

Rebuilding After the War: Environmental Education in Sierra Leone

By Nikki Skuce, One Sky in collaboration with both educational teams.

According to the United Nations quality of life index, Sierra Leone is considered the worst place in the world to live. Life expectancy in this West African nation is a mere 36 years and adult literacy hovers around 31 per cent. While remnants of a decade of war linger, Sierra Leone is now officially at peace and there is a willingness and passion to reinvigorate the under-funded and under-staffed education system as a way to build hope for the future. As part of this rebuilding, One Sky – The Canadian Institute of Sustainable Living and Friends of the Earth Sierra Leone (FOESL) are working together on developing a series of eco-curriculum modules and teachers' workshops.

Background

Bordering the Atlantic Ocean on the west coast of Africa, Sierra Leone borders Guinea and Liberia. With a population of just over 5 million, Sierra Leone is home to 20 native African tribes (Temne 30%, Mende 30%, other 30%). The country was founded by the British in 1787 as a settlement for Africans freed from slavery. This small nation, which is slightly smaller than



New Brunswick and South Carolina, is made up of a coastal belt of mangrove swamps rising to savanna grasslands. It is the upper most region of the Guinean low-land forest and is mountainous in the east. While endowed with mineral, agricultural and fishing resources, the majority of the population relies on subsistence agriculture and few industries have been developed.

Before the war began in 1991, Sierra Leone had isolated cases of environmental degradation, almost exclusively in the southern and eastern mining districts. The war resulted in intense fighting and diamond mining in the eastern district where the Gola forest, rich in biodiversity, was severely impacted.

The underlying cause of environmental degradation in Sierra Leone is diamonds. While the war initially began for ideological reasons, it turned into a resource conflict over the precious gem. Diamond mining, predominantly carried out by independent diggers, is often done in riparian zones and causes soil erosion from constant clearing and digging of the land. Remaining holes become breeding grounds for malaria. Land pollution takes the form of water contamination, degradation of forests and land, and siltation of rivers and creeks. As the war intensified and spread so did the number of displaced Sierra Leoneans living off the land and moving to the capital Freetown with an already fragmented infrastructure and deplorable sanitation. Displaced people turned from agriculture to raiding the forests for bush-meat, and deforestation spread around refugee camps. The war resulted in illegal and unregulated logging that has rapidly deteriorated the Sierra Leonean environment.

The resulting damage has alarmed the government and attracted the attention of many environmental organizations both in and outside the country. Poverty and war clearly limit the

ability of Sierra Leone official to address the environmental impacts of mining and illegal logging.

Environmental Education

In 1998, growing awareness of environmental degradation created the impetus for environmental education to begin in Sierra Leone.

Initially the education was informal – through the media, awareness building and community activities. While continuing informally, environmental education is now also being introduced to the formal education system. It is mentioned as a topic in various courses, including geography, agriculture and integrated science. According to Sierra Leonean educator Christopher Buzie, however, little attention is given to its content by both teachers and pupils. In relying on directed instruction, the teachers in Sierra Leone are confident and well informed on their subjects. Until enough accessible information becomes available on new topics, such as environmental education, teachers are reluctant to stand before their classes with new material.

When One Sky and Friends of the Earth Sierra Leone partnered in 2000 to begin a series of sustainable development projects, environmental education was seen as a necessary component. It may at first seem inappropriate to prioritize the environment in the face of destitution yet without the protection of water, air and natural resources we risk inflating the impacts of poverty and war. In a nation where life expectancy is so low, the link between the environment and health is also acutely relevant.

Other NGOs, such as the Conservation Society of Sierra Leone and Bird Life International, have also worked on developing some handbooks on environmental education for teachers. In a post-war atmosphere, these organizations are concentrating on conservation assessments. The FOESL/One Sky approach is to complement these previous efforts and to use grassroots workshops and practical activities to disseminate eco-curriculum modules.

A future with sustainable development

Classrooms are basic, housing up to fifty students. Textbooks are few and dated. A chalkboard is often the only teaching implement. Due to the war, each grade contains a wide range of ages. The Revolutionary United Front relied on child soldiers as young as 5 throughout the civil war. Classrooms include a mix of former child combatants, refugees and internally displaced peoples, many of whom missed years of study. Recognizing teachers as social change agents, FOESL and One Sky decided to produce eco-curriculum modules sensitive to these conditions and introduce them in teacher's workshops.

These curriculum modules are being written to complement the existing social studies, integrated science and agricultural curriculum and will expand the range of instructional strategies used. Accordingly, a group of five local Sierra Leonean educators were selected to start developing the modules. In addition, a One Sky staff person was put in charge of coordinating the modules and setting up a Canadian advisory committee.

In November 2001, a Canadian educational delegation went to Sierra Leone to clarify the educational context, develop working relationships with the Sierra Leone teachers' team and help raise the profile of the environmental education project. The latter objective was achieved through the joint delivery of workshops to more than a hundred and twenty teachers. Three

teachers from each school in the Freetown and Waterloo areas were invited to apply to attend the workshops through a letter of interest. These workshops promoted the importance of environmental education, provided an introduction to various instructional strategies, and made the link to gender issues. Modules on pollution and water quality were introduced to highlight these new teaching methods. Each of the two to three participants per school received their own personal copy of the modules along with one donated to the school.

Determining the appropriate approach to support the Sierra Leone teachers' team proved to be among the greatest challenges facing the delegation. In order to stay true to their intention to support and empower local educators, the delegation struggled to ensure that their input effectively recognized and built on, rather than invalidated, the dominant oral-rota learning approach utilized by most teachers. The natural tendency was to want to go too far, too fast in introducing a broad range of teaching strategies that progressive teachers use in the comparatively luxurious schools of Canada. When Janet Sondresen, vice-principal of an elementary school in Saskatchewan, introduced a series of new strategies, she stressed that many Canadian teachers only use a select few and that sometimes the 'talk and chalk' approach works best. In the end, a variety of strategies including mind-mapping and interviewing were met with enthusiasm and subsequently adopted by several teachers.

Process

For the last year, the five member educator team from Sierra Leone has met twice a week to draft the modules and develop complimentary activities. Due to the lack of resources and unreliable Internet connection, up-to-date information on environmental issues is extremely difficult for the team to obtain. This is the key area where the Canadian team assists – providing additional information to supplement content. In addition, once the draft is completed and sent to Canada, the Canadian advisory team proposes activities that could be used before returning it to Sierra Leone. The Sierra Leonean teachers then revise the draft and send it for final edits and layout to Canada.

One of the greatest challenges arose in the creation of appropriate activities in support of the learning objectives. While Western educators have developed many ways to engage students in hands-on learning they have come to increasingly rely on equipment, materials and an Internet connection. Activities are not as transferable or universal as they may first appear. In developing the activities, it was challenging for the Canadian team not to assume that basic resources taken for granted here, such as photocopies for the class or a measuring cup, are available. A lot of effort was put into adapting activities to be both relevant to the Sierra Leone context and to the lack of available resources.



Modules

Each of the eight modules addresses a specific aspect of the environment such as biodiversity, food security or pollution and suggests activities that both teachers and students could use to reinforce the ideas in the text. Each module begins by outlining the overall learning objectives, and each section within includes key questions and ideas followed by an activity. While some of the information is general, such as the water cycle or importance of oceans, there was a consistent effort to situate the information in a Sierra Leonean context. Due to gaps in resources

and data, the region and continent were sometimes used instead of the country specifically. The main objective of the modules was to make them relevant to both the local environment and teaching constraints (in particular the lack of resources mentioned earlier).

There were attempts to bring international issues to a local level and local issues to an international scale. For example, Sierra Leone itself releases few greenhouse gasses due to its lack of industry and few automobiles but increasingly it is deforested and is obviously affected by climate change as a coastal country. One of the activities in the Climate Change module calls for students to interview members of their community (particularly elders) to identify possible changes in water levels, weather patterns, plant or bird species, and to brainstorm ways to reduce the impacts of climate change locally.

As outlined in the preface, the activities are not exhaustive and teachers are encouraged to suggest further ones that encourage students to make a closer observation and understanding of their relationship with the environment.

During an Earth Day celebration at the new FOESL Alternative Technology Centre in Hamilton, Sierra Leone, over a hundred of the first two modules (pollution and water quality) were distributed to teachers and participants from over 40 schools. They were also distributed at workshops, meetings, school campaigns and to other relevant non-governmental organizations. The rest of the modules will be sent out through the school administration to ensure they are accessed and used by teachers in the schools.

Conclusion

Both teams of educators from Canada and Sierra Leone have benefited immensely from interacting and exchanging views. The largest lesson learned for the Canadians was a healthy respect for the lack of resources in Sierra Leone and how much teachers here rely on them. Learning by rote in a resource-less society is an important method and educators in Sierra Leone are definite experts in this area. Canadians can quickly check for information in the library or on the Internet, where as the teacher in Sierra Leone *is* the resource centre and becomes the primary source of information.

While resources, circumstances and teaching methods may vary, in the end we are all teachers hoping to inspire students and pass on knowledge to help make the world a better place.

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