

Education

Education, training, and awareness raising are the doorways to effective stakeholder participation and empowerment in biodiversity conservation and management.

Education, training, and awareness raising are critical to bringing various stakeholder groups to the same level of understanding about project goals, objectives, and methods.

Education also helps ensure that all stakeholders are equally able to contribute to decisions about how resources are to be managed.

Participation reflects organized efforts to increase control over resources and regulative institutions by communities previously excluded from such control. Empowerment enables communities previously excluded from power to secure a fair share of the contested power. In simple terms, control over resources is achieved through exerting power in an institutionalized setting, and the capacity to exert power is facilitated by education, training, and building awareness.



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Formal education is one way to develop stakeholder understanding of biodiversity conservation issues.

Although the terms education, training, and awareness raising are often used interchangeably (they use many of the same processes and procedures to achieve their different purposes), they are not synonymous. Education gives the learner knowledge that he or she can use to take guided actions or to make decisions on matters of interest. Training is concerned with preparing people to perform specific functions within defined settings in which they work or play. Training improves their performance at particular tasks through the acquisition of

information and skills. Awareness is not an action or activity, but rather a consequence of education, training, observation, and experience. The ultimate goal of education, training, and awareness raising can be said to have been achieved when an individual knows about the existence of an issue and understands it sufficiently to take appropriate action (Byers 1996).

Observations from the Field

When asked about options for conservation of medicinal plants, villagers in Mali responded, “There is no problem because you cut the plants, and, when rain falls, they grow again; even when you burn them, they will always grow again.” In a study of the perceptions and values of wildlife and forests of village communities around forest protected areas in southwestern Ghana, it was found that four out of the six factors identified as key to the overexploitation and degradation of forest resources were related to ignorance (Ntiamao-Baidu 1995). Education (both formal and nonformal) was therefore considered central to raising people’s awareness of the issues, as well as equipping them with the skills required to address them. **NATURAMA**, **CAMPFIRE**, **DZANGA-SANGHA**, and other BIOME projects have developed educational materials, school curricula, and teacher-training tools to help promote environmental awareness at the local and national levels.

All of the BIOME projects incorporate training elements for both staff and key stakeholders and are using various methods to educate communities and to develop their capacity to manage natural resources. **KENGO** organized training seminars and mounted exhibitions on indigenous fruits and vegetables and recipes to sensitize and equip women in their project area with the technical expertise required to cultivate the fruits and vegetables. In Burkina Faso, **NATURAMA** organized training programs in fire fighting, apiculture, and soil conservation to enable village communities to contribute to the management of the Kaboré Tambi National Park and the resources it contains. The **MASOALA** project in Madagascar incorporated training of community members to impart skills and empower them in their role as respected and recognized partners in managing the protected area. In Côte d’Ivoire, **VIE ET FORÊT** provided training to community health workers and traditional midwives to enhance their effectiveness as social service providers. **GACON**, in Ghana, provided communities of more than 7,000 people with training in use and construction of efficiency-improved stoves, fire prevention techniques, fire break construction, and nursery practices.

In the East Caprivi area of Namibia, exploitation of water lilies and palm trees was unsustainable. People were compelled by hunger to start harvesting water

lilies before the plants had had time to seed, thus reducing the viability of the resource base. To address these problems, the **LIFE** project mounted an education campaign involving personal contacts and production of brochures and leaflets; it also drew upon people's indigenous knowledge of harvesting methods to sensitize them to the problem and encourage wise use of the resource. Similarly, women who use palms for basket making were trained in alternative methods of weaving to improve the quality of the finished products. These improved palm baskets were more suitable for urban taste, thus increasing the market value of each basket and reducing the need to mass-market baskets and overexploit the palms.

The **LIFE** project also used a "training of trainers" approach to improve the skills of carvers and the quality of their crafts. Working through the CACA, the project identified master craftsmen in villages, hired a consultant to train them in how to produce high-quality crafts, and sent the trained master craftsmen to villages where they organized training workshops for small groups of village craftsmen.

Another effective approach is the organization of study tours/visits by community members to another community where things are working better. This provides people with first-hand experience of what works and what does not, and it allows exchange of experiences among people with similar interests. This method was used by the **LIFE** project, where reciprocal visits were arranged between local people from the Kunene region, who had long been involved in community-based natural resource management projects, and those of the East Caprivi area, who were just starting. The key here is to recognize the limitations of communities in terms of appropriate skills for natural resource management and marketing, to identify key members of the community through participatory processes, to identify their training needs, and to provide for such needs.

In the **CAMPFIRE** project, education, and awareness raising were given a high priority from the beginning because the project was introducing a new approach to wildlife management to policymakers and the communities involved, and all stakeholders needed to have a common understanding of the project's goals and mission. As a result, the **CAMPFIRE** project provides useful examples of the range of education and training activities typical of BIOME projects. In **CAMPFIRE**, there are three main approaches. The Centre for Applied Social Sciences (CASS) disseminates the results of its socioeconomic research and conducts monitoring and evaluation of institutional activities to promote the adaptive management of the **CAMPFIRE** program. Africa Resources Trust (ART) undertakes international awareness raising and lobbying, advocating for the sustainable use of wildlife products. It also raises awareness

about the **CAMPFIRE** approach to sustainable wildlife management in Zimbabwe within the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and organizations related to the Biological Diversity Convention. Zimbabwe Trust (ZIMTRUST) trains communities to identify their development needs and design development projects that they will manage, and it provides assistance to communities and community institutions to enhance their capacity to manage common wildlife resources in the interest of sustainable development.

Conclusions

Education, training, and awareness raising are important aspects of all BIOME projects. Most, however, neither made an explicit distinction between education and training nor characterized exactly how these activities were expected to change the behavior of the learner. Observation of BIOME projects also revealed that education is still often viewed as a one-way process whereby “knowledgeable” managers impart “valuable information” to less knowledgeable community members. In this scenario, the learner is psychologically subjugated by the teacher, and the teacher seldom believes that the learner knows anything of value. For the most part, BIOME projects’ views of education focused on “science knowledge” and seldom on “time-and-place (indigenous) knowledge.” A focus on science knowledge and formal teacher-student modes of education denies the two-way flow of information that is critical to finding effective solutions to development and conservation challenges.

Observations from the BIOME projects allow us to draw several specific lessons learned.

🍃 Education, training, and awareness raising are critical to bringing different stakeholder groups to the same level of understanding about project goals, objectives, and methods.

🍃 Education programs are most effective when they are designed to address specific audiences. This is particularly important when a primary goal of education and training activities is to enhance the functional awareness of individuals and communities so that they can design and implement their own development activities based on sustainable wildlife management.

🍃 Given the range and complexity of education and training needs, projects should seek partners to help provide a reliable source of funding and technical expertise to run the education and training program.

🌿 Strong national and local government support provides opportunities for projects to collaborate with other institutions and organizations that can provide technical expertise and training facilities.

🌿 Integrating indigenous (time-and-place) knowledge with scientific (including economic and political) knowledge is the key to finding effective solutions to development and conservation challenges. Acknowledging that local communities hold the key to understanding local environmental and socioeconomic conditions and constraints is as important as acknowledging that indigenous information is not sufficient to solve many twenty-first century problems.