

GreenCOM

Environmental Education and Communication Project

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Environmental Education and Communication Inventory in Namibia

July 1994

Academy for Educational Development
1255 23rd Street, NW
Washington, DC 20037

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**Environmental Education and Communication
Inventory for Namibia**

Martha Monroe

July 1994

**Academy for Educational Development
1255 23rd Street, N.W.
Washington, D.C. 20037**

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EXECUTIVE SUMMARY

The environmental education (EE) community is broad and diverse in Namibia. There are environmental education and communication (EE&C) activities currently underway or discussed in several Ministries, through many NGO's, and in parks, communities, and classrooms across the country. Unfortunately, all of this activity is not recognized as EE&C because of a perception that EE includes only the formal sector: teachers, curriculum, and school-aged youth. This report seeks to identify the full range of EE&C activities, including community-based adult activities.

The inventory undertaken for this report was requested by the Namibian Environmental Network (NEN) to help them coordinate and further the EE&C activities in Namibia. In-person interviews and site visits were conducted throughout the four-week data collection period. Each interviewee offered wisdom about their programs, their experiences, and their hopes for future activities.

A series of suggestions for furthering communications and coordination and strengthening EE&C activities are included. These suggestions will be discussed and critiqued by the NEN as they decide what is of highest priority. Future activities may include ways to involve more teachers in EE activities through workshops, newsletters, and leadership opportunities; an interpretive plan for the National Parks; training in environmental education and communications methods, monitoring and evaluation, and workshop development; addressing environmental issues through existing, related programs, such as adult literacy, radio, and youth programs; and increased communication and coordination among Ministries and between Ministries and NGO's.

Section I of this report introduces Namibia, the strong commitment to environmental education, and the details of this consultancy. Section II is the inventory—a summary of the EE&C activities currently underway by organizations and agencies in Namibia. The findings from this inventory are presented in Section III and suggestions that arise from these findings are in Section IV. The degree to which this report is disseminated and these suggestions reviewed and discussed is largely the responsibility of the NEN, but suggestions to support this process are included as well. Section V includes a draft of a national environmental education policy, as requested in the terms of reference for the consultancy. The Appendix includes additional information that may be helpful to some readers: an orientation for non-Namibians, a list of people contacted, and a list of the materials collected during this inventory.

ACRONYMS

CBO	Community-Based Organization
CCF	Cheetah Conservation Foundation
DERU	Desert Ecological Research Unit
DRFN	Desert Research Foundation of Namibia
EE	Environmental Education
EE&C	Environmental Education and Communication
EEASA	Environmental Education Association of Southern Africa
GECCO	Group for Environmental and Creative Consciousness
GRN	Government of the Republic of Namibia
IRDNC	Integrated Rural Development and Nature Conservation
LIFE	Living in a Finite Environment
MAWRD	Ministry of Agriculture, Water, and Rural Development
MEC	Ministry of Education and Culture
MET	Ministry of Environment and Tourism (formerly Ministry of Wildlife, Conservation, and Tourism)
MYS	Ministry of Youth and Sport
NARREC	Namibia Animal Rehabilitation, Research, and Education Centre
NGO	Non-Governmental Organization
NNF	Namibia Nature Foundation
READ	Reaching out with Education to Adults in Development
RF	The Rössing Foundation
SADC	Southern Africa Development Community
SIAPAC	Social Impact Assessment and Policy Analysis Corporation
SIDA	Swedish International Development Authority
SSD	Social Science Division of the Multi-Disciplinary Research Centre (of University of Namibia)
SWAPO	South West African Peoples Organization
UNESCO	United Nations Education, Scientific, and Cultural Organization
USAID	United States Agency for International Development
WUS	World University Services (now Ibis)
WWF	World Wildlife Fund

SECTION I THE PROJECT

A. Introduction

Spread across Africa's Namib and Kalahari Deserts, from the Orange to the Kavango Rivers, is Namibia. Namibia is the most arid country in Africa south of the Sahara. This dry land supports cattle, goats, and sheep on large farms and communal areas, but few crops or other foods are produced. The mineral wealth sustains a mining industry, but the lack of water prevents the development of other major industries. Perhaps even more than other neighboring countries, Namibia will always rely on her natural resources.

Namibia's new constitution is one of the few in the world that proclaims that "the State shall actively promote and maintain the welfare of the people by adopting...policies aimed at...the maintenance of ecosystems, essential ecological processes and biological diversity in Namibia, and utilization of natural resources on a sustainable basis for the benefit of all Namibians, both present and future" (Article 95). Namibia's Green Plan, a guide to environment and development, commits the government to "encouraging environmental awareness and education initiatives" (page 7). The same plan states that "Namibia's goal is to develop an environmentally literate society in which citizens have the knowledge, skills, and values necessary for appropriate action" (page 164) and acknowledges that Namibians must become involved in making environmental decisions. To reach this goal, the government will ensure that environmental information is available to the public, conduct assessments of environmental conditions, and provide all Namibians with access to environmental education through formal or non-formal channels.

Both the Ministry of Education and Culture (MEC) and the Ministry of Environment and Tourism (MET) have made a substantial commitment to environmental education. Within the basic education curriculum, environmental connections can be made from grades one-seven and are strongly reinforced in the new Life Science Curriculum for grades eight-ten (see page 7). Adult Basic Education also lists environmental awareness as one of their ten core areas of emphasis (see page 11). The new teacher training curriculum for preservice teacher education also includes environmental education (see page 8).

The MET plays an integral and supportive role to MEC EE activities by providing environmental education staff and facilities. Currently there are two residential facilities, and staff at two other locations who use school sites and non-MET facilities to offer EE programs to school children as well as other community groups (see page 13).

Several NGOs are also active in providing EE programs and supplementary activities for school-aged youth, particularly the Namibia Animal Rehabilitation, Research and Education Centre (NARREC) (page 36), Wêreldsend (page 34), and Cheetah Conservation Fund (CCF) (page 38).

Extension Officers, Information Rangers, and community-based natural resources projects through the MET and the Ministry of Agriculture, Water, and Rural Development (MAWRD) help complete the EE&C picture by providing EE programs and skill-building workshops to adults and communities (pages 19, 20, 48, and 59). Several NGO's are instrumental in providing these programs (see pages 32, 41, and 44).

Perhaps because of this breadth of activity, communication and coordination between groups is difficult, even to the point that there is disagreement about who is doing "environmental education." It is clear from Namibia's Green Plan that the goal of an environmentally literate citizenry cannot be achieved through any one of the aforementioned activities. The emphasis on school-aged children is appropriate, particularly with the science-based, environmental awareness activities. But communication and problem solving skills must also be taught, and may be most appropriately introduced to adults in the context of managing their own natural resources. In this respect, the innovative programs to strengthen community-based natural resources management are critical elements of the EE&C picture.

B. This Consultancy

This report was requested by the Namibian Environmental Network (NEN) to facilitate and strengthen the EE&C activities in Namibia. It was made possible by support from USAID through the GreenCOM Project. Data were collected in Namibia from June 17 to July 15, 1994. The tasks for this assignment were to:

1. Collect and review documents on environmental education in Namibia.
2. Conduct a series of interviews, meetings, and visits with key individuals and groups in Namibia working in both formal and non-formal environmental education.
3. Gather information on donor funded EE in Namibia.
4. Develop strategies for improving coordination between the Ministries, NGOs, and formal and non-formal EE sectors.
5. Prepare a draft national policy statement on environmental education that will be reviewed by the NEN.
6. Present a draft of final document for review by the NEN before departure.

An additional element in the scope of work, the preparation of materials to measure baseline knowledge, attitudes, and skills in environmental education, was dropped from the consultancy due to lack of time and specificity.

The consultant was accompanied by the GreenCOM Project Director for the first two weeks of the assignment. We met with the NEN Executive Committee, the Rössing Foundation EE Steering Committee, and an EE Roundtable in the first week to learn of existing EE&C activities and to collect suggestions of individuals and organizations to include in this inventory.

Most of the individuals contacted for this report were interviewed in person with open-ended questions. Several were contacted by phone. Documents and reports were collected and used to enhance the background information in each section. Field trips were conducted to visit several key EE&C facilities. The team kept in daily contact with both the USAID office and the NEN Chair at the Rössing Foundation.

C. Limitations

Inventories of this type are never as complete nor as exhaustive as they should be. Nevertheless, within the very real constraints of time and geography, many organizations and individuals were successfully contacted. Unfortunately, there was not time to interview individuals from museums, the herbarium, youth organizations, churches, television programs, libraries, and private game farms who may or may not conduct environmental education activities.

The vast array of EE&C activities and the geography of Namibia made it possible to visit only a few facilities. Although information about key programs was verified through cross-checking questions and site visits, a thorough investigation of every activity was not possible.

In addition, several individuals instrumental in the development and on-going coordination of environmental education in Namibia were in the hospital during the time of this consultancy. Their lack of input in this document will, ideally, be rectified during the review and editing process.

SECTION II ORGANIZATIONS AND RESOURCES FOR ENVIRONMENTAL EDUCATION AND COMMUNICATION

A. The Inventory

This inventory of environmental education and communications activities in Namibia was compiled, for the most part, from personal interviews with each of the contact people listed. Discussions averaged two hours, and some included follow-up questions. Additional people were interviewed by phone or completed short surveys about their projects distributed during the EE Roundtable meeting at the Rössing Foundation. Materials, papers, and reports were also used to fill in details. These are listed in Appendix C.

The original list of contacts was suggested by the NEN. This report does not match the NEN list exactly because some individuals were not available to interview and others were added. It is not an exhaustive list of every EE element in Namibia, but rather, a panoramic view of the major features of this landscape. A list of potential contacts that were not made for this report is included on page 3.

Each interview involved a brief tour of the facility (where appropriate and possible) and a set of open-ended questions to understand the type of EE&C activity that was conducted, how it was funded, what other projects the organization wished to pursue, and what organizational objectives it accomplished.

The following descriptions of each organization or agency give the name, address, and phone and fax numbers (if available) for the interviewee. Background information provides a context and history for the activity. After the activity description, a short observation of the funding patterns and capacity of the group is described. The subheading, "Wisdom Shared," is reserved for information the interviewee has gained through conducting this activity, for his or her future plans, and for the shortcomings he or she might recognize.

B. Ministry Departments and Agencies

NAMIBIAN ENVIRONMENTAL NETWORK (NEN)

Len le Roux
The Rössing Foundation
P.O.Box 20746
Windhoek
Tel: 61-211721; Fax: 61-211273

Background Information

NEN was established as a result of the May 1993 EE Conference held at Hardap. It was the third meeting of environmental educators from across Namibia. The consensus was to work toward the direction of a coordinating association, but not to form one, yet. Participants preferred to create an informal, informational exchange mechanism. By establishing a rather loosely constituted organization that provides for some degree of communication and exchange, participants will continue to evaluate the advantages and disadvantages of forming an Association. There was considerable debate about the name of the network, with hesitation to call it "environmental education" (EE) because of a perception that EE is limited to those in formal schooling systems; they felt it important to include adult opportunities.

EE&C Activities

An Executive Committee was elected during the conference and asked to develop a newsletter and continue the discussions relevant to EE in Namibia. Unfortunately, those elected to leadership positions were either too busy or not sufficiently interested in the NEN; the momentum faltered. The Rössing Foundation then agreed to provide secretarial and some leadership functions for the Executive Committee as a part of their EE Project (Cooperative Agreement with USAID). With Liz Komen's leadership the first newsletter was produced in June 1994. The NEN is sponsoring this GreenCOM Inventory of Environmental Education and Communication (EE&C) activities in Namibia in order to document the vast array of activities that occur within the country. The NEN will use this document to produce an overall vision, direction, and policy with which people are comfortable.

Members of the NEN Steering Committee include:

Brian Jones, Dept of Environmental Affairs, MET
Liz Komen, NARREC
Tilla Skummen, Secondary Teacher
Hafeni Nanghonda, Ministry of Defense
Peter Bruce, Namibia Development Trust
Moses !Omeb, Adult and Continuing Education, MEC
Boas Ercky, Namutoni EE Centre, MET (now at Technicon)
Rosie Holmes, Wêreldsend, IRDNC
Len le Roux, RF

In order to improve the accuracy and tone of this document, a core team of NEN members will review draft copies. The Chair will distribute copies to Tim Holmes, Dudu Murorua, Liz Komen, Peter Tyldesley, Brian Jones, and Cliff Olivier.

The committee brainstormed a lengthy list of the EE&C community in Namibia that should be contacted for this Inventory.

Funding and Capacity

At the present time, the NEN relies on the volunteer efforts of its members, some of whom can build NEN responsibilities into their work (i.e., some NGO staff), and some of whom cannot (i.e., teachers, some agency staff). Funding for initial NEN activities is coming through the Rössing Foundation's EE Project funded by USAID. It appears there is a need for local leadership and energy, aside from what Rössing can or should contribute.

Wisdom Shared

There is a strong need to inventory the EE&C community. At the recent SADC conference it became clear that most Namibian participants did not know the full breadth of their EE activities.

People rarely work on the development of an organization if there is not a clear understanding of how the new organization will benefit them and their work. For NEN to be successful, it must be perceived as benefitting the EE community, not merely taking up everyone's time.

Efforts that NEN wishes to conduct will take a considerable amount of energy, initially, until they build their own momentum, gather more interested people, and collect a critical mass.

The Rössing Foundation does not wish to direct the development of the NEN, and understand that it is the wishes of the environmental educators that they play only a supportive role.

The need for an association like the NEN to coordinate communication among the various EE&C entities is critical. If it functions successfully, it can:

- prevent duplication,
- encourage more complete coverage of Namibia with relevant EE activities,
- match newcomers to the field with those capable of providing training or internships,
- facilitate funding to EE&C activities from the private sector or donor community,
- help identify areas for collaboration,
- offer professional development for environmental educators,
- provide a vehicle for exchanging innovative ideas, and
- engage environmental educators in projects that forward their individual and collective efforts.

MINISTRY OF EDUCATION AND CULTURE (MEC)

Cliff Olivier

Life Science Project

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Windhoek, Katutura

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Background Information

The education reform effort in Namibia began when SWAPO (the South West African Peoples Organization) was in exile. Knowing that a new curriculum would be a major effort when Namibia won independence, SWAPO requested assistance from the Danish government to design and pilot a junior secondary curriculum at the Namibia Secondary Technical School in Loudima, P.R. Congo. The first materials in the new Life Science curriculum focused on food production and were used in 1986.

The new curriculum (and later, the broader educational reform effort) was targeted at the junior secondary level (grades eight–ten) because this level contains a reasonable number of teachers and schools (fewer than primary and more than secondary) and the teachers tended to have some teacher training.

C. Olivier is the MEC EE Coordinator, representing the Ministry on the Inter-Ministerial Coordinating Council (see page 36), chairing the Enviroteach Project (see page 25), and serving the NGO community by coordinating the approval process for EE materials developed outside the Ministry. His particular focus includes syllabus design and teacher training. His position is funded by the Danish Aid organization through the Life Science Project.

At this point, a new syllabus, new materials, implementation workshops (with the new materials), teacher training reform (at the pre-service level), and teacher certification programs (for in-service teachers) are occurring simultaneously across the grade levels. The effort is huge. If it is implemented as planned, the Namibian education system (and the environmental education component) could well become one of the most advanced and creative formal education systems in the world.

EE&C Activities—Curriculum Development and Implementation

Environmental education is integrated throughout the basic education syllabus (grades one–ten) in Namibia. In grades one–three there is an environmental studies track which explores the students' natural and social environments. Grades four–seven contain natural science and health subjects where environmental awareness plays a prominent role. The junior secondary curriculum (grades eight–ten) includes nine compulsory subjects, one of which is the Life Science. Although further education is not mandatory, Namibia has extended the environmental education theme by using Natural Economy, Agriculture, and Geography as "carrier subjects." Despite the use of the Cambridge Exam assessing senior secondary students, a new text has been written for Natural Economy that offers Namibian examples (see Namibia Nature Fund (NNF), page 32).

The Life Science Project (funded by the Danish International Development Agency through Ibis—formerly World University Services) seems to be the most developed of these efforts. The textbooks have been written, pilot tested, printed, and distributed to every junior secondary student in the country. The syllabus is based on a combination of health, biology, ecology, and agriculture, involving students in life-sustaining activities: planting gardens, composting waste material, exploring environmental issues, raising small animals, and understanding human physiology. Textbooks include activity suggestions for classrooms and clubs that help to make the concepts relevant and build students' skills in food production, recycling, personal hygiene, observation, etc.

With the completion of the textbooks, the Life Science Project moved into implementation workshops through a "cascade model" of dissemination: a national workshop for regional facilitators, regional workshops, workshops for teachers representing clusters of schools, and school visits by regional Life Science Project staff. There are two cycles of workshops each year on subjects in the curriculum (e.g., human physiology, environment) or on topics of interest to teachers (e.g., use of the kit, student assessment). During the workshops, teachers are introduced to the content and explore various methods of teaching these concepts. Needy schools are eligible to receive a kit of laboratory and field equipment so they can undertake the experiments and exercises in the curriculum. There are approximately 25,000 students in each of the junior secondary grades, 300–500 teachers of these students, in about 250 schools across the country.

Teacher Training in EE

With the assistance of several donors, the entire teacher training program is being reformed, with a new emphasis on cross-curricular activities, cooperative learning, reflection, critical thinking and questioning skills. Environmental education is well adapted to these goals and is built into the curriculum in several ways.

In Year One, all students (pre-service teachers) take Integrated Natural Science where they learn science concepts and science teaching methods. EE has a prominent role in this course, but is also integrated into the other subject areas (math, language, etc.). During their practice teaching assignment, many Year One students have chosen community environmental issues to explore.

In Years Two and Three, students are divided into grade level and subject matter specialty areas. Environmental themes are present in many of the courses for elementary pre-service teachers, as well as secondary science courses.

The Enviroteach materials (see page 25) may be utilized in the Teacher Colleges beginning next year. They are produced by the Desert Research Foundation of Namibia for secondary teachers and include background information and brief activity ideas for including topics such as soil erosion, energy, water, and population in the curriculum. If accepted, the materials could be used in all subject areas as resource texts for information and teaching ideas (see also page 48).

There are four Teacher Training Colleges in Namibia:

- Windhoek College of Education (in Khomistal)
- Rundu College of Education
- Ongwediva College of Education
- Katima Mulilo College of Education

In-Service Training

The process of formally upgrading the skills and knowledge of those who have taught with only a grade ten or twelve education (not teacher training) has begun. An Accreditation Council will be established to give credit to teachers who attend approved in-service workshops and courses. The MEC is establishing modules to be offered during school holidays at the regional education centres for credit. An upcoming Peace Corps/USAID initiative will help carry these modules to schools on a weekly basis for those who cannot afford to leave families or farms.

There are twelve National Teacher Resource Centres that serve regional communities: Keetmanshoop, Swakopmund, Windhoek, Katutura, Gobabis, Khorixas, Otjiwarango, Tsumeb, Ruacana, Ongwediva, Rundu, and Katima Mulilo.

Additional smaller community centres are being added to the MEC system in: Nyambali, Okatana, Oshela, Kamanjab, Mariental, Karasburg, Luderitz, Grootfontein, and Okakara.

Wisdom Shared

The experience of the Life Science Project provides an incredible wealth of knowledge.

There is some resistance to the new Life Science curriculum from some privileged schools. Teaching animal husbandry may not be their idea of the prerequisites to succeed in a prestigious university. If secondary students are able to pass the Cambridge Exam having taken the Life Science curriculum, these concerns may be mitigated.

Recent conferences have made it clear that teachers are less interested in continuing education and workshops if they are not offered key incentives: credit, salary increases, or new MEC-approved teaching materials. If NGOs are interested in offering teacher workshops, they should be coordinated with the MEC Accreditation Council.

A study is planned to determine the effectiveness of the new Life Science Project. It may also be worthwhile to study how well the new syllabus is being implemented across all grade levels, determining if primary teachers have the resources and materials to conduct environmental education activities while they teach other subjects.

The best role for an NGO to play in support of schools and the new EE curriculum is to:

- become familiar with the new syllabus,
- offer workshops and class visits that advance the new curriculum in a variety of subject areas,
- develop activities and support materials that enhance the new syllabus in specific ways,
- help teachers gain confidence in using the new materials,
- help teachers connect the textbook concepts with the real world by using community-based organizations and resources.
- help headmasters and administrators develop a supportive environment for teachers and students as they explore these new methods of teaching: issue-oriented, problem-solving, cross-curricular, group activities.

MINISTRY OF EDUCATION AND CULTURE (MEC)

Department of Adult Education, Libraries and Culture
Directorate of Adult and Continuing Education
Evaluation, Materials Production, and General Services

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Background Information

The basic education program in Namibia was designed to increase literacy in both mother tongue and English among the non-school population. Although most learners are adults who left the formal education program before matriculating, this program also serves young people who are too old for their grade level. Last year over 30,000 learners and 1700 instructors were involved in the program.

At the present time, the program includes three stages. At Stage One, learners are taught how to write and read their own language (materials are produced in eleven languages). At Stage Two, learners gain a functional ability in this language when learning about health, sanitation, and financial management, for example. Learners are introduced to functional English at Stage Three. Courses are being developed that will enable learners to complete a primary certificate.

Courses are taught in communities (often in schools during off hours) by "promoters," who have received a three-week pre-service training and occasional inservice refresher courses. Their literacy courses meet either three-four days a week for a total of six hours a week.

Promoters are coordinated by District Literacy Organizers. There are seven districts in the country. Three regions have between 100 and 120 promoters and each serve 1000 to 2250 learners. The largest region has 450 promoters and serves 11,000 learners. The regional offices are in the following communities: Khorixas, Windhoek, Katima Mulilo, Keetmanshoop, Ondangwa (with two regional offices), Rundu.

EE&C Activities

The literacy education stages include several opportunities for environmental themes. Stage One uses pictures and discussions to introduce key words: plowing, gardening, wood collecting, water, and elephant. If the promoters were comfortable with the material and the open discussion teaching style, environmental education could be a significant strand in the program.

MEC has made a strong commitment to environmental education and the Adult Basic Literacy program identified the development of environmental awareness as one of the ten

aims of the national literacy programme. Their curriculum guide defines this goal "to develop a holistic understanding of the dynamic interdependence of all living things and their environment; to develop an awareness and responsibility towards restoring and maintaining ecological balances through the sustainable management of natural resources; and to promote and encourage involvement in practical activities to preserve and sustain the natural environment."

The "teacher guides" for the promoters encourage them to use participatory, student-centred techniques. These teaching methods are ideal for building efficacy, exploring attitudes, and enhancing self-concept, concepts that play a strong role in environmental education.

Funding and Capacity

The materials and program have been funded by MEC, SIDA, and UNICEF. The staff responsible for the project have completed graduate work in adult and continuing education, literacy, or similar area.

Wisdom Shared

Men are more interested in learning English than learning their mother tongue.

Men are not as motivated to attend classes, particularly in the urban areas. It may be possible to attract urban learners through the business community, as many are migrant workers.

There are more female promoters and female learners in nearly every region of the country, and a huge difference in the Ondangwa region.

Learners talk much more about their feelings when they are discussing issues (i.e., water and forest conservation).

Each region may serve several languages; Windhoek has them all. Promoters are specialized by language.

Promoters tend to teach one stage and do not advance with their students to the next stage.

Not all promoters are equally adept at leading discussions around the pictures.

Although the "teacher guides" are written in English, sections may need to be translated into the relevant tongue for the promoters. This task falls to the regional office.

Distance makes it difficult to reconvene the promoters for refresher courses as often as the region would like.

The materials development staff are anxious and willing to receive feedback and comments from the promoters and reviewers of the program. They intend to continue to improve the materials.

MINISTRY OF ENVIRONMENT AND TOURISM (MET)

Brian Jones, Environmental Affairs
Henk Coetsee, Information Section
Private Bag 2607
Otjiwarongo
Tel: 651-2443

Background Information

MET was previously named the Ministry of Wildlife, Conservation and Tourism (MWCT). It is charged with protecting and conserving the natural resources of Namibia such that all citizens have the opportunity to live sustainably (Article 95 of the Namibian Constitution). It is undergoing a substantial reorganization and rationalization plan, so departments and divisions are in a state of transition.

Historically, Extension officers were employed in the Management Section. Although their role was information/education, they were frequently asked to conduct other activities, such as law enforcement and problem animal control. In 1988 the Information Section received several staff from Management to become full-time Information Officers. Their role then included radio talks, brochure development, community education, and school programs, but their training program was not as thorough as it might have been. The philosophy for extension work with Information has varied somewhat from Management: rather than approaching an audience with a conservation message, Information staff work to understand the audiences' interest and needs. With recent training and program planning from the Rössing Foundation EE Project, these goals are more likely to be met.

MET has a communications policy which underlies their current activities in extension, environmental education, public relations, information to the public, and media liaison. Through these policies, MET establishes a strong foundation for the development of mutual trust, shared responsibility, participation, and honest communication. Among staff, communities, and media representatives. The Ministry's environmental education, according to this plan, should include:

- the provision of information and resource materials for teachers, EE centres, schools, and individuals involved in EE
- establishment of EE centres and satellite facilities across Namibia
- cooperation with MEC, NGOs, and individuals involved in EE
- cooperation in establishing a national environmental education strategy in Namibia
- promotion of ongoing EE and research.

EE&C Activities

Under the Information Section are two EE Centres and about twenty-eight staff. Four individuals operate the EE programs at the Centres, three additional EE staff conduct programs in schools in the Caprivi and Windhoek regions. Of the remaining staff, one person is a journalist and one of the public relations officers, who is also heading the section, are serving all of the MET Sections; one is an artist working on posters, displays and

exhibits; ten are Information Officers who work out of following regional MET offices. The remainder are laborers and clericals.

Katima Mulilo in Caprivi
Rundu in Kavango
Opuwa in Kaokoland
Okakarara in Hereroland
Etosha in Ovamboland
Windhoek

EE Centres

Both EE Centres are residential facilities that are open free of charge to visiting groups (though donations are accepted to help provide better services). Both are located in national parks; the major attractions of visiting are viewing wildlife and being in a natural area. Neither facility has been officially opened; staff at both are working on upgrading the facility and programs. A wide variety of groups have attended programs at the centres: Technicon students, Headmen, Girl Guides, Teacher Training Colleges, Peace Corps Trainees, but the majority of the scheduled visits are from school groups—primarily the better endowed schools which have access to transportation. In both cases the plan is for the centres to serve the schools in their local communities. Staff in both centres have found it challenging to attract local schools.

Both facilities have sleeping huts for participants, a kitchen and outdoor eating area, toilets and showers, a teacher resource room, and a classroom area. Waterberg is constructing an office. The centres will accommodate groups of between forty and forty-eight with ease.

EE programs are conducted at the following four areas by MET staff:

1. **Namutoni Environmental Education Centre**
at Etosha National Park
Graeme Wilson and Meryn Smith
PO Namutoni, via Tsumeb 678-Onkose 13531
or
MET, Private Bag 13306, Windhoek 61-63131

2. **Okatjikona Environmental Education Centre**
at Waterberg Plateau Park
Grant Coleman and Seth Imasiku
Private Bag 2506
Otjiwarongo
0651-2443 (Hank Coetsee's office) (fax: 0651-3642)
or
MET, Private Bag 13306, Windhoek

3. **Katima Mulilo**—where school programs are offered without an actual physical centre, Marie Mott-Adams

4. **Windhoek, at Katutura Youth Centre and Friedenau Dam**, where staff are developing new EE programs with MYS, Mark Griffiths, and Florence Sibanda.

Teachers or group coordinators are free to develop their own schedule of activities for their visit to the Centres. Most teachers are grateful to the staff who conduct programs such as: game drive; night drive; initiative tests/team building games; visit to Snake Park; introduction to the history of the area; astronomy talk; ecology hike, alien plant removal, water studies, scavenger hunt; map-reading exercise. The staff are also adept at infusing discussions of appropriate environmental behaviors into conversation (not formal lectures), such as biodegradable waste and litter and water conservation. Most groups visit the centre only once. Even if a relationship is established with a school to bring students every year, it is likely to be different students each time. Because of the large number of schools in the area, the staff are struggling to create a lasting impression during the learners' short stay.

Centre staff have completed the diploma program at Technicon in Nature Conservation. This provides them with a broad understanding of wildlife and resource management, community development and environmental education (see Technicon page 55). They are actively seeking additional training, attending EE workshops sponsored by the Rössing Foundation, the EEASA (Environmental Education Association of Southern Africa) Conference in South Africa, and traveling abroad for training courses.

The EE Centres are active members of ShareNet, a southern African regional network for the exchange of environmental education materials and resources that have been developed. Adaptations to the original resources are easily made by requesting the computer disk.

Information Officers

The Information Officers work out of regional offices of the MET. In general, they have a junior secondary education; some have matriculated. Upgrading their knowledge and skills is an on-going process that is carried out in a program of in-service training. Some of the regional officers in the Management Section have attended the Information Section training workshops because they work closely with communities in their region and conduct similar programs. Programs tend to involve various films and slide shows, discussions with groups, radio talks, visits to chiefs and headmen, distributing brochures, etc.

Community-Based Natural Resource Management Programs

MET and WWF with USAID funding are exploring innovative approaches to managing resources for sustainable ecological and environmental benefits. This effort, known as the LIFE Project, is described in more detail on page 59.

Training

The Information Section conducts training courses for their staff. Such programs include a balance of content (e.g., MET-based information on policy, techniques, resource management) and process (e.g., how to design radio programs, how to work with teachers).

The LIFE Project (see page 59) is helping to make possible a thorough training needs assessment for MET. This information will help feed into the reorganization effort. One outcome might be the addition of a Training Staff to this Section that would conduct training for the entire MET.

National Parks

The parks are operated out of the Management Section of MET. At select locations in the more popular parks (i.e., Bernabe De La Bat Restcamp at Waterberg Plateau Park; Okaukuejo, Halali, and Namutoni at Etosha National Game Park), facilities provide travelers with a "nature resort" experience, with restaurants, bungalows, and protected camping areas. Information and interpretation is minimal. Waterberg offers several unguided hiking trails (one on the plateau is closely regulated) and one guided hike experience. Etosha has no public trails. None of these areas appear to offer evening programs, audiovisual programs, or staff who can answer questions. Staff from the Research Division have volunteered to conduct educational trips for and visits to the primary school located in Etosha for residential children.

Funding and Capacity

MET funds the facilities and the staff in the Information Section. Additional funds are available through NNF for equipment and special projects (computers) and through the Rössing EE Project (training, printing, and materials).

With the new Inter-Ministerial Coordination Council, additional resources may be made available to MET. For example, Youth and Sport has offered an under-utilized Centre for EE programs near Windhoek (Friedenau Dam). In total, there may be fourteen such centres available for EE activities across the country.

Wisdom Shared

The Directorate is relatively small. Increased exposure and additional trained staff would enable them to improve their impact.

Centre staff and Information Officers are working hard to help their audiences identify their needs regarding programs, and then developing programs specifically for them. As more groups visit the centres and patterns of needs arise, it may be possible to standardize some of the program offerings.

The Centres are available at no charge to groups with the appropriate signatures on their permit, but staff suggest a minimum donation to help defray maintenance costs. Centre staff coordinate the permitting procedure for the visiting groups.

Those individuals interviewed for this document expressed a need for training or resources on evaluation techniques. It is difficult to obtain meaningful comments from students, and centre staff are interested in monitoring their programs with additional feedback. A new evaluation form is being tested at Okatjikona.

Centre staff are quite interested in serving the local schools but have had difficulty attracting them to their facility, despite an outreach effort to the schools. Additional effort to expand the outreach program would be appropriate.

Communication to and among Centre staff can be challenging. Okatjikona, for example, does not have a phone and the line that will be put in will not be able to carry a fax.

Staff utilize the Materials Development and Resource Centre at the Rössing Foundation but are unable to come to Windhoek frequently.

MET would like to move towards helping specific community groups identify their environmental problems and explore ways of solving them, and away from nature study/animal behavior type programs.

Most park visitors appear to be from South Africa, Germany, and Namibia. Signs and brochures are offered in three languages. It is not clear that future materials need to be produced in Afrikaans.

The various sectors of MET (extension, education, parks) have different philosophies and approaches to environmental education. It may be useful to coordinate these efforts and develop a umbrella goal for reaching youth, adults, and travelers with environmental messages.

Upgrading and updating park interpretation has been a long-standing need, but staff and resources have not been available to make it happen. Trails, trail guide books, auto tours, auto cassette tours, kiosks, signs, evening programs, guided walks, family programs, junior ranger programs, and outreach to the local communities for natural history, cultural history, and environmental issues could be done.

Satellite facilities under the leadership of the residential centres could serve to continue the residential experience and strengthen the connections between the MET staff and the communities. Such facilities could be located within other Ministry facilities, increasing communication between them.

MINISTRY OF ENVIRONMENT AND TOURISM

Management Section

Mr. Rod Braby

Private Bag 5018/PO Box 656

Swakopmund

Tel: 0641-5610

Background Information

In Swakopmund the MET Management Section does not have official responsibility for environmental education. The district's Information Officer was not replaced in a recent shift. Nevertheless, EE activities are conducted and now amount to approximately twenty-five percent of one person's time. The other seventy-five percent is spent with administration, enforcement, and technical management duties. MET Management staff receive no training in EE methods, receive very little funds for EE, and are not officially mandated to perform EE.

EE&C Activities

An example of an EE&C activity includes showing a slide show or film and guiding a discussion with school groups, youth groups, various meetings/festivities, and at the GECCO Earth day workshop. A regular activity takes place during the December/January holiday season when MET staff set up a display in a tent on the beach depicting aspects of fragile desert ecology, ATV misuse, littering, fisheries ecology, and regulations.

Wisdom Shared

Mr. Braby is the Chair of the Swakopmund Wildlife Society, a group of "ecologically concerned" members of the community. This Society has:

- established bottle banks—collection points for glass bottles that are recycled by a private company;
- sponsored clean-up days within the municipality;
- conducted school-based youth group outings to band birds;
- conducted occasional seminars to discuss aspects of ecology;
- lobbied for recycling with municipal official and Rössing Uranium Inc.; and
- instituted a ten-cent charge on plastic grocery bags to limit their use (profits went to charity). This campaign, which ran for one year and halved the number of bags used, was halted because of the controversy it provoked.

**MINISTRY OF AGRICULTURE, WATER, AND RURAL DEVELOPMENT
(MAWRD)**

Directorate of Planning, Pricing, Marketing, and Cooperatives
Sustainable Animal and Range Development Program (SARDEP)

Dr. Jörn Fitter
Private Bag 13184

Windhoek

Tel: 61-224550; Fax: 61-222974

Background Information

Dr. Fitter is an employee of GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit) (see page 62) and seconded to this Ministry to help coordinate the Sustainable Animal and Range Development Program (SARDEP).

Communal farmers across Namibia face similar challenges constraining their abilities to productively manage cattle and rangeland. Technical answers exist, but technical solutions are not always accepted, especially when the feedback to indicate success does not come quickly.

SARDEP is organized to work with the farmers and communities to identify problems, suggest solutions, negotiate experiments, and provide technical training and know-how where needed. They are working in pilot areas in four sections of the country (Hereroland, Namaland, Ovamboland, and Damaraland). In each location, they establish a Community Management Committee with ten–fifteen representatives. A facilitator (not from the community, but from the ethnic group) helps the group in development and governance skills. This project brings an innovative approach to technology transfer to Namibia. It is not duplicating the Extension program, which is burdened with administrative functions and understaffed.

EE&C Activities

Like the LIFE Project, SARDEP helps build skills in governance, decision making, and problem solving. Like LIFE, the communities are empowered with decision making responsibility, which can be converted into financial gain. And like LIFE, these goals match those of EE&C.

Wisdom Shared

SARDEP has no intention of starting competing Community Management Committees if they happen to work with a village that is participating in the LIFE or Water Affairs' Projects. It would be ideal to shift the committee's attention to a different natural resource and extend their governance abilities.

In evaluations of SARDEP by the community members, the process has been confirmed as appropriate and right.

Tangible benefits are challenging when the issue is long-term land management. This makes it more challenging to motivate participants who have to fight for survival.

Land tenure is the key to sustainable resource management.

MINISTRY OF AGRICULTURE WATER AND RURAL DEVELOPMENT (MAWRD)

Directorate of Extension

Piers Vigne

Private Bag 13184

Windhoek

Tel: 61-302-9111

Background Information

The Ministry of Agriculture, Water, and Rural Development has four main sections which provide environmental information: Agricultural Research (mostly livestock and crops), Training (formal training at the Agricultural Colleges and non-formal at Rural Development Centres), Veterinarian Services (produces materials and conducts training with field staff), and Extension (200 field staff with diplomas and up). In addition to these sections there are numerous projects, such as SARDEP.

EE&C Activities

There are severe limitations on the staff, particularly in the communal areas where the farmer/staff ratio is much too high to be effective. It is difficult for extension staff to initiate programs; they most often respond to requests.

Extension activities vary greatly from the commercial to communal areas. In commercial areas, staff help fine-tune farming techniques, plan water systems and fences, conduct meetings, and arrange Farmer Days. In communal areas, basic agronomy skills and information are provided.

A large number of donor-sponsored projects are being implemented through MAWRD, but current hiring freezes prevent new staff from coming on to manage the projects. MAWRD intends to build capacity among agriculture-oriented NGOs to implement these projects.

Wisdom Shared

Although agriculture is a major component of the new Life Science Project, some MAWRD staff believe the approach is too theoretical and not practical enough. They anticipate a change when the program is reviewed and evaluated in several years.

Although a balanced, effective environmental program ought to include agriculture, there seems to be a dichotomy between MAWRD and MET. There are very few joint programs and very little communication, at least in Windhoek. In the field, MAWRD and MET extension staff may have a much different relationship.

MINISTRY OF YOUTH AND SPORT

Youth Resource Centre

Mark Griffiths (from MET) & John Friedman (Peace Corps)

Private Bag 13359

Windhoek 9000

Tel: 61-63281; Fax: 61-221304

Background Information

The Ministry of Youth and Sport (MYS) is a very new ministry. It is organized in two divisions—school sports (formerly with MEC) and youth, whose main objective is to provide programs and training for out-of-school, unemployed youth (age: fifteen–thirty). Each of the thirteen regions have field officers who facilitate programs, answer questions, and meet local requests. These staff typically have not had specialized training and do not receive many resources.

MYS registers youth organizations throughout Namibia. Some of the more active are organized through churches or schools (Katutura Youth Enterprise Council and NANSO—Namibian National Student Organization).

EE&C Component

In a recent meeting of the Inter-Ministerial Coordinating Council, MYS agreed to coordinate the development of two EE Centres in existing MYS structures as a pilot program. If successful, other facilities owned by MYS and MEC may be available. Both Mark and John are working on this project. The goal is to create an Urban Conservation Centre at the Katutura Multi-purpose Youth Resource Centre and a satellite facility for overnight excursions at the Friedenau Dam.

Program ideas for the Dam centre on outdoor leadership and challenge activities, including trails, rock climbing, ropes courses, overnight camping, canoeing, and sky observation. The Urban EE Centre will include an emphasis on gardening, town planning, and urban issues, with some amount of duplication from the EE Centres in the National Parks (such as displays, live animals, etc.) since youth in Katutura are not likely to visit Etosha. Visits to Daan Viljoen would be difficult to build into the program, since there is an entrance fee.

MYS is also conducting a series of Wilderness Expeditions with unemployed, out-of-school youth. Four trips are planned for the first year. Each will involve ten youth on a one-week trip to a site where they will engage in a service project and do a three-day backpack trip. The first trip (July 1994) will be to GECCO and the Namib Desert. Activities will include geology, environmental awareness, team building, and outdoor skills. It is anticipated that trip participants may become part of a leadership network in Katutura that will help build both Centres.

MINISTRY OF FISHERIES AND MARINE RESOURCES

Mr. David Boyer
Swakopmund
Tel: 0641-5744

Background Information

Namibia has two ports, Walvis Bay and Luderitz, and since the 1940s fishing has become a major industry. It began with a pilchards industry within the twelve-mile zone and grew to include a deep water hake industry. At present, approximately nine percent of the GNP is derived from these industries. The Namibian fisheries is well-defined by a warm water northern boundary, a low oxygen upwelling in the south, and only two ports. Therefore, the controlling of illegal fishing practices and the monitoring of catch quotas is achievable.

Prior to independence, South Africa attempted to enforce a 200-mile jurisdiction on the fisheries, but because RSA laws were not recognized by the international community, foreign vessels fished the area to near exhaustion. With Namibian independence foreign boats were evicted from the zone; permit costs and levies on foreign vessels were increased; subsidies for local vessels were instituted; quotas were established for Namibian sailors on foreign vessels; intensive training programs for Namibians to become sailors, fisheries inspectors, and research scientists were initiated; and advanced research activities were instituted to monitor and the fish populations. Norwegian and Icelandic foreign assistance is behind many of these efforts.

EE&C Activities

Additional non-formal training of Namibians to become sailors, fisheries inspectors, and research scientists is taking place. Much of this training is held in Luderitz at the Rössing Foundation Training Centre or in Walvis Bay with the fishing industry.

There are effort to influence policy makers. This process, which culminates with the setting of catch quotas, involves fisheries scientists presenting their projections to an advisory board made up of industry representatives, Ministry of Fisheries and Marine Resources officials, and representatives from the Ministry of Trade and Industry. This year, because of endangered pilchard levels and subsequent recommendations to greatly limit catch quotas, 3,000 people may be temporarily limited from working. Much of this process of setting policy/quotas depends on the personal communication style (credibility and persuadability) of the scientists.

C. Non-Governmental Organizations

CONSERVO
Willa Le Roux
PO Box 6897
Asspanplatz
Windhoek
Tel: 61-293-4358

Background Information

Conservo is an annual environmental project competition organized by the MEC and sponsored by the Coca-Cola Company. The program started in 1988 and has grown to involve fifty-seven different schools throughout Namibia this year. It started as a competition among senior secondary students and expanded to include all students, even pre-primary.

EE&C Activities

The competition requires that teams of three-six students identify and investigate a local environmental issue. They then develop a project related to this issue in a manner that will involve the community or a community resource person. Secondary students and senior primary students prepare a file that documents their plans and activities throughout the process; preprimary and junior primary students submit a poster of photos and records that an adult made with them.

Information about the competition is sent to each school in early February and announced via the media by Coca-Cola. Teachers enter the projects by submitting an entry form. Projects are due by July 11, when they are judged by a team assembled in Windhoek. Finalists are invited to come to Windhoek to give an oral presentation on their project in August. They may use drama, slides, posters or other media to present their project. Several prizes are awarded in several categories, making the number of "prize winners" about ten groups.

Workshops have been conducted in several regions of the country to help teachers understand the competition and what projects they could undertake.

Coca-Cola sends small items (baseball cap, pen, notebook) to each student who enters the competition, and additional goodies (T-shirt, totebag) to those who complete projects. If the first-place winners have a superlative project and if additional funding can be obtained, students are given an opportunity to attend the National Youth Environment Symposium in South Africa (SA), organized by the SA National Parks Board.

Wisdom Shared

Conservo is such a popular competition that it will soon grow too large to be handled as a national competition. They may be able to hold the competition at the regional level first, and send several regional winners to the national competition.

Funding from year to year is never completely certain since Conservo relies on donations from Coca-Cola for media, prizes, and publicity.

More teachers need to be introduced to the idea of environmental projects and the types of resources that are available to them. Where workshops have been held, more teachers in that region participate.

Conservo has not been able to collect feedback on the competition from teachers who enter but do not complete their project. The competition is evaluated by the types of projects that are submitted by school groups.

Conservo has, over the years, made a nice collection of creative projects that school children have successfully completed. There is interest in assembling these examples in a booklet, exhibit, or publication of some kind that makes these ideas available to others.

Conservo is one of the few activities in the country that encourages learners to investigate issues and take action to begin to resolve them.

ENVIROTEACH
Desert Research Foundation of Namibia (DRFN)
Derick du Toit
Gobabeb
PO Box 1592
Swakopmund
Fax: 0641-61300

Background Information

The Enviroteach project is funded by SIDA through the Ministry of Education and Culture and supported by the Desert Research Foundation of Namibia, the umbrella organization that also supports DERU, the well-known Desert Ecological Research Unit. Dr. Mary Seely directs the activities of the Foundation.

Historically, DERU explored the ecology, geology, geomorphology, archaeology, and climatology of the Namib Desert. Located on the northern edge of the sand sea, southwest of Walvis Bay, the research facility has hosted a number of scientists over the years. Since independence, DERU focuses on more appropriate research and teaching research skills. Students from University of Namibia live on site for ecological methods classes and field work. In addition to identifying a research project and conducting the research, they must communicate their discoveries to the public. This may result in a poster, a report to a Ministry, or public presentations.

The DRFN has several education projects that all involve communicating DERU's information to the public, whether by making information available for the inclusion into textbooks, creating a series of culturally-specific booklets on boreholes and community decision-making, or helping a researcher publish a booklet on local botany, for example. The DRFN is currently working extensively in the fields desertification and environmental assessments for development projects.

EE&C Activities

Enviroteach is a project of the DRFN. It includes the development and testing of five resource books and a number of booklets for secondary teachers. The topics of the books focus on the most crucial environmental issues in Namibia: water, energy (including forest issues), and population. Tools for problem solving and case studies of people who make a living from the environment are the topics of the remaining planned books. The books are designed to accompany the curriculum at each grade level: energy with grade eight, water in grade nine, people in grade ten, and tools and careers in grades eleven and twelve where these topics will enhance the required senior secondary project work.

Each book (approximately 225 pages) contains background information and clever graphics to present the issue and related topics. Colored pages provide lists of activity ideas: suggestions that teachers can use to present the main concepts to students while meeting their subject-specific objectives. Small supplemental booklets have also been developed for specific topics: seaweeds, soil, and using the outdoors. The designers never intended to

write "textbooks" for science, but rather an integrated, informal learning guide that will help all secondary teachers incorporate environmental issues into their teaching.

The first three books are being field-tested in twenty-four schools (four in each of six regions) across the country. One is a primary school; the rest are evenly divided between junior and senior secondary, and rural and urban schools. Organizers chose fairly typical schools, asking the regional officers for recommendations. Each school is visited several times throughout the year, introducing the books and activities to ALL teachers, answering questions, offering ideas, making additional suggestions, and showing teachers how the activities can be conducted in the classroom. Newsletters showing the curriculum connections are left at each school.

After the materials are revised, the project will be turned over to MEC to administer. Enviroteach will offer several possible dissemination schemes for their Steering Committee to discuss. It is most likely that the materials will become a part of the Basic Teacher Education Program at the Teacher Training Colleges, but working with Teacher Resource Centres is another possibility.

Funding and Capacity

Funding for Enviroteach is provided by SIDA through the Ministry of Education and Culture. This employs four staff at present. DRFN plans to continue to specialize in the translation and application of Namibia-specific scientific research to Namibian environmental issues, in addition to other programs. Funding is generally obtained on a project-by-project basis.

Wisdom Shared

As a national EE project, Enviroteach could not address the more traditional environmental science and ecology topics, since those vary so greatly from the Caprivi to the Namib.

It can be a delicate and challenging process to explain controversial issues. Some officials are not anxious to risk the interpretation that the government policy might be wrong. Enviroteach materials tend to reserve a strong advocacy position for issues of critical importance.

About ten percent of Namibian teachers, probably, are currently in a position to make use of the Enviroteach materials. Other teachers may lack familiarity in the content, comfort with the process of activity-based teaching, support from administrators, etc.

Teachers who have received recent in-service training from ANY other program are more capable of using the Enviroteach materials.

Business Economics and English teachers tend to do very well with the materials, perhaps because their curriculum is less crowded.

The books are written in English which is a significant barrier to many teachers, but this accords with the policy of the MEC.

Enviro-Boxes are assembled at one school and exchanged with another so students can handle artifacts from other ecosystems.

As a result of the pilot program, changes in the books will include more activity ideas, and more detailed activity descriptions. The staff hope to include activities that teachers have designed.

It is most difficult to move teachers out of the comfortable "chalk/talk" lecture mode and give students an opportunity to think independently and question information. Enviroteach activities work best if teachers can begin to teach in this way.

THE RÖSSING FOUNDATION

Len le Roux, Deputy Director

June Horwitz, Project Manager

PO Box 20746

Windhoek

Tel: 61-211721; Fax: 61-211273

Background Information

The Rössing Foundation was originally established as a social service NGO of Rössing Uranium. The Rössing Foundation's major activities have been adult education in literacy and basic income-generation skills. They operate eight Centres around the country with classrooms and teaching staff (Luderitz, Windhoek, Katutura, Swakopmund, Omaruru, Okashena, Ondangwa, Shankara) and projects in four additional areas (Gibeon, Okambahe, Ogongo, Swakop River).

EE&C Activities

Prior to the Cooperative Agreement with USAID for the EE Project, Rössing coordinated several environmental education activities:

Conservation Trails are organized and led by Pieter Mostert. They began as outdoor excursions for youth and teachers and have evolved to focus on bringing together meaningful combinations of business or government leaders. Participants learn about the environment, but chiefly relax and develop new relationships among themselves.

Young Scientist Exhibition is coordinated by June Horwitz. It is a national science fair targeted to secondary students, with project entries in all aspects of science. Those in biology tend to have a strong conservation emphasis. For the last seven years the Wildlife Society has awarded prizes to those projects with a conservation theme. Winners are often sent to International Competition.

Namibian Youth Award is coordinated by Pieter Mostert and is similar to the U.S.'s Congressional Award. It improves the self image and self confidence of participants by offering a set of projects they can voluntarily complete without being in competition with other young people. Projects are in the following categories: Community service, Expedition, Hobby, and Sport. An annual awards ceremony is held where certificates and badges are distributed.

EE&C Project Activities

June Horwitz manages the EE Project under a cooperative agreement with USAID/Namibia. The team is in the midst of developing a new cooperative agreement with USAID, with the assistance of a newly developed logical framework (logframe). A brief description of their current EE&C efforts follow:

National Coordination of EE&C

1. Provide leadership to the Namibian Environmental Network (see page 5). One newsletter has been produced; GreenCOM assessment has been coordinated.
2. Develop a Resource Centre of EE instructional materials (books, magazines, games, music, songs, videotapes, etc.) and resource manuals on environmental topics. The Centre is coordinated by Martha Nghidengwa and was opened on World Environment Day, 1994. Materials are available for reading on site, not for lending. A brochure has been distributed to advertise the Centre.
3. Provide environmental educators and university students with the technical resources to produce and print materials. The Materials Development Officer is Jenny Davis, computers are in place, and printing machines (photostat and duplicator) are available for EE organizations to use.
4. Coordinated the 1993 Environmental Conference in Hardap Dam, Namibia. Reports of the conference (both plenary sessions and workshops) were distributed to participants and other interested individuals. Will coordinate a follow-up conference in 1995.
5. Assist in the organization of the SADC Conference on Environmental Education in 1994 and helped create criteria for environmental education in Namibia.
6. Assist in overall EE&C coordination with MEC, MET, NNF, NGOs, etc.
7. Serve as liaison between MEC and literacy NGOs to write stories with environmental themes for use in literacy programs.

Scholarships

1. Provide scholarships to Namibians to attend the Masters of Education (in Environmental Education) program at Rhodes University in Grahamstown, RSA. Three awards have been made.
2. Provide partial (in Year One) and full (Years Two--Three) scholarships for people to attend the Nature Conservation Diploma at Technicon (in Windhoek). Five awards have been made.
3. Enable environmental educators to attend short courses and study tours. Sent one MET staff to the Centre for Environmental Education in India, and an MEC staff to Bradford UK for a course in evaluation.

Sub-grants to EE Organizations

1. A brochure about the grant opportunities has been printed and distributed. Seven grants have been awarded:
 - East Caprivi EE Project (IRDNC) for vehicle, slide projector, generator, equipment, books.
 - Wêreldsend (IRDNC) for computer, solar equipment, generator, printer.
 - NARREC for all-weather display boards.
 - Wildlife Society of Namibia for a two-page insert into Abacus, a newspaper that will be sent to all schools.

- Eastern Epukiro Farmers Association to increase environmental awareness and sustainable farming practices between Waterberg and Gobabis on communal Hereoland. The association has formed a seven-person committee to draw up environmental awareness programs.
- CCF for development and printing of school materials.
- Northern Namibia Forestry Committee to establish clubs in schools, conduct forestry competition, run seminars for teachers and students at junior and senior secondary.

Training

1. A series of workshops have been held for environmental educators:
 - Illustrators and Production Training for an issue of ACTION and other EE resources
 - Resources and Materials Development for NGO and MET staff
 - MET participatory planning workshops for program planning and evaluation
 - Appropriate paper-based technology workshop for income-generation and letter removal
2. Fund the participation of environmental educators to local professional development programs: six people to EEASA Conference in 1994; eight to the EESA conference in 1993.

Awareness Events

1. Assisted with World Environment Day and a national Art Competition and Festival.
2. Designing an annual nonformal festival; this year will be Environmental Art from Scrap competition, with regional competition coordinated through Teacher Resource Centres and Peace Corps Volunteers.
3. Jamborees for youth in clubs will be held every year at an EE Centre. The two-day event will involve selecting participants and coordinating sessions and entertainment.
4. Assist in the programming on NBC's environmental radio programme.
5. Funded one MET person to attend African Environmental Expo in Harare in 1993.

Management

1. Develop a Steering Committee which reviews proposals and hold regular meetings.
2. Participate in logical framework exercise, develop objectives, and revise the Cooperative Agreement.
3. Organize staff development plans.
4. Organize a separate subcommittee to select scholarship recipients.

Other

Equipment given to MET EE Centres: furniture, computers, bungalows, etc.

Wisdom Shared

Environmental educators in Namibia, while full of energy and good ideas for projects, appear to need assistance in planning, organizing, monitoring, and evaluating their projects. A separate course or training exercise on pre-testing, pilot testing, monitoring, and evaluation could be very helpful.

There is a need for resources to be shared more widely—for more people to be aware of the Materials and Resource Centres, and for some of the resources to travel to people who cannot get to Windhoek.

There is a need for increased technical training in the use of the Desktop Printing Facilities. A system or training in how to pre-test and pilot test materials could be helpful.

NAMIBIA NATURE FOUNDATION (NNF)

Peter Tyldesley

PO Box 245

Windhoek

Tel: 61-35111; Fax: 61-34021

Background Information

NNF was initially established by Douglas Reissner, an employee of Oltaver & List and Namibia Breweries, as an investment in local natural resource management. From the beginning it was designed to provide a mechanism to allow private funds to go to special projects of the Ministry of Environment and Tourism. In 1993, the current director was hired.

EE&C Activities

The NNF has several missions: to establish increased commitment and support from various Ministries for environmental education, and to coordinate funding and administrative support to various NGOs and Ministerial units.

Toward the first goal, an Inter-Ministerial Coordinating Council for Environmental Education has been established, currently with four interested Ministries: Environment and Tourism (page 13), Education and Culture (page 7), Defence, and Youth and Sport (page 21).

In their discussions of limitations and resources, representatives of these Ministries have made a commitment to share existing resources and jointly sponsor programs. Their first agreement was to share under-utilized Youth and Sport Centres near Windhoek with Environment and Tourism staff to create new EE Centres. In time, additional Ministries will be added to this Council.

NNF has also undertaken the authorship of the text and teachers guide for the Natural Economy course at the Senior Secondary Level, one of the "carrier subjects" for environmental education. The textbook is currently being reproduced and workshopped with secondary teachers. It will be used in thirty-five schools during the next school year. Materials have been designed around the Cambridge assessment exam for Natural Economy.

As a part of the second goal, NNF receives the funding that MET EE Centres are granted from various sources to purchase materials and equipment. Under the LIFE project, NNF will assist several NGOs (IRDNC, Nyae Nyae, etc.) with their bookkeeping, procurement, visas, and other tasks.

Funding and Capacity

NNF currently has five staff, comprised of EE specialists and accountants. With the assistance of the LIFE project, they embarked upon an organizational assessment and planning process that will enhance their abilities to move forward.

Wisdom Shared

NNF performs a critical role for the MET, enabling them to benefit from donations. NNF's main roles are fund-raising for MET and NGOs, fund management, and project administration (accounting, procurement, etc). EE is a secondary, but important function.

NNF could greatly assist the NGO community in Namibia by helping them with infrastructure development, planning, organizational development, grant-writing, evaluation, and management.

NNF is working to establish additional EE Centres (mostly through the MET) across the country and supporting them with staff and materials.

To reach appropriate levels of EE programs in Namibia, staff in these centres and NGOs need

- training in needs assessment, program design, and evaluation;
- training in programs that build skills and confidence to solve problems; and
- design programs and opportunities that are affordable and acceptable to the local communities.

WÊRELDSEND ENVIRONMENTAL CENTRE

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Background

Wêreldsend is a residential environmental education centre located in a remote section of northwest Namibia. Although it is 140 kms to the nearest town (Khorixas), it is centrally located between three villages with fifteen schools (twelve primary, one junior secondary and two senior secondary). Traveling time between the centre and the schools varies from forty minutes to three hours.

The Centre consists of a building for displays, meeting space, and storeroom; showers; pit toilets; an outside cooking area; and tent space for overnight guests. Staff housing is available on site. Wêreldsend is supported by NORAD (Norwegian Aid and Development) through IRDNC (Integrated Rural Development and Nature Conservation).

EE&C Activities

Wêreldsend is the education arm of IRDNC. Its goals are to increase environmental awareness among the local population, provide resources and assistance to educational leadership (teachers, group leaders, etc.), and offer a site where people can see wildlife, selected technologies, and resource conservation practices.

Wêreldsend staff conducted EE courses for teachers in 1992, and although teachers personally benefited from the information, few incorporated the new materials into their curriculum. On further exploration, the staff realized they needed to alter their program to meet the perceived needs of their local teachers.

Because teachers were concerned about deviating too much from the standard curriculum, they were more interested in extra-curricular activities, i.e., environmental clubs. The staff framed their involvement around the expressed requests of the teachers and promised to provide materials and activity ideas that the clubs could use. They visited each school to introduce the idea of the clubs (with a green-faced, costumed alien who wanted to know what "environment" meant) and began to form a productive and respectful relationship with the grade seven teachers. All materials are syllabus related and a recent development has been the discovery that some other teachers have asked to use materials in lesson time.

In subsequent workshops with club leaders, the teachers have developed goals for their clubs and decided on a name: "Earthcare Clubs." Regular visits to the schools help keep students excited and interested. Students never fail to greet them with the club sign and symbol: a four-finger wave and "ESAW!" (earth, soil, air, and water). Clubs visit the Centre on weekends (Wêreldsend provides transportation), and some have been able to take field trips to more distant environments.

In addition to building environmental awareness and ecological knowledge, the program is designed to teach critical thinking, problem solving, and decision making skills. These are still unusual elements of the curriculum in this region. The staff also design activities to communicate information in memorable and interactive ways, using group tasks, self-discovery, games, songs, visual aids, walks, and AV materials, not just lectures and discussions. A final goal is to assist students with English, a language they are still just learning.

Wêreldsend is the Namibian test site for the ACTION magazine, produced in Harare for southern Africa. One thousand copies are sent to Wêreldsend, which is enough to give every Earthcare Club member one magazine, and each school one classroom set. Use of the magazine varies from teacher to teacher.

To extend the visit to Wêreldsend, students are supplied with worksheets and activities to be completed prior to and after their visit.

Funding and Capacity

A local "logistics" assistant was employed at the beginning of 1993 who has progressed to "teaching"-assistant. He leaves to study at the end of 1994. After a long search, an untrained but experienced teacher is to join the staff in September 1994. Few professional Namibians choose the rural existence; the call to the cities is much too strong it is therefore a constant struggle to find **good** local staff.

The NORAD funding is in its last year. Additional resources have not yet been located. The Rössing Foundation provided Wêreldsend with equipment through the EE Project: computer, printer, generator, and solar collector.

Travel time between schools makes it difficult to provide resources to more schools that they are currently serving.

Wisdom Shared

It is essential, if one wishes to empower people and engage them in a new activity, to work very hard to understand their needs and interests.

Therefore, since staff are in the position of asking what people want, there must be a willingness to change the course or hopes to accommodate the local needs. Furthermore, staff must be willing to accept new definitions of a "club," since in some schools the groups meet weekly to conduct activities, and in other places they meet monthly to simply sing. Whatever works, as long as students are increasing their understanding and awareness of the environment, is acceptable.

Wêreldsend has had difficulty finding counterparts to anchor and continue the program.

**NAMIBIA ANIMAL REHABILITATION, RESEARCH, AND EDUCATION CENTRE
(NARREC)
Liz Komen
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Background Information

NARREC is Namibia's only wild animal rehabilitation centre. It began in 1988 and now has twenty-seven outdoor aviaries, thirteen kms of trails, an animal medical room, solar collectors for water and electricity, and an animal food production unit. NARREC has three main functions:

1. To professionally treat injured, orphaned and misplaced wildlife with a view to rehabilitation and release.
2. To offer school children cross-curricular, holistic environmental education, bearing in mind syllabus requirements.
3. To provide research opportunities to school children and university students.

At present, NARREC plans to develop into a self sufficient farm complex that utilizes alternative technology and environmentally-friendly techniques to farm domestic livestock, produce vegetables, and care for wildlife. They also would like to develop overnight accommodation for visiting groups.

EE&C Activities

Education of the public is seen as one of NARREC's most important function, to ensure the long-term security of wildlife and habitat. Programs for school classes cover specific aspects of animal husbandry (part of the Life Science curriculum, see page 7) or general ecology through an outdoor hike. The general public is also welcome to visit NARREC; there is no admission fee but donations are gently encouraged.

NARREC has been able to take advantage of the media, in part because injured wildlife is an exciting and interesting topic. A single television broadcast resulted in the delivery of an increased number of injured animals to the facility. NARREC sees a need to advocate for stronger animal conservation efforts—reduce illegal falconry, increase cage size regulations, and improve captive animal care.

Funding and Capacity

NARREC operates on donations and grants for projects. Recently they received equipment from GTZ, Rössing Uranium, and MET. At the present time, donations are not keeping up with expenses (primarily food and salaries). NARREC operates with a bare-bones staff (one director/educator and two maintenance/animal staff). Increased effort to develop funding requires a time investment that staff are unable to undertake at this time. Similarly, serving

more schools, working with more volunteers, or developing a membership program will require additional staff.

Wisdom Shared

NARREC has made tremendous strides from a small operation to a state-of-the-art facility. It is now on the cusp of making the next step toward continued growth, which could involve an institutional assessment leading to a reconfiguration of administration (i.e., additional staff). A board of trustees might encourage donors to donate.

NARREC prefers to be open to the public for no fee, as this encourages local people to come, visit, and learn. They have experienced relatively little vandalism, perhaps due to the relationship they have fostered with their neighbors.

NARREC staff may be able to work more closely with the MET's Permit Office, perhaps training staff and offering materials, if the upcoming MET training needs assessment indicates a need.

The animal husbandry component of the Life Science curriculum makes a strong tie between NARREC and the junior secondary schools. NARREC has offered advice in the development of teacher materials for this section. A field trip to NARREC could greatly enhance students' and teachers' knowledge of this topic.

CHEETAH CONSERVATION FUND (CCF)

Laurie Marker-Kraus and Daniel Kraus

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or

c/o International Wilderness Leadership Foundation (WILD)

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Background Information

CCF has been based in Namibia for three and a half years on a ranch in the heart of cheetah habitat. One-fifth of the entire cheetah population lives in Namibia, and ninety-five percent of these animals are on commercial farms across north central Namibia, from Windhoek to Etosha. This farm ecosystem also contains seventy percent of Namibia's wildlife population and fewer large predators than the national parks. CCF conducts surveys of farmers and farmworkers to learn how to help other farmers protect livestock in ways that will enable the cheetahs to continue to use their lands for hunting (i.e., guard dogs, increased protection for young calves). CCF also conducts field research and currently has eight radio-collared cats to learn more about range, movements, and social structure.

CCF's main goal is to create a sustainable cheetah population in Namibia. The target population size will enable trophy hunters to shoot several cats each year, provided the CITES quota continues to permit it. The largest threat to cheetahs are the farmers in north central Namibia who see cheetahs as a threat to their calves.

CCF's main activity centres around education for improved farmland management, wildlife management, and livestock management that will enhance cheetah survival, education for increased knowledge and attitudes about cheetahs, and basic research.

EE&C Activities

To begin to change farmers' attitudes and behaviors toward cheetahs, CCF conducted a sizable survey of farmers. Information about how some farmers protect calves from cheetahs is shared with other farmers and extensions officers through newsletters, presentations to farmers' unions, presentations to agriculture colleges and Technicon students, television documentaries, and reports. CCF has begun a project to place a special breed of guard dog on select farms and educates farmers about the care and training of the dogs.

CCF is also active in the local schools to help young people understand and appreciate cheetahs. This is done to not only educate youngsters, but also to send a message home to farmers. Volunteer staff have conducted assemblies at forty-four schools, reaching 5000 students over the last year. Repeat visits and extended contact with teachers help increase the assembly's educational value. Materials and activity sheets emphasize a cross-curricular approach to learning about cheetahs, predators, wildlife, and farmland ecosystem. One local

school has three Conservo groups working with CCF on various research and outreach projects.

Across the country, CCF supports awareness projects to help all Namibians take pride in their special cat, such as with the Shell-sponsored Art Competition on predators and the writing competition on cheetahs. The products of these two competitions will be published in a book.

CCF works with other EE efforts where possible, teaming up with MET staff when school groups stay at the MET EE Centres, conduct training for Peace Corps Volunteers, and conducting activities and games at the American community Fourth of July picnic. They recently completed a coloring book and packet for elementary students that contains information about cheetahs and simple activities: coloring pictures, dot-to-dot games, maze, bookmark. As a part of their Rössing Foundation/EE Project sub-grant, CCF is printing 600 copies of a secondary teacher packet for all subject areas.

The CCF site is open to visitors, though they are not set up to handle great numbers. Farm workers come to see and pet the two tame cheetahs. Farm workers' wives are involved in a small business venture with CCF. CCF provides fabric, embroidery thread, and cheetah patterns, and buys embroidered tablecloths and placemats from the women. Handiwork is then sold at a profit for CCF.

Funding and Capacity

CCF funding comes primarily from donations from the United States, sales of T-shirts and materials, and grants for projects. There are no staff. The two directors do not draw a salary and the seasonal university students actually pay a fee for food and supplies. These volunteers assist with field work, launch special projects, prepare educational materials, and conduct programs. The farm is managed separately by the owners and resident farm workers.

CCF is a registered trust and non-profit organization in Namibia with a Board of Directors and an international board of research advisors. CCF is also a project under WILD, a United States-based NGO.

Wisdom Shared

It is important for Namibians to be integrally involved with the CCF projects and to receive the credit for their success. Consequently, local farm workers are featured when documentaries are filmed about cheetah conservation.

It is important that the messages directed to farmers about changes in livestock management credit their source—other farmers. CCF is not dreaming up new techniques, merely sharing practices that others have found successful.

It is important to cultivate cheetah fans in all walks of life: embroiderers, gasoline attendants, teachers, church leaders, because they all are a part of the system that supports cheetahs.

Cheetahs, predators, and wildlife in general can be the vehicle through which many subjects are taught: mathematics, science, geography, history, English, art.

With support, the community in Otjiwarongo is ready to conduct their own World Environment Day. Parents, teachers, students, churches, and other development groups have formed a cohesive community that works together.

NYAE NYAE DEVELOPMENT FOUNDATION

Axel Thoma, Coordinator

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Background Information

The Nyae Nyae Development Foundation coordinates integrated rural development activity in Bushmanland. They are working to change people's perceptions of development from a system of handouts to earned and owned investment. (Both the recipients and the donors can unwittingly continue the "handout" system.) As a result, the Foundation staff resist certain requests (i.e., for transport) and instead help Bushman generate the income necessary to purchase their own vehicle. They have taken more of an advocacy role, however, in helping to negotiate media coverage to prevent blatant exploitation.

The Nyae Nyae Development Foundation grew out of strong interest in the Bushman by John Marshall, an American film maker and anthropologist. His family has been active in Bushman research and filming since the 1950s, and helped establish both Nyae Nyae and the Farmer's Cooperative. He used his influence to prevent the South African government from removing Bushman from the area, and to obtain certain developments, like boreholes.

Because of the Bushman culture and norms regarding time, distance, quantities, problems to be solved, and decision-making practices, as well as ignorance and racism within the government, few Bushman have been involved in setting government policies about their lands. The Nyae Nyae Foundation is working toward a goal that within ten years, Bushman will speak for themselves, without Nyae Nyae's assistance.

EE&C Activities

The work that Nyae Nyae conducts with the Bushman to help with natural resource management does not necessarily require training in citizenship or group process. The cultural norm already exists for Bushman adults to discuss and contemplate an issue until no dissenting voices are heard. Men form the decision-making group and although women do not have an equal voice, they can effectively point out their perspectives. Nyae Nyae uses the Bushman decision-making process instead of a Western model, helps groups realize when they need more information, and helps providers of that information gear their discussions appropriately.

Bushman already know a great deal about the environment. Nyae Nyae would like to hire several people to teach English so Bushman women can articulate what they know more effectively. Nyae Nyae suggests targeting women because their literacy skills are typically lower than the men who learned Afrikaans from the South African Defence Force.

Funding and Capacity

Nyae Nyae is a small NGO that has obtained funding from WWF-International for their integrated rural development work, and now from the LIFE Project. They also receive funding from SIDA and NORAD. They prefer to move slowly, as too many programs, too fast, may not be appropriate for the Bushman.

Wisdom Shared

Land tenure is the key to increasing environmental commitment.

Education must be integrated into everything, and it will cost something to provide it to Bushman, as the time they spend learning from books is time they cannot spend finding food.

Nyae Nyae needs to move quickly in generating cash from natural resources, so that Bushman can see that money can be made from their land, not just cattle. As the Herero move back into Namibia from Botswana, there is increased pressure on Bushmanland to become cattle rangeland.

Bushman are clear in their intention to live on their land and find their livelihood there. They may want cattle, but not so many that they can no longer collect wild food.

FARMER'S UNION IN KHORIXAS

Themistokles Dudu Murorua

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c/o Save the Rhino Trust

Khorixas

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Background Information

The Farmer's Union is a national organization with regional boards and associations. In the Khorixas region, members are primarily cattle herders. The organization coordinates auctions, negotiates better prices for their members, and helps solve problems.

Land tenure in the communal areas is the biggest barrier to improved environmental management.

EE&C Activities

Although currently there are no formal EE&C activities, this network of cattle herders represents one potential organization that could become involved in a campaign to improve environmental awareness.

NAMIBIAN DEVELOPMENT TRUST

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Background Information

The Namibian Development Trust (NDT) is an NGO that works to promote agriculture, income generation activities, health, and education among the economically and socially marginalized Namibians. It was developed as a channel for funding by the EEC, and since Independence has become an education and development organization. They are currently working with Oxfam-Canada on a youth education and empowerment program.

EE&C Activities

NDT takes an integrated approach to development and environment, seeing the rhino and the people as equally important elements in the ecosystem. Their main activity is food security, and with excess crops, food processing to add value and generate income. Solar energy programs are also an important alternative to wood for fuel.

Their work is based out of two regional centres in Oshakati and Keetmanshoop, with headquarters in Windhoek. Program officers act as community mobilizers, helping communities identify problems and projects that might work in their area. They help create a development plan and interact closely with relevant Ministry staff.

Because the present education system does not prepare all students for competing effectively in the marketplace, NDT is working with one junior secondary school to pilot some career courses and student empowerment programs.

Wisdom Shared

Typically NDT works in a community for two–four weeks. They are finding that this is not enough time to make an impact on a long-term development project and are working to increase follow-up opportunities.

Human resource development is greatly needed throughout Namibia; NDT works to empower people with citizenship education as well.

UNITED STATES PEACE CORPS/NAMIBIA
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Background Information

US Peace Corps/Namibia sponsors about seventy-five American volunteers in various projects, mostly in rural Namibia. Volunteers range from recent college graduates to retirees and usually stay two years. With permission, they may extend their contract to three years. Volunteers work with all major ethnic groups in Namibia and during their orientation receive training in five different languages.

EE&C Activities

The majority of Peace Corps Volunteers (forty-eight) teach English, math, and science classes in secondary schools. Their training program helps them develop the ability to infuse environmental education into their subject areas and make them more aware of the Namibian environmental concerns.

An additional fourteen volunteers work in the Teacher Resource Centres and Colleges of Education where they help teachers develop skills in teaching methods and subject area expertise through workshops, courses, demonstrations, and site visits. They also demonstrate how EE can be infused into the curriculum at various levels. The Ministry of Youth and Sport has seven volunteers developing youth programs; one is responsible for the new Desk for EE Activities (urban environmental activities and outdoor leadership with EE component). Five Peace Corps trainees are undergoing training and will be assisting the Ministry of Youth and Sport. The Ministry of Agriculture Water and Rural Development accepted two trainees who are also undergoing training and will work with Extension Officers on water and sanitation issues.

Funding and Capacity

Peace Corps is funded by the U.S. government with project assistance, if applicable, from other U.S. agencies. As per agreement between the U.S. Government and the Government of the Republic of Namibia, Peace Corps volunteers are provided furnished rent-free housing and utilities. The Peace Corps office is particularly understaffed at the present time with several people on leave.

Wisdom Shared

The APCD for Education is interesting in starting an EE Committee to promote environmental awareness in schools and exchange engaging activity ideas among the volunteers, including urban environmental issues.

In the rural areas there can be a distrust of Conservation Extension Officers caused by misinterpretation of their jobs, making the schools a more credible source of environmental information.

Girls drop out of school at a greater rate than boys. PC operates a Committee for Women in Development and some volunteers counsel female secondary students and organize club events through this activity.

During May 1993, Peace Corps organized an EE workshop for fifteen Peace Corps volunteers and fifteen Namibian teachers. Useful environmental resources were shared. These resources were mostly organized by DERU and Enviroteach.

Peace Corps currently has two volunteers working in environment related projects. One volunteer works with Enviroteach and the other works with the Ministry of Youth and Sport—urban environmental issues and outdoor leadership (with an EE component). Peace Corps/Namibia overall supports EE efforts.

RURAL DEVELOPMENT CENTRE—ONGWEDIVA

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Background Information

Plans for the Rural Development Centre (RDC) were approved by the former administration in 1987, construction began in 1988, and the program opened in 1989. Until April 1994, three separate directorates advised rural people about land: Rural Development worked inside the kraal on homestead uplifting, Agriculture dealt with local rangeland, and Forestry addressed communal lands. Now all three divisions are sharing the extension function of rural development. The officers use the RDC and other regional NGO programs as backup resources to their field.

RDC provides courses on site to develop skills and products. These include construction, fish farming, dam building, tinsmithing, sewing, breadbaking, solar energy, bottle houses, etc. RDC also has staff that travel to communities to give presentations, talk to women, and offer skill-building sessions.

The RDC is authorized by MAWRD and managed by a private consulting firm. Consideration is being given to establishing additional centres at Gobabis, Rundu, and Rehoboth.

EE&C Activities

To identify which regions need what projects, RDC meets with Headmen and community leaders. One of the easiest mistakes to make is rushing to action to solve the problem before the people are aware that a problem exists. One good example is deforestation: the problem is perceived to be the distance one must go to collect firewood. Planting trees, therefore, would not be the immediate solution, rather to be emphasized as a long term plan.

Trainees come from across the region on a first come, first serve basis and stay overnight at the RDC. As most of the courses are taught in Oshivambo, people from other regions would find communications limited.

The RDC has worked to coordinate and increase communication among the regional development projects. Several forums have evolved from the Ovamboland Development Committee to increase communication and advise projects. The Water and Sanitation Community Forum, the National Forestry Committee, and the Small Business Advisory Board have met regularly. The lead organizers for each committee have been expatriates from concerned projects.

School groups visit the RDC to explore various topics. Currently there are no locally produced AV materials.

Wisdom Shared

Jumping to action and meeting failure could damage future relations with that community and slow down other projects.

The formula for development work: Awaken people to the problem; help them become Aware of the consequences and possibilities; engage them in becoming Alive with the situation and believing that they could make a difference; take Action to resolve the problem.

As expatriates are replaced by community members in the Forums, people are likely to need training in organizing meetings, making decisions, planning projects, and leadership.

Development should be thought of as a business venture. The outcome should be an economic incentive. In the past, development has been a presented gift and may not have been perceived as having much value.

Projects should be integrated such that one project opens the door to additional messages. When a well goes into a community, people can also learn about health and sanitation.

Community based staff and additional transport can make efforts more effective. There is a strong need to carry the same rural development messages to the urban areas, where the rural behaviors regarding stoves, firewood, sanitation, gardens, and water use could be modified to be more environmentally appropriate.

It is critical to work with the headmen and community leaders to identify problems and involve them in planning towards solutions.

Videotapes of Ovamboland people doing rural development projects would be very helpful. These would be used to work within the community forums to identify examples to showcase. Video or slides are good media when explaining ideas to communities.

ONGWEDIVA COLLEGE OF EDUCATION

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Background Information

Seven hundred students attend Ongwediva College of Education, the largest teacher training college in Namibia. There are a total of about forty-five faculty; thirteen in the maths, science, and agriculture department. The new curriculum for teacher training, the Basic Education Teachers Diploma, is in its second year of implementation—the new third year courses will begin in January 1995.

EE&C Activities

Environmental education is a component of several different departments, due to the interest of the faculty and the availability of the Enviroteach materials. At the present time, faculty have one set of materials for coursework. If students also had Enviroteach books (see page 25) it would be easier to infuse environmental lessons into all subject areas and help students new teaching methods. Social studies, English, and science currently have strong EE components.

The second year math/science majors are planning a field trip to Okatjikona Environmental Education Centre at Waterberg Plateau Park in August. The objectives for this trip include (1) learn how to fundraise, (2) practice organizing an excursion, (3) see the side of Namibia that tourists see, (4) enhance geology lessons, (5) conduct field work, and (6) develop an appreciation for Namibia's natural environment.

The science program makes good use of outside resource people as well. Visits from Erik Jessen at the Onankali Nursery have resulted in a garden on the College site (page 52). The Mobile Museum conducted a mapping exercise. Representatives from Water, Forestry, and other departments have given talks.

The cooperating teachers who agree to supervise preservice teachers during the school-based studies (student teaching) also attend a workshop at the College where they become aware of new teaching methods and EE resources.

The science departments from all four teaching colleges meet to discuss new courses and curriculum ideas. All of the faculty from all of the colleges are meeting in August to discuss the Teacher Education Reform Project.

Funding and Capacity

Several Peace Corps Volunteers are placed at the College as faculty. Only three of the thirteen faculty in the science department are Namibian.

Wisdom Shared

For the college faculty to make good use of the Enviroteach materials, they will need to be inserviced—taught how to use them.

Even with an inservice, some faculty may not accept new methods and materials easily.

A pretest of BETD students knowledge and attitudes will help evaluate the effectiveness of the BETD courses after the three year program.

On-going support for the new graduates will be important, as they have a variety of barriers that work against the effective implementation of new teaching methods: lack of support from colleagues; lack of support from administration; youth; inexperience; negative attitudes from teachers without diplomas whom they are replacing; home chores; sixty students in a class; 250 students in a day.

ONGWEDIVA TEACHER RESOURCE CENTRE

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Background Information

The Ongwediva Teacher Resource Centre is one of twelve TRC's operated by the Ministry of Education and Culture to serve in-service teachers around the country. This particular centre operates three local TRC's.

The facility includes office space for projects, duplicating machines, a library, classrooms, and access to College dormitories. When school is in session, up to fifty teachers can stay up to five days for a course. During holidays courses may run for two weeks. Since the beginning of 1994, there have been workshops scheduled every week at the Centre, sometimes as many as six at one time.

EE&C Activities

The Life Science Project has one office at the Centre and conducts courses on site and at schools in the region. In addition to the events, courses, and workshops offered through this project, this Centre offers two other programs—one for the Basic Education Teaching Diploma and the other for miscellaneous in-service opportunities.

Wisdom Shared

The Life Science Project has been an extremely successful effort. The staff are pleased to work with a core of life science teachers (after several years of basic workshops) who have basic competencies in both content and science education.

Most workshops end with the production of a teaching aid: paper, scissors, and markers are common tools.

ONANKALI NURSERY

Erik Jessen
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Ondangwa

Background Information

The Onankali Nursery sits on one hectare of sand owned by the Forestry Division and is managed by a volunteer from Denmark. Funds for construction and activities come from Africa Groups of Sweden. The nursery acts on its own but it also acts as a satellite site of the Rural Development Centre in Ongwediva.

Three workers keep the nursery running, construct buildings out of beer bottles and cement, and conduct their own experiments with seedlings and various regimes of water, wind exposure, and organic nutrients. The goal of the experiments is to discover the minimal requirements for each species to survive. The region has neither water nor nutrients to spare.

EE&C Activities

Erik is available to speak to courses and help teachers start nurseries and gardens, but he doesn't believe a strong outreach program is beneficial. He believes people learn when they are ready and they need to seek information. He also believes people learn from conducting their own experiments and the best thing he can do is provide them with seedlings.

The nursery is open for anyone and everyone who drops by to see what is growing. Passionfruit are doing well, and chili peppers are becoming popular as a small income-earner. Papaya do not survive the cold, dry wind unless they are sheltered by a building or other trees.

Signs on each of the bottle buildings indicate how many bottles and the other resources were required to make them. The guest house rondovel took 2800 bottles.

Workers go to primary schools to share information about planting trees and herbs. Although Erik is willing to make presentations at the secondary schools, he finds that the teachers want something more "academic" than his practical, hands-on approach to learning.

Funding and Capacity

This is a very small operation, and that makes it a good demonstration site for activities that people can do at their own home site. It began as a one-year project, and as a result did not establish a community committee to govern the activities. There are plans to continue for three more years, and to organize the local community to identify the types of concerns that should be experimented with at the nursery.

Wisdom Shared

If he finds success in practice, his ideas will spread to others. By demonstrating his ideas, and by offering a little advice to those who ask, he believes he is doing all that ought to be done.

Since this centre operates in a constant cycle of praxis, there can be no accurate or effective "workplan." The work evolves as experiments present themselves.

People in this region do not have a tradition of planting things. There is a strong belief that the natural resources (i.e., firewood and construction timber) are "provided" to them. Therefore, the idea of planting things in a place where you want them is most readily accepted for species that are not found naturally—fruit trees and ornamentals. Because it is so important to begin to change this norm of not planting, the nursery grows mostly fruit and ornamental plants, not fodder, construction, or firewood species.

Another difficulty facing this region is the strong norm against picking up trash. Although beer bottles are plentiful and an excellent substitute for wood in home construction, people do not want to collect what other people have discarded. Attempts to offer financial incentives (ten cents per bottle) have failed.

Children and young mothers are the most likely target group for new messages; they are most eager to learn new ways of maximizing resources.

BRICKS COMMUNITY PROJECT

Simon Manuel, Cultural Department

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Background Information

Bricks is a community-based NGO that supports community development, income generation, issue awareness, and English through their magazine and community theatre. They also publish the newsletter for NANGOF. Some of the theatre topics include AIDS, boreholes, endangered species, equity, gardening, etc.

EE&C Activities

Bricks was asked to create a play for World Environment Day and used information about endangered species and pollution to raise awareness about the problem. They have also worked with SARDEP (see page 19) to communicate information about farming issues and boreholes to communities. Performances are conducted in the local languages.

Bricks is sharing the medium of theatre by starting theatre chapters in schools. Members of these groups receive training in writing plays, mime, acting, and leading theatre; they perform for local events. Most plays run about twenty minutes and involve six–twelve actors.

Wisdom Shared

They find theatre is an excellent medium through which to increase awareness and provide information.

They do not use comedy to communicate a serious message.

TECHNICON
Ibo Zimmerman, Lecturer
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Windhoek
Tel: 61-307 2461

Background Information

The Technicon is currently under the University of Namibia and the Ministry of Education and Culture. It provides three-year technical diplomas to Namibians who matriculated from grade twelve.

EE&C Activities

The National Diploma in Nature Conservation is the main vehicle for training resource managers and environmental educators employed by the Ministry of Environment and Tourism and private game farms and lodges. The program involves four semesters of required coursework and two semesters of in-service training. While on campus, students take courses in animal studies, ecology, plant studies, conservation administration, conservator development, law enforcement, resource management, and nature conservation techniques. The theoretical component of most courses is oriented to memorization and lectures. Most courses also have field exercises and group projects. Courses generally involve four one-hour lectures per week and may include field trips. Students take five courses a semester and no electives.

At the present time, environmental education is covered in one section of one course. There is not time to include much instruction on learning theory, teaching methods, or instructional materials. During the in-service training period, students are expected to complete an EE project. Through field trips and course projects, students are exposed to the programs at NARREC, DERU, Conservo, etc.

The number of students joining the program starts at about twenty-five per year, though about half drop out before the end. Students come from several sectors. The MET sends some employees to study at Technicon, the MEC supplies some partial or full scholarships, Rössing Foundation's EE Project offers some scholarships, and some are "private" students. Of the students in the nature conservation program, about seventy percent are black; about twenty percent are women.

Wisdom Shared

Students are graded on a fifty percent pass rate, which reduces the incentive to do better than "pass."

There is consideration of adding a compulsory course in English and a specialization in ecotourism, sustainable development, and environmental education.

Most students are accustomed to memorizing information and some are uncomfortable when they have to think for themselves. In addition, changes in pedagogy are not being encouraged much. Most of the in-service experiences are arranged with MET or private game farms.

WILDLIFE SOCIETY OF NAMIBIA

c/o Hildegard Becker

PO Box 23007

Windhoek

Home Tel: 61-35433

or

Roger Swart

PO Box 3508

Windhoek

Fax: 61-221786

Background Information

The Wildlife Society is a membership organization that seeks to maintain wildlife and a sustainable and healthy environment by supporting projects and educational initiatives. It is an active organization in major cities across Namibia, with volunteers conducting a wide variety of programs. The organization is made of separate chapters that meet locally and conduct local projects. Activities in Swakopmund are described on page 18. Activities in Windhoek follow.

The Society publishes a magazine, "Roan News" for its members. Copies are made available to the MET EE Centres and some schools.

EE&C Activities

Monthly meetings that focus on environmental topics are held for interested members and public in Windhoek. A group of seven volunteers conduct most of the educational projects, which include supporting local competitions and developing programs and courses for school groups at a local environmental centre.

The Society intends to develop more outreach programs for rural communities.

NAMIBIAN SPORT AND RECREATION CLUB

Lazarus Mambo
PO Box 7396
Windhoek
Tel: 61-21888

Background Information

The Club operates in a variety of locations to promote community development.

EE&C Activities

Broad efforts in environmental awareness, primarily around litter and rubbish, are conducted. Tidy-Up Campaigns and relationships with private rubbish contractors are conducted. Both roadside areas and community open spaces are targeted for clean-up.

Program activities are sponsored by local private enterprises, and organized by volunteers.

LIFE—LIVING IN A FINITE ENVIRONMENT

Chris Weaver, COP and Barbara Wyckoff-Baird

World Wildlife Fund-US

68/A Robert Mugabe Ave.

Windhoek

Tel: 61-239945; Fax: 61-239799

Background Information

The LIFE Project is a Cooperative Agreement between World Wildlife Fund/United States (WWF), MET, and USAID/Namibia to support further development and implementation of a national program in Community-Based Natural Resource Management in Namibia. This goal is accomplished through work with local NGOs, providing them with technical assistance, training, and grants to enhance the capabilities of poor, rural communities living on marginal lands.

This project grew out of a successful Game Guard/wildlife management effort initiated by IRDNC and funded by WWF-International and a USAID Southern Africa Regional Program for Natural Resources Management with community-based programs in Zambia, Zimbabwe, and Botswana. As with the early efforts, managing wildlife for economic benefit is a part of the LIFE Project. LIFE's unique contribution, however, is the integration of all natural resources and their management for community benefit (i.e., ecotourism, thatch grass, crafts, filming contracts).

LIFE targets NGO's working with community-based natural resources in the Caprivi (IRDNC) and Bushmanland (Nyae Nyae). Future work may include the Etoash catchment. At the national level, subgrants have been awarded to NNF for NGO support and the Social Science Division at University of Namibia for monitoring and evaluation efforts.

EE&C Activities

Much of the LIFE project activity can be considered environmental education: assisting people in building the skills and competence to solve their own environmental problems and create a sustainable system. These goals are being accomplished through communications skills workshops, legal assistance, conservancy development, marketing plans, governing structures, negotiation and conflict management skill building, etc.

The LIFE Project Program Objective Tree includes another outcome that is also considered to be environmental education: "increased community awareness and knowledge and natural resource management opportunities and constraints." At this time it is unclear which EE&C methods will be utilized to achieve this outcome.

READ—REACHING OUT WITH EDUCATION FOR ADULTS IN DEVELOPMENT

Nancy Wilson
World Education, Inc.
Tal House, 2nd floor
61 Tal Street, PO Box 13376
Windhoek
Tel: 61-239461; Fax: 61-240319

Background Information

The READ Project is a nonformal education and training project which provides assistance and support to strengthen NGO's in five areas: literacy/numeracy, life skills and income generation, health, environmental awareness, and civic education/democracy.

It will achieve these goals through institutional strengthening workshops and assistance, training programs, research, outreach, and networking. World Education, Inc. coordinates a portion of the READ Project with the MEC Department of Adult and Continuing Education. Funds from the READ Project have been dedicated to the EE Project, which is managed by Rössing Foundation under a separate cooperative agreement with USAID/Namibia.

EE&C Activities

Initial efforts under READ were devoted to NGO institutional assistance and development. The Steering Committee hopes to explore the possibility of combining the environmental awareness and civic education goals of the READ Project by helping NGOs assist communities interested in responding to and resolving local environmental problems in a democratic and participatory manner.

One proposal for an environmental awareness activity combines literacy support with basic research on the usefulness of various media. The Rössing Foundation plans to propose the development of a comic book and radio broadcast. A careful assessment would be conducted to learn if this is a valuable tool for increasing either literacy or environmental awareness.

D. The Donor Community

The following list includes the bilateral and multinational funding organizations that fund EE&C activities in Namibia.

SIDA—SWEDISH INTERNATIONAL DEVELOPMENT AUTHORITY

Ingrid Lofstrom-Berg
Embassy of Sweden, Development Corporation Office
Sanlam Centre, 9th floor
P.O. Box 23087
Windhoek
Tel: 61-222905; Fax: 61-222774

SIDA has made a major investment in environmental education teaching materials by funding Enviroteach, a project to develop teacher information and activity books by DERU (see page 25). They also fund the research and production of booklets about current environmental issues, e.g., temporary lakes in the north, borehole drilling, and damming streams. In terms of general education, SIDA is heavily involved in the reformulation of the teacher education program with MEC.

EMBASSY OF NORWAY

Mr. Oyen
P.O. Box 9936 Eros
Windhoek
Tel: 61-227812

The Norwegian government sponsors environmental education projects such as IRDNC (Wêreldsend) through NNF. Their major effort in the near future will be to support the development and passage of new environmental legislation. They can also assist in training programs and participation in international conferences (particularly in Norway). The Norwegian Nature Conservation Organization will be sponsoring a program with the Desert Research Foundation of Namibia for the Legal Assistance Centre in adult environmental issue education.

BRITISH COUNCIL

Jasper Utley, Annie Symonds
PO Box 24224
Windhoek
Tel: 61-226776

The British Council considers environment and environmental education a very big priority. They provide training courses, facilitate workshops, provide resources, provide consultants, and transport people to regional courses and training events. Many of the projects are targeted to Ministries, but not all of them. A recent emphasis has been to increase capacity among newspaper and NBC journalists in covering environmental issues and stories. Great

Britain also sponsors the Voluntary Service Overseas program which can place skilled, qualified volunteers in particular areas, based on needs.

UNICEF
Mr. Shipena
P.O. Box 1706
Sanlam Building
Tel: 61-229220

The major priorities for UNICEF are wells, sanitation, and children's health care.

ROYAL NETHERLANDS EMBASSY
Netherlands Government Development Cooperative Office
Mr. Everard
2 Crohn Street
Tel: 61-223733

A funding agreement for an environmental profiles project has been concluded with the Dutch and should start this year.

ITALIAN EMBASSY
Ms Chioffi
Tel: 61-228602

The Italian Embassy is supporting an Italian NGO to help strengthen Namibian community-based organizations. One aim of the project is to recommend closer associations with environmental objectives in their community development. Mr. Giovacchini (from the NGO) is working closely with NDT.

GTZ—DEUTSCHE GESELLSCHAFT FÜR TECHNISCHE ZUSAMMENARBEIT
c/o Dr. Fitter
Ministry of Agriculture Water and Rural Development
Private Bag 13184, Windhoek
Tel: 61-224550; Fax: 61-222974

GTZ supports the SARDEP through the MAWRD (see page 19), a marine resources monitoring program, and a water awareness project which successfully involves communities in water management issues in the north.

OXFAM-CANADA
Peter Meisenheimer and Jeremy Miller
Tel: 61-37908

A copy of a report is available summarizing their analysis of environmental activity and needs.

UNITED STATES EMBASSY
Barbara Belding, USAID
Kathy Petersen, Embassy
Private Bag 12029
Ausspannplatz
Windhoek
Tel: 61-221601; Fax: 61-229792

In addition to supporting NGO activity through LIFE, the EE Project, and READ (see pages 59, 28, and 60), USAID assists MEC in the implementation of the Basic Education Program for primary grades, and funds tertiary training in the United States through the ATLAS program. Through the U.S. embassy, funds are available for Biodiversity and Self-Help Projects.

Other potential donors that were not available at the time of this consultancy:

- Finland Embassy and Finida
- Unesco
- Overseas Development Agency
- European Commission
- Danish Embassy and Danida
- Oxfam-UK

E. Private Sector

The private sector has shown a great deal of interest in funding aspects of the environmental education efforts in Namibia and being involved in environmental efforts. The Namibia Business Forum for the Environment was established in April 1993 to:

- promote high standards for commerce and industry in Namibia;
- promote a balanced view of environmental issues;
- communicate with government regarding environmental legislation and;
- create a platform the expression of views of the business community on the environment.

The Forum originated with fourteen members, each representing a major business or industry, and as of April 1994 has thirty-two members.

Some examples of business sponsorship of environmental education activities:

Goldfields built the facilities at Okatjikona Environmental Education Centre at Waterberg Plateau Park and seconded one staff person to MET to help coordinate the development of the centre.

Standard Bank is sponsoring the Youth Wilderness Program with MYS and MET out of the Katutura Youth Centre.

Shell sponsors the Art Competition, usually with an environmental theme, and often with an environmental organization, such as CCF or DERU.

Air France sponsored a bird competition in conjunction with NARREC.

Coca-Cola sponsors the MEC Conservo Competition for community environmental actions.

F. Media

Namibia has a developing media infrastructure. There is one television station (Namibian Broadcasting Corporation, NBC) that broadcasts programs from the USA, Britain, and southern Africa countries, in addition to some programs filmed in country. Although the broadcast covers much of the country, few people in the rural areas have television sets. Advertising is free, and if the topic can become a program, it is all the better. A second station offers movies for a fee.

NBC also operates national radio programs in several languages. This is an effective avenue for reaching people across the country. Advertising is free. A survey has recently been conducted by NBC to understand more about the listening audience. There is talk of developing community radio stations, and to this end a separate media survey is being conducted by NANGOF with SIAPAC, funded in part by READ. This survey will focus on magazines, newspapers, radio, and languages.

Namibia has several newspapers with wide distribution, though few areas in the country receive them on the day they are printed. When an organization wishes to advertise an event, it often uses all media channels at once: TV, radio, newspaper, billboards, posters, and the banner across Independence Way downtown. Radio, however, is the only timely medium that reaches outside of Windhoek, but the culture is such that schools and direct contact are the most credible avenues of information.

The idea of a coordinated, concerted media campaign to change environmental behavior was not well received by several of the individuals interviewed, perhaps because of Namibia's recent struggle for independence. There is a strong aversion to "being told what to do" or participating in a program that seeks to confine, constrain, or change behaviors. There is strong agreement and support for programs that empower people, build capacity and skills, and increase citizenship skills. Media programs cast in this light are likely to be more accepted.

NBC, PO Box 321, 61-215811 (fax: 61-217760)

Namibia Press Agency, Box 61354, 61-221711 (fax: 61-221713)

The Namibian (newspaper), Box 20783, Windhoek, 61-36970

Windhoek Advertiser, 9 Stubel Street, 61-221737

Inter-Africa Outdoor Media Advertising, Box 24139, 61-229019

Hergen Junge, PR for Appropriate Paper-based Technology, 61-220863

Pronam (PR Consultants), 61-230095 (fax: 61-220557)

G. Other Resources

Depending upon the nature of new EE&C initiatives, these resources might be useful.

SIAPAC—Social Impact Assessment and Policy Analysis Corporation, Ltd. PO Box 82, Windhoek, 61-220531 (fax: 61-35859)

David Cownie and Elizabeth Blake manage this SADC-based consulting firm specializing in social needs assessment, programme evaluation, and socio-economic survey research. They have the capacity to quickly gear up for a large study and send thirty surveyors into the field. A substantial amount of their work is for NANGOF, including a recent media study (funding through NANGOF and READ).

SSD—The Social Science Division of the research centre at the University of Namibia.

Chris Tapscott is the current director. This institution works closely with the LIFE Project to assist with monitoring and evaluation of the community resource management efforts.

SECTION III FINDINGS

There are three broad spheres of environmental education and communications activity in Namibia:

1. school-based EE curriculum designed by MEC
2. NGO and MET programs, primarily targeting schools and youth
3. community and adult extension programs, from Ministries and NGOs

If these three spheres are divided by target population, then there are two basic recipients of EE&C activities: schools and communities. Because there is an overlapping set of agencies and organizations that provide services to these two populations (teachers and students are increasing their work with community issues; schools visit MET EE Centres to supplement the school curriculum; NGOs provide resources for teachers and community leaders; NGOs and Ministries work with community leaders to solve problems and change behaviors) there is a strong need for communication and cooperation.

A fair number of programs, while they do not have a major commitment to environmental education, have some level of responsibility and opportunity to add an environmental theme to their work (Adult and Continuing Education, for example). These programs dramatically increase the number of EE resources that could be mobilized to work in a given region on an environmental initiative.

There appears to be little communication and coordination between efforts, however, perhaps because geography and the lack of telephone lines makes communication difficult, because people are extremely busy conducting their own jobs, and because it doesn't seem to be anyone's job to increase communication and coordination.

There is genuine excitement throughout Namibia about the new programs, innovative ideas, and tremendous opportunities in environmental education. Finding the people to do the work, or secondarily, training them, seems to be one of the most serious stumbling blocks.

SECTION IV SUGGESTIONS

As a result of this consultancy, several ideas were put forth by interviewees and a few more were generated out of the combination of discussions and reflections. Two things are clear about the following list of ideas:

1. The people conducting EE&C programs in Namibia know the most about what works, what might work, and what is worth doing—all of these suggestions must be developed by people in Namibia, and
2. All of these efforts cannot be conducted at once. The EE&C community in Namibia will need to prioritize the suggestions that seem feasible and create an implementation plan or working group to begin to put some actions in place.

Given the need for the Namibian EE&C community to revise, discuss, develop, and create consensus around these suggestions, the following plan has been recommended:

1. This draft report is circulated to the interviewees for correction and comments, which will be due to June Horwitz by August 1.
2. Corrections will be made to the document by GreenCOM; a final report will be available by September 1.
3. The final document will be distributed in its entirety to members of the core of the EE&C community and interested interviewees.
4. A two-day working meeting will be held in October or November for the core members of the EE&C community to discuss the report and prioritize the most feasible actions that could be taken to advance EE in Namibia. Working groups may be established with a set of tasks to complete by the next NEN conference.
5. An NEN conference, with workshops and working group meetings will be held in March 1995 to develop broader consensus among the EE community for these initiatives, or to put into place some of the suggestions.

The following suggestions stem from a selection of goal statements that may or may not be relevant to the environmental education community in Namibia. They may lead to interesting and dynamic discussions about the goals of various aspects of EE programs. For example, should the MET centres focus on nature appreciation and ecology, environmental issues and solutions, or meeting local needs, whatever they are?

If the goal is to introduce youth to nature and environmental science...

then the traditional EE programs that already exist should be supported and expanded so that more children can have access to this experience. The work of NARREC, Wêreldsend, DERU, CCF, and the MET EE Centres would serve as models of innovative and practical strategies for sharing information and creating a positive attitude toward the environment. The current diversity of methods for reaching youngsters (i.e., residential experiences, youth clubs, jamborees, festivals, outdoor skills, curriculum-enhancing supplementary programs) should be continued, with a research or evaluation component that

begins to identify when one strategy is more effective than another. For example, a festival may be a very appropriate strategy for beginning awareness about an issue, but a less effective strategy once awareness already exists.

If the goal is to support the EE elements of the school curriculum...

then more programs should be targeted to school teachers and should directly enhance the objectives in the curriculum. The EE community could work together to become familiar with the curriculum, identify the curricular needs in EE, and devise resources, activities, and supplemental materials for each subject area or for each grade level; to introduce materials and concepts to teachers in each region; to support the Teacher Resource Centres with materials, programs, and resources; and to infuse EE content and methods into the Teacher Training programs for the Basic Education Diploma and senior secondary teacher training. Teachers could work on committees to develop, review, and pilot the activities and resources. Programs offered at Centres would supplement the curriculum, as would guest speakers and classroom resources. Regional networks of resource people and materials could be available through the Teacher Resource Centres or other facility. Training in needs assessment, activity design, materials production, workshop delivery, pretesting, and evaluation may be needed.

If the goal is to introduce young people to environmental issues and problem solving skills...

then teachers, EE Centre staff, and others need training in teaching approaches which encourage learners to identify problems and seek solutions, and experiential learning techniques. Two existing programs should be supported and widely implemented: Enviroteach and Conservo. They appear to be some of the best school-based opportunities for learners to be introduced to environmental issues, problem solving skills, and action-taking opportunities. Programs in EE Centres could be designed to enhance Enviroteach lessons and units at each secondary grade level. EE resource people could be trained to conduct workshops specifically around the Enviroteach materials, to increase teachers' familiarity with the content and the teaching methods. Regional networks of resource people in various Ministries could be available to support activities in each of the Enviroteach topic areas. Pre-service teachers could be introduced to the materials in their teacher training programs at the Colleges of Education and the University.

If the goal is to assist communities with environmental problems and decisions...

then the innovative programs such as LIFE and SARDEP should be supported and expanded; the knowledge gained from these activities shared broadly with Extension programs through joint conferences, training programs, and publications; and the Extension staff in various Ministries coordinated at the regional level to respond to basic requests. The extent to which a community management formed either through LIFE or SARDEP can switch to manage another resource could be explored. Effective methods of increasing skills in problem identification, negotiation, decision making, and leadership could be confirmed. Regional infrastructures that respond to environmental requests could be established, (perhaps modeled off the Rural Development Centre in Ongwediva or the Teacher Resource Centres) that provide a mechanism for communities to direct extension support, for teachers to request resources and information, and for regional environmental issues to be addressed in a

coordinated manner. Training in needs assessment, communication, program development, evaluation, and education methods may be needed.

If the goal is to help make everyone aware of their environment and the associated problems...

then the existing, far-reaching programs should be enhanced with environmental themes and messages. The Adult and Continuing Education program for Adult Literacy, for example, could increase the training for promoters in environmental concepts, and new materials could be developed that focus on regional environmental issues of concern. Effective ways to communicate environmental messages within one medium (using mystery, character development, or comedy) and among media (graphics, voice, comic, text) could be explored. The radio station could increase environmental programming. National parks could increase the interpretive programs for visitors and outreach to local communities with guided hikes or auto tours, evening programs, junior naturalist and family programs, mobile displays, brochures and trail guides, kiosks and displays, and information desks.

If the goal is to involve more black Namibians in visible leadership roles in environmental education...

then a concerted campaign may need to be undertaken to provide training and leadership opportunities. The EE community could begin by compiling a list of all the teachers and headmasters that have to date been involved with any of the EE programs: Enviroteach, NARREC, the EE Centres, CCF, Earthcare Clubs, etc. This group of teachers could receive periodic newsletters that inform them of the variety of opportunities and resources in EE, workshops, etc. A subset of this group could be identified of teachers who show creative or leadership ability. Additions to this list would be constantly cultivated. These teachers and administrators could form a nucleus of new EE leaders. They could serve as judges for contests and campaigns, pretest materials in their classrooms, serve on committees to review and adapt curriculum, act as co-facilitators for workshops in their region, write articles for the newsletter, and attend EE conferences.

To achieve any of these projects, it may be important to:

- improve communication channels among EE Centres, Resource Centres, and NGOs by evaluating opportunities to use e-mail, radio conferences, faxes, direct modem connection, etc.
- add additional Ministries to the Inter-Ministerial Coordinating Committee and identify their roles, functions, and commitments. They could help make possible increased communications, cross-training opportunities, and regional networks of staff members.
- form an association with individual memberships from all sectors of the EE&C community. This association could be organized around Sections of professional affiliation or Work Projects and could offer a newsletter, annual conference, projects that strengthen EE&C in Namibia, study tours with the region and other professional development activities. Leadership might be identified among the younger members of the EE community.

SECTION V
DRAFT NATIONAL ENVIRONMENTAL EDUCATION POLICY

Whereas, the Government of the Republic of Namibia has boldly committed to actively promote the sustainable utilization of natural resources for all Namibians (Article 95 of the Constitution); and

Whereas, the sustainable utilization of resources necessitates that users have access to information and the skills to use this information; and

Whereas, Namibia's Green Plan for Environment and Development states that "Namibia's goal is to develop an environmentally literate society in which citizens have the knowledge, skills, and values necessary for appropriate action" (page 164); and

Whereas, the development of an environmentally literate citizenry will require the coordinated efforts of government and non-governmental activities throughout Namibia, both in school and out of school;

Be it Therefore Resolved that the Namibian Environmental Network promotes the following policy on environmental education.

Section 1: Definition and Objectives

- 1.a. Environmental Education is defined as the process of developing an environmentally literate citizenry which is aware of and concerned about the total environment and its associated problems, and which has the knowledge, attitudes, motivations, commitments, and skills to work individually and collectively toward solutions of current problems and the prevention of new ones.
- 1.b. The objectives of environmental education are to promote:
 - awareness of the natural and built environments and their associated problems;
 - knowledge of the natural and built environments, their associated problems, potential solutions, and the procedures for implementing these solutions;
 - attitudes and values that promote responsible environmental behavior and active participation in environmental improvement and sustainable utilization;
 - skills for identifying and solving environmental problems and practicing responsible environmental behavior;
 - participation of individuals and groups in the active resolution of environmental problems and sustainable utilization of natural resources.
- 1.c. Environmental education shall be conducted:
 - with people of all ages;
 - in formal and non-formal educational programs;

- with adult, community-based organizations;
 - through media campaigns and festivals;
 - in natural and built environments.
- 1.d. Environmental education efforts shall be cross-disciplinary so the full nature of environmental issues can be explored, including economic, social, historical, cultural, political, scientific, and technological aspects.
- 1.e. Environmental education opportunities should be learner-centred, enabling learners to discover information, make relevant connections, ask questions, think critically, and take responsibility for further exploration and application.

Section 2: Environmental Education Office

- 2.a. To coordinate the development of environmental education efforts across Namibia, an environmental education office will be established with support from the Ministry of Education and Culture, the Ministry of Environment and Tourism, the Ministry of Agriculture, Water, and Rural Development, and the Ministry of Youth and Sport. The responsibilities of this office will be to:
- i. coordinate environmental education efforts in the various Ministries and non-governmental organizations,
 - ii. administer a small grants program that provides funding to environmental education activities,
 - iii. support associations and organizations that conduct environmental education activities and those that coordinate and support environmental education activities,
 - iv. monitor and evaluate environmental education activities,
 - v. coordinate the development of new efforts and projects to improve environmental education activities,
 - vi. initiate research on critical aspects of environmental education practice,

Section 3: Training

- 3.a. To support environmental education activities in both schools and communities, training opportunities in environmental education should be directed toward:
- i. teachers and headmasters, with support from teacher resource centres, curriculum developers, and tertiary education institutions in pre-service teacher training and extension education;
 - ii. community-based organizations, extension officers, and development workers;
 - iii. environmental professionals in business, industry, tourism, and resource development.
- 3.b. Internships, short courses, workshops, study tours, lecture series, radio broadcasts, and other opportunities should be utilized to help the aforementioned trainees practice needed skills. Relevant incentives should be offered to encourage broad involvement

(i.e., salary increases, credit toward diploma or advanced degree, increased opportunity for leadership, new materials).

Section 4: Environmental Education Centres

- 4.a. Regional environmental education centres shall be established to:
- i. provide in-service training to teachers, headmasters, extension officers, and development workers,
 - ii. provide regional coordination between Ministries and NGO's serving local communities,
 - iii. provide a forum through which communities can express environmental concerns and request information, training, and expertise,
 - iv. provide a site for learners to gain experiential knowledge about the natural and built environment, environmental issues, and practical environmental solutions
 - v. provide a resource centre for educators, environmental professionals, citizens, and community leaders.
- 4.b. Regional environmental education centres may be based in any of several Ministries or NGOs, but they must be linked in a communications network with each other and the communities and organizations they serve.

Section 5: Formal School Curriculum and Teacher Training

- 5a. Basic education in Namibia (Grades one-ten) will include environmental education in the following ways:
- i. an awareness of the environment and environmental issues across subject areas in grades one-seven;
 - ii. knowledge of ecology, environmental relationships, and environmental issues in the Life Science curriculum in grades eight-ten;
 - iii. knowledge of critical Namibian environmental issues (water, energy, population) will be explored in all subject areas in grades eight-ten.
- 5b. At the senior secondary level, students in grades eleven and twelve will develop environmental problem solving skills by participating in Conservo competitions and local problem solving initiatives.
- 5c. Teachers will be introduced to environmental concepts and environmental education teaching methods in their pre-service training at the Colleges of Education and University.
- 5d. Teachers will be supported and encouraged to extend their environmental education efforts by on-going inservice programs organized by MEC, MET, NGOs and other regional resource people.

APPENDIX A
ORIENTATION TO NON-NAMIBIANS

A. Education

Basic education covers grades one-ten (lower primary, upper primary, and junior secondary). Students take an exam at the end of grade seven to complete primary education (Certificate of Primary Education) and sit a grade ten exam for the Junior Secondary Certificate. Senior secondary is grades eleven and twelve, at the end of which students take a Cambridge exam to matriculate.

The Ministry of Education and Culture operates Regional Education Centres throughout the country that offer in-service training workshops, implementation workshops, and resources to teachers in their district. Staff from these centres travel to schools to support teachers in the education reform process.

Junior secondary students take nine subjects concurrently; Life Science, for example, meets for four forty-fifty minute periods per week.

Schools are not at all standard in terms of which grades are served. Virtually every combination of twelve grades can be found somewhere (one-five, three-six, eight-twelve, etc).

Girls tend to drop out of school at a faster rate than boys, because of cultural pressures to insure the son's education and for the girls to start families. In many parts of the country, female teachers dominate the elementary schools where male teachers are more prevalent in secondary schools. In Katima, however, most teachers are male, regardless of the grade level; Windhoek has virtually no male elementary teachers, and Ondagwa boasts mostly male elementary teachers.

B. Environment and Tourism

The Ministry of Environment and Tourism operates two regional EE centres (Waterberg and Namutoni) through the Information Division and plans to open additional centres throughout the country.

The Ministry has nearly completed a substantial reorganization and rationalization effort; there is great uncertainty in most sections about who will have which job at what post.

C. NGO Community

The NGO Community in Namibia developed during the colonial era to meet the needs of black Namibians who were not receiving government services. The majority are focused on

social and community development. The pattern of activity has been a "top-down approach" of offering services rather than jointly planning programs, which has created a welfare mentality and unfortunately, reinforced the apartheid message that some people cannot think for themselves.

Just prior to Independence, many NGOs received foreign aid because they were a non-governmental channel through which to implement projects and activities. Projects were not necessarily planned and evaluated, nor funds thoroughly accounted for. Supporting activity in Namibia was an appropriate and significant goal. Since Independence, the donor community has begun a new approach to NGOs, requesting accounting procedures, Boards of Directors, monitoring and evaluation of projects, and multicultural staff. This change has brought a challenging evolution to some NGOs.

D. Population

Namibia is made of at least eleven different cultural groups: white Namibians are usually of German, Afrikaner, or British descent (though many were born and raised here and are proud to be Namibians), "colored" Namibians are a mixture of black and white Africans, often with South African roots, and at least seven major black African groups form the "original" population of Namibians. They are listed below with a generalization about their original livelihood and location in Namibia:

- Oshierero speakers (nomadic cattle herders in north central Namibia, Angola, and Botswana)
- Nama (nomadic goat herders in south and central Namibia)
- San (Bushman) (historically hunter-gatherers in the Kalahari)
- Himba—subgroup of Herero hunter-gatherers in northern Kaokoland and Angola
- Oshiwambo speakers (farmers in northern Namibia)
- Damara (now smallstock herders in central and northwestern Namibia)
- Kavango (farmers along Kavango River)
- Caprivians (farmers in Caprivi including Yei, Subia, Totela, Tori, Mafwe, Mbukushu, and Bushman)

Each group retains their cultural identity fairly well with their own language, which is spoken in school through grade three. English, the language of none of the powerful groups in Namibia, was declared the official language upon Independence. It is used in schools from grade four through senior secondary. This is an unusual challenge for many countries and is expressed in several ways. For example, Peace Corps volunteers are trained in five different languages when they enter Namibian pre-service training. As Afrikaans was the last official language, most informational signs are in English and Afrikaans. In tourist areas, German is the third language of choice and signs often show all three.

**APPENDIX B
PEOPLE CONTACTED**

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Jörn Fitter, GTZ and MAWRD
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John Friedman, MYS and Peace Corps
Mark Griffiths, MET
Dorian Haarhoff, University of Namibia
Tim Holmes, Wêreldsend Environmental Centre
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Nancy Wilson, READ/World Education Inc.
Barbara Wyckoff-Baird, LIFE/WWF-US
Ibo Zimmerman, Technicon

APPENDIX C
MATERIALS COLLECTED

Papers and Reports

Background Information

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Environmental Education

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Ministry of Education and Culture

"A curriculum guide for the National Literacy Programme in Namibia" Ministry of Education and Culture, July 1993.

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Waterberg Plateau Park Unguided Hiking Trail

Game Auction Namibia 1994

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Waterberg Plateau Park Birds

Namutoni Environmental Education Centre

Endangered Animals-NARREC

NARREC

Subgrant brochure-RF

Environmental Resource Centre brochure-RF

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Burn Less Wood Lesson Card

Don't Waste—Recycle Lesson Card

Food shopping and maths Lesson Card

Wholly Ground

A beginner's guide to outdoor teaching

Managing boreholds and grazing areas in Namibia/Okavango

Teaching Materials from Adult and Continuing Education

Stage 1 Literacy Promoter's Handbook

Stage 1 Maths Book

Stage 2 Oshindonga

Stage 2 Nama/Damara

Stage 2 Literacy Promoters Handbook

Stage 2 Maths Book

Stage 3 Basic English Learner's Workbook

Stage 3 Basic English Promoters Handbook

Teaching Materials from NNF

Natural Economy: Module 2, Learners Handbook

Teaching Materials from Wêreldsend

EarthCare Club Handouts
Look in the mirror poster
Elephant activities
World Environment Day activities
Songs
Action Magazine

Teaching Materials from RF

A Day in the Life of Kuhn
The Giant Ant Teacher
Source Pack

Teaching Materials from NARREC

The Domestic Rabbit; A guide for school rabbitries
Owl/Rat/Seed math problems
What is a raptor?
Birds can crack cross-curricular studies

Teaching Materials from CCF

CCF Colouring Book

MEC Life Science Materials

Life Science for Namibia Text and Reference Book 1
Life Science for Namibia Text and Reference Book 2—The Environment
Life Science for Namibia Workbook 2—The Environment
Life Science for Namibia Text and Reference Book 3—Animal Husbandry
Life Science for Namibia Text and Reference Book 4—Human Physiology

Teaching Materials from LIFE/WWF-US

Communication Skills for Community Development
Participatory Rural Appraisal for Planning in Natural Resource Management
Valuing the Community: Awareness Building for Working with Outside Investors
Grassroots Communication Skills Development for Sustainable Community Development
Technical Assistance to IRDNC: A workshop on valuing the community