities give them an opportunity to learn by doing and increase their creativity, encouraging them to participate in other programs. Using this creative and entertaining learning process, in which students research and apply their findings, proves more effective than other one-way approaches where students simply acquire knowledge. These activities also help develop the social capital of the nation.

Case Study II

One of the best examples of conservation work done by the school based Eco Clubs is that of the Students' Environment Group of Jagatamba Secondary School, Thakurdwara, Bardiya. The Eco Club won the Abraham Conservation Award in 1999. One of Eco Club many remarkable activities is the management of 8 hectares of government forest that was at one time illegally encroached upon by landless people. The Eco Club members played a crucial role in the reforestation of the encroached land and are at present carrying out agro-forestry work on the land. The Eco Club members sell the fruit generated from the agro-forestry work and collect funds for Eco Club activities. The Eco Club activities in addition to increasing the level of awareness among the students also provide opportunities to utilize and manage the livelihoods resources for the sustainability of the Eco Clubs. Additionally, the members and teachers of the Eco Club spread conservation awareness within the community.

There are 7 Eco Club networks in Bardiya, Bhaktapur, Dang, Kailai, Kanchanpur, Palpa and Solukhumbu—formed to strengthen the Eco Clubs, to facilitate sharing of ideas among the members and to make the Eco Clubs independent and self sustainable. Each Eco Club has two teachers for guidance and support—the principal of the school (as patron of the Eco Club) and, usually, a teacher who teaches Environment, Health and Population, a compulsory subject in His Majesty's Government of Nepal's (HMG/N) curriculum. With 245 Eco Clubs, WWF Nepal Program and its conservation partners have 490 teachers as assets to support and ensure quality conservation education in both schools and communities, thus ensuring the development of social capital in the regions.

By instilling the importance of conservation and SD in the minds and actions of the youth, we look forward to their support as they grow up and leave the Eco Clubs. It has

already been observed that Eco Club members show increased responsibility towards the environment and student education radiates through communities. Conservation messages conveyed to a student are passed to the people in his/her home, then through them, to the wider community. Eco Club activities are much appreciated in schools by the teachers, students and parents.

Environmental Awareness and Extension Programs

Various environmental awareness and extension programs including campaigns, community mobile education and extension programs, celebrations, audio/visual programs, billboards with conservation messages and street theatre are organized at local levels to create awareness on conservation issues among the local communities. These are more frequently organized for environmental celebration dates such as World Environment Day, World Forestry Day, World Wetland Day, Wildlife Week, Biodiversity Day, etc. The Ministry of Population and Environment, of His Majesty's Government of Nepal, has encouraged organizations working in the field of environmental conservation to make the most of celebrations as important opportunities to communicate and raise community awareness about the significance of biodiversity conservation and SD.

Hence, these events are celebrated in the project areas of WWF Nepal Program by students, teachers, local NGOs and community-based organizations, with community participation. These celebrations are an effective tool for disseminating information about the importance of biodiversity, its conservation and sustainable use. They not only help raise awareness among those who participate in the festivities, but also among the larger communities who observe the programs. The knowledge participants' gain from their involvement in such events is shared among friends, neighbours and members of the wider community thus increasing conservation awareness among a larger population.

Case Study III

Eco Club Meet 2004 – World Environment Day

On the occasion of the World Environment Day 2004, Eco Club Meet 2004 was organized from June 1–6, 2004 with the objectives of:

- bringing together the members of school environment clubs in order to encourage them for greater participation in conservation awareness activities by sharing ideas and experiences, and
- spreading wider awareness about Eco Club activities.

A three day **Eco Club Camp** was conducted for the Eco Club members and teachers from the project areas of WWF NP namely, Terai Arc Landscape, Sagarmatha Community Agro-Forestry Project and Northern Mountain Conservation Project. Altogether 8 Eco Club teachers and 28 members participated in the Eco Club camp where they learned composting, solar water disinfection process, paper recycling, renewable and non-renewable energy and various methods to work in teams through games and interactions. The most interesting part was that the Eco Club members from six different districts of Nepal (Project Areas of WWF NP) got an opportunity to share each other's experiences and ideas on environment conservation activities during the three days at the Eco Club Camp.

Additionally, more than 300 students (members of school environment clubs—Eco Clubs and Nature Clubs) from 10 districts of Nepal participated in the various programs such as the Art Competition, Learning Workshop for School Environment Clubs, Poster Presentation Competition, Field Visit and On the Spot Report Writing Competition, Eco Yatra: Visit to houses following environmental practices, organized during the Eco Club Meet 2004. The winners of the program were given prizes during the closing ceremony of the program.

Programs like these boost students' knowledge and confidence, enabling them to identify and choose better livelihood opportunities as they grow up, while making them environmentally conscious and proactive. The Eco Club Meet 2004 was organized in partnership with various organizations working towards biodiversity conservation and SD in Nepal.

Not everyone in the remote areas of Nepal has access to radio or television, and quite a number of people cannot afford these. In such areas, other communication means are more effective, such as street theatre and mobile exhibitions. Professional organizations and groups perform street theatre in these areas, writing their own scripts and performing according to community needs. In this way, street theatre carries conservation messages to those who are often less aware of the issues, and proves an effective means of communication and education.

Case Study IV

Extension programs are a very effective medium of communication in and around Nepal's National Parks. These programs not only raise awareness among the people but also bring out the participants' hidden talents. For example, a group of people from the capital city, Kathmandu, went to the Royal Bardiya National Park Buffer Zone and performed street theatre on the importance of biodiversity conservation. After seeing the performance, a person from the locality started doing the same and he now has a group of people doing conservation street theatre performances, raising community awareness and at the same time earning a considerable amount of money for his livelihood.

Girl Students' Stipend

The Girl Students' Stipend is for the long-term empowerment of women through education and to reduce the gender inequality due to lack of financial resources. The Girl Student Stipend is awarded to needy girls in the mountain project areas of WWF Nepal Program. Educating girls is a long-term investment for biodiversity conservation and SD. In the Terai Arc Landscape the student stipend is provided to students who have been injured or whose families have suffered casualties from wildlife. The stipend is also provided long-term to the girls/boys whose parents have been killed by wildlife. This kind of stipend is provided to compensate for damages caused by or reduced vulnerability raised due to wildlife. In this regard, an endowment fund has been created for the sustainability of the program. In total, 106 students have been receiving students' stipends in the project areas of WWF Nepal Program.

Non -Formal Education

(a) for Women

Non-formal education is implemented in the project areas of WWF Nepal Program, in order to improve literacy rates and to increase levels of conservation awareness. This is especially so among women who are an integral part of the household. However, a few men also participate in the program. In rural areas it is women who collect fodder for their cattle and firewood from the prohibited forest. Women are the heart of the house so it is essential to educate them in the wise and sustainable use of resources. Women attending non-formal education classes say that education makes them much more alert and that they cannot be cheated easily. They learn to read, write, do basic calculations and learn about the sustainable use of natural resources. It is said that "if you educate a man, you educate one person but if you educate a woman, you educate the whole family".

Non-formal education

(b) for 'Gothala' (Cattle herders)

Gothala or cattle herders' education is another form of non-formal education, aimed at teaching cattle herders about the importance of conservation and sustainable use of resources, and motivating them to enroll in school so as to increase the literacy rate in the community. Cattle herders spend most of their time in the forest, habitually destroying plants, cutting off branches off trees, collecting and eating the eggs of birds and killing birds for meat. These environmentally unfriendly practices generally result from lack of conservation awareness.

The *gothala*/cattle herders' non-formal education program was launched to address these habits. Cattle herders are taught basic literacy, environmentally friendly and sustainable resource use practices, encouraging them to engage in productive work during their spare time. The cattle herders' education is usually carried out in the cattle-grazing fields, facilitating access to, and the application of, whatever is being taught.

Case Study V

At the Royal Bardiya National Park, after receiving the cattle herders' education, 50 cattle herders enrolled themselves in Jagatamba Secondary School, Thakurdwara, Bardiya for formal education. This was generally the result of finding out the advantages of being able to read and write. Such activities could also motivate them to alter their livelihoods strategy, which could result in a reduction in the risk of unsustainable grazing. Though it may take some time, education and communication can bring about dramatic changes in the behavior and attitudes of people in the vicinity of protected areas.

Printed educational materials

The educational materials are developed in Nepali for the community members. They are usually developed focusing on forest and species conservation. Different types of materials are developed for different target groups—such as community members, school students and teachers—including books, posters, flyers, bookmarks, postcards and stickers.

During the conservation education classes, it is much easier to help the target audience understand the conservation issues with the help of visual aids. Following the classes, educational reference materials are distributed, helping the target audience to recall and retain conservation issues.

Case Study VI

Red Panda saved by Eco Club Member: The impact of an educational poster

A young boy studying in grade V at Shree Jana Sewa Lower Secondary School, Sano Gumela in the Sagarmatha Community Agro-Forestry Project (SCAFP) found a few porters trying to hit and kill an animal that was wandering on a trail near the Toktok village at Chaurikharka VDC—5, Solukhumbu. The boy believed the animal to be a Red Panda. However, not being quite sure, he went and explained what he had seen to his brother—Sanjiv Rai an Eco Club member—who ran to the site. Referring to the educational poster developed and distributed by WWF Nepal Program, he verified that the animal was a Red Panda—a rare species. He saved the Red Panda from the porters and reported the incident to SCAFP officials. The Park Ranger of Sagarmatha National Park, who was present in the SCAFP office, went to the location and released the panda into the forest.

When asked later, Sanjiv said that he had seen and read about the animal in the Nepali poster Rare/Endangered Animals Species found in Mountain Region of Nepal provided by SCAFP, enabling him to identify the animal. He is actively involved in conservation activities through the Eco Club formed by SCAFP. The boy was felicitated by the Deputy Director General of the Department of National Parks and Wildlife Conservation in an award distribution ceremony.

This incident has shown that:

- Educational posters are an effective means to spread awareness;
- Eco Club members, with proper guidance, can really play an active role in conserving endangered and rare species.

Publications

Quarterly Newsletter

Quarterly newsletters are published in each of the project areas, detailing the important activities being carried out in the communities. The quarterly newsletter contributes to recording and disseminating information to people about the project areas' activities.

Annual Report

An annual report, published from the head office is a brief collection of the year's work and the achievements of the WWF Nepal Program family. The report gives others the opportunity to learn about WWF Nepal Program's progress and successes in conservation. They are circulated throughout the WWF Network, other conservation organizations, partner organizations (both governmental and non-governmental) and many other institutions and individuals who are keen to know about WWF Nepal Program and its conservation activities.

Media Coverage

Media coverage is also a crucial way to make conservation efforts known to the rest of the country and the world, so WWF Nepal Program organizes media trips for environmental journalists. These media trips help journalists appreciate, and thereby portray, the real situation 'in the field'. Media coverage motivates the people involved in conservation by recognizing their efforts and also reaches out to the general public who are keen to know more about conservation.

Radio Programs

Radio programs are carried out in collaboration with various local FM stations in the project areas of WWF Nepal Program. At present, the radio program Bhuparidhi (meaning landscape in Nepali) is broadcast in the Terai Arc Landscape area to raise awareness on various conservation issues in the area among residents. Bhuparidhi has become one of the best examples of disseminating information through radio to larger audiences than can possibly be reached by field staff in a short period of time. The program coordinator received lots of queries and feedback letters from the audience, and a listeners' club has been formed which has established good communication channels. In Nepal, radio is the most effective medium of communication as it has a wide coverage, most people can afford it, and it reaches illiterate people in a way that most printed media cannot.

Conservation Videos/Documentaries

Videos and documentaries on the conservation of forests, wildlife species, plant species and the sustainable use of resources are also made and collected from relevant organizations. These videos and documentaries are shown to the protected area community members in order to raise conservation awareness. Project documentaries are also made and broadcast on national television and other channels. By doing so, information about project activities and regional issues is disseminated to a larger audience. People residing in the project areas and involved in conservation activities, feel proud and motivated when such information is aired on reputed television channels.

Conclusion

The main objective of conservation education and communication is to bring about changes in the attitude and behavior of youth, local people, and local leaders through various awareness programs, so that they become catalysts in efforts to raise voices supporting conservation and SD. Conservation and the sustainable use of resources begin at home. Thus, knowing about conservation and sustainable use of resources is important for everyone as it increases the level of awareness on conservation and access to livelihood resources and its sustainable use. It is through various education and capacity building programs that WWF Nepal Program and its partners have been able to minimize the conflict between the park and people and, by creating better understanding among the local people. Furthermore, such efforts have been helpful in enhancing the capacities of community members to improve their livelihood status by conserving biodiversity.