

# Mali

## Environmental Education Expansion

**In 1997**, the Malian government, USAID, and other international donors were on a quest to boost Mali's agricultural production while also protecting the environment from threats such as forest loss, desertification, and soil erosion. USAID/Mali envisioned a comprehensive program of agricultural research and extension activities, improved governance in the realm of natural resource management, and environmental education.



The mission called on GreenCOM to help address its education objective for Malian youth. GreenCOM's task was to strengthen environmental education in primary schools and to use other, less formal communication tools to carry environmental messages beyond the schoolyard and into community and family life.

### *Environmental Education Strategy for Schools*

Mali's Ministry of Education had chosen an infusion model for introducing environmental education in primary schools. Infusion "integrates environmental education into existing lessons, units, or topics focusing on other subjects such as history, science, and the social sciences."<sup>1</sup> The ministry had also decided on four environmental issues that schools should focus on: desertification, firewood harvesting, firewood reduction technologies, and erosion.

GreenCOM's task was threefold:

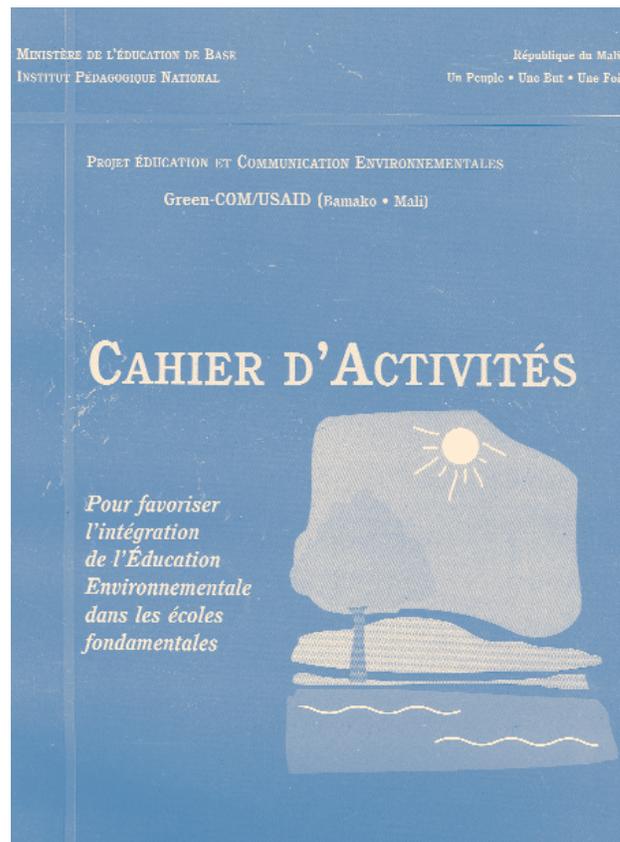
- **Develop a teacher's guide** to environmental education infusion.
- **Train selected teachers** to use the guide in a pilot test of 18 schools.
- **Measure student knowledge** of particular environmental issues before and after the pilot test.

<sup>1</sup> US Environmental Protection Agency, *Report Assessing Environmental Education in the United States and the Implementation of the National Environmental Education Act of 1990*. Washington, DC: US EPA, 1996, 8.

GreenCOM worked with an African environmental education specialist to write a teachers guide based, in part, on an existing environmental education curriculum. The new GreenCOM guide contained practical ideas about how teachers could integrate environmental information in their lesson plans for French or math or history, for example. Project staff vetted the guide with district supervisors, principals, and educators, who helped to refine the contents.

Once a working draft of the guide was ready, GreenCOM held a series of workshops with teachers from the 18 primary schools selected for the pilot program. These schools, both public and private, were located in three regions of Mali—Bamako, Koulikoro, and Sikasso. Ninety teachers received instruction on using the guide. Pre- and post-training surveys with participating teachers demonstrated a 42 percent average increase in their knowledge of environmental issues and a 35 percent average increase in their knowledge of infusion teaching methods. GreenCOM also asked workshop participants to suggest ways to improve the guide before it was tested in the schools.

In 1998 and 1999, the 18 selected schools took part in a yearlong pilot test of the new guide. A team of Malian researchers administered surveys at the beginning and end of the pilot program to measure changes in knowledge among 3,910 students in the third through sixth grades. The sample was divided into three groups based on levels of infusion used by teachers—none, low, and high. Results differed according to a number of other variables (type of institution, gender, etc.), but overall the research indicated that students' environmental knowledge increased significantly in the classrooms with high levels of infusion.



GreenCOM produced a student activity book to accompany its teachers guide to environmental education.

By 1999, the teachers guide had been finalized and a companion book of student activities had also been published. Both books were distributed to hundreds of teachers, school administrators, government officials, and NGO staff members, many of whom also took part in training sessions on using the guide.

## Education and Communication Beyond the Schoolyard

In addition to formal curricular materials, GreenCOM initiated activities designed to educate and communicate with Malian citizens outside of schools:

- GreenCOM conducted a workshop to train staff members from the ministry of education and an environmental NGO called *Walia* to use desktop publishing software. The *Walia* trainees used their new skills to produce newsletters on environmental education for students, parents, and teachers affiliated with environmental youth clubs, and the education ministry published a newsletter for teachers.
- Another non-school-based activity involved community radio, which has a rich history in Mali and is an ideal medium for reaching out-of-school youth and women with environmental messages. GreenCOM collaborated with a staff

member of the National Radio and Television Association to train journalists from 29 community radio stations on radio reporting, environmental reporting, and radio program evaluation.

During the course of the training, the participants created a series of six programs real environmental concerns about the selected communities. This series was subsequently broadcast on stations around the country. Many of the trainees also convinced their stations to sponsor community clean-up days, and one station was inspired to launch a sister station dedicated exclusively to women's issues.

- To expand environmental programming after GreenCOM's work ended, project staff also trained a cadre of seven individuals from the private and public sectors to continue the radio journalist workshops.

## Lessons Learned

GreenCOM's paramount concern during its two years in Mali was participation, as participation was key to the success of all project activities. GreenCOM focused on listening to partners' needs and concerns, which not only built mutual trust but also increased the partners' confidence in their ability to identify and solve problems in creative, innovative ways.

The project's outreach to multiple stakeholders—teachers, government officials, journalists, and environmental NGOs—helped to expand the effect of the different activities implemented. It was



important to involve both traditional education channels (schools) and less formal channels such as radio stations and youth clubs. By activating many different groups, the interventions started on a large scale and had strong prospects for growth.

By emphasizing active stakeholder participation on a broad scale and research-based interventions, GreenCOM helped to lay a strong foundation for future environmental communication efforts that reach beyond students in the classroom to involve surrounding communities.



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all project activities.*

## Selected Publications and Products

GreenCOM Project. *Cahier d'activités pour favoriser l'intégration de l'éducation environnementale dans les écoles fondamentales*. Bamako, Mali: Academy for Educational Development (AED), 1999.

Grieser, Richard P. *Final Report: GreenCOM/Mali, September 1997–September 1999* (also available in French: *Projet expansion d'éducation de base au Mali: rapport final*). Washington, DC: AED, 1999.

Ministère de l'éducation de base, Institut pédagogique national et GreenCOM. *Approche intégrative des objectifs et des activités relatifs à l'éducation environnementale en rapport avec les programmes du premier cycle de l'enseignement fondamental*. Bamako, Mali: AED, 1998.



GreenCOM is funded and managed by the USAID Economic Growth, Agriculture, and Trade Bureau: Natural Resources Management Office. Technical services for GreenCOM (Contract no. LAG-I-00-01-00005-00) are provided by the Academy for Educational Development in partnership with Chemonics International.