

## **FOR ENVIRONMENTAL EDUCATION IN UNDERDEVELOPED COUNTRIES**

**D. C. Cawsey**

*Environmental Training Consultancy, Pencroft Farm, Uplyme, Devon, England*

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### **Summary**

Education is an essential requirement for solving the problems faced by the underdeveloped countries. Many of these problems relate to the environment. The priority needs of communities in underdeveloped countries include: provision of drinking water and sanitation; health and hygiene education; maintaining soil fertility; solid waste disposal. Formal educational methods are not always appropriate and informal methods are often more effective. The work of international NGOs is exemplified by a conservation plan developed by the World Wildlife Fund (WWF) with participation by indigenous people in Cameroon.

Local NGOs working collaboratively with international NGOs can be very effective and this is illustrated by an example from Bangladesh. Some of the most effective environmental education takes place through small-scale local initiatives including micro-enterprises such as COFERENE in Costa Rica. Performance education, as exemplified by the Ndere Troupe in Uganda, uses traditional methods to convey environmental education especially where literacy rates are low or formal methods are inappropriate. Individuals also play an important role in forming local NGOs and in publicizing environmental issues. In some cases, individuals have been killed for their beliefs and protests, but resulting international publicity has led to positive changes in the countries concerned.

## 1. Introduction

Education is a key requirement for solving many of the problems faced by underdeveloped countries. Many of these problems relate to the environment. Before considering the important role of environmental education, the needs of rural and urban communities in underdeveloped countries should be identified. The priority needs include:

- Provision of drinking water and sanitation;
- Prevention of water borne diseases
- Health and hygiene education;
- Provision of birth control;
- Prevention of sexually transmitted diseases;
- Maintenance of soil fertility in rural areas;
- Provision of housing and transport especially in urban areas;
- Disposal of wastes especially in urban areas.

Although increasingly formal methods of education are being adopted by underdeveloped countries, such methods may not always be the most appropriate for providing environmental education. Many people in underdeveloped countries are unable to read and write. This is especially so in rural areas where, traditionally, informal learning takes place through work, play and conversation. Some examples of these informal but effective educational methods are described below.

## 2. International NGOs

International NGOs support many different types of initiatives for environmental education in underdeveloped countries. In the field of wildlife conservation, the World Wildlife Fund (WWF) is the world's largest and most experienced independent organization. The organization supports projects linking indigenous peoples and conservation in many underdeveloped countries, for example Brazil, Central African Republic, Mongolia, Nicaragua and Papua New Guinea. Traditional peoples have accumulated vast amounts of ecological knowledge in their long history of managing their environment. This knowledge can be beneficial for nature conservation and the sustainable use of natural resources. An example from Cameroon illustrates how the knowledge of local people and specialist expertise can be brought together for wildlife management.

The Lobeke National Park is an area rich in forest resources and wildlife on which have depended generations of indigenous communities. These include the Baka Pygmy, the Bangando, and the Bakwelle. Human activities in the region include timber extraction, hunting and fishing. In order to provide a management and conservation plan for the Park, local communities, administrative and municipal authorities, representatives from the Ministry of Environment and Forests (MINEF), and representatives from WWF and the German aid agency (GTZ) were brought together to consider the issues involved. This participatory process resulted in a document which defined the boundaries of the park, community hunting zones and important sites used for rituals by the Baka people. The community was satisfied with the outcome because all the main demands of the

local people were met, and they secured a larger area of community forest than they had expected.

WWF is involved in ecological monitoring of the Lobeke region. The Lobeke Reserve is home to a great variety of endangered animals such as forest elephants, western lowland gorillas, leopards and forest buffaloes. Unfortunately the richness of the region has attracted timber companies and poachers. Since the 1970s timber companies have opened up an extensive network of roads and tracks such that only 400 of the 2,200 square kilometers of the Lobeke Reserve are still untouched. The number of poachers has risen sharply and the number of animals has decreased significantly.

With only five guards at its disposal, the Cameroonian Ministry of Environment and Forests (MINEF) was facing an impossible task to patrol the areas of Lobeke, Boumba-Bek and Nki which together total 6000 square kilometers. With the support of WWF-Germany, the WWF Programme Office in Cameroon started a forest guard program in 1999. The initial funding guaranteed the salary of 20 guards for three years. The approach was to recruit exclusively from the local communities. All the villages of the region were informed and there were 280 applicants. After an initial selection process, 120 candidates progressed to a written examination based on their motivation and knowledge of the forest and conservation. The 50 candidates who passed were then interviewed by a panel composed of representatives of MINEF, GTZ and WWF. They were also tested on their understanding of the different roles of government and NGOs.

The new guards have had some success against the poachers. A few weeks after starting her job, Charlotte Lambo, the only woman to be appointed, commented:

*“Even in this short period of time, we have seized six pairs of elephant tusks, several kilos of bushmeat, dozens of green parrots, and even two leopard skins. Too often they (the poachers) come back. Sometimes, they resist and we are obliged to beat them. That doesn’t bother me, though. Here it’s rare that a woman has the opportunity to beat a man!”*

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### **Bibliography**

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Vargas, C. M. (2000). Community Development and Micro-Enterprises: Fostering Sustainable Development. *Sustainable Development* 8, 11-26. [This study assesses the reasons for the success and failure of micro-enterprises in the context of sustainable development. One of the case studies described is COFERENE in Costa Rica.]

**Websites:**

[www.wateraid.org.uk](http://www.wateraid.org.uk) [The web site provides comprehensive information about the organization and its activities]

[www.wwf.org](http://www.wwf.org) [The web site provides comprehensive information about the organization and its activities including details of individual projects in underdeveloped countries.]

**Biographical Sketch**

**Professor David Cawsey** has an honors degree in Geology and a doctorate in Civil Engineering. He is a Chartered Geologist and a Fellow of the Geological Society of London. His wide experience includes working for central and local governments, higher education, and industry in engineering geology and subsequently in environmental engineering and management. He is the author of more than 50 publications in these fields. Other professional activities have included leading successful international environmental and training programs, and acting as external examiner and adviser for degree programs and doctorates. He now combines some university teaching with consultancy and professional activities.

Professor Cawsey has spent most of his career in university teaching and research, especially collaborative research projects with industry and local authorities. He has recently left his post as a director of a university school of the environment to concentrate on consultancy, teaching and other professional activities. His experience includes involvement in many European-wide environmental programs, and he was recently involved in coordinating the development and implementation of a new European training course including modules on sustainable development, life cycle assessment and environmental management systems.