

School-Community Linkages
Success Factors of Conservation Clubs in Tanzania

1999

GreenCOM
Environmental Education and Communication Project
U.S. Agency for International Development
Contract # PCE-C-00-93-00068-00

This document was prepared for USAID by the
Environmental Education and Communication (GreenCOM) Project.

The findings, conclusions, and recommendations expressed in this document do not necessarily reflect the official viewpoint of the U. S. Agency for International Development.

Written by:

Irma Allen
Bruce K. Downie

For more information contact:

GreenCOM Project
Academy for Educational Development
1825 Connecticut Ave., NW
Washington DC 20009
United States of America
Fax: (202) 884-8997
E-mail: greencom@aed.org
<http://www.info.usaid.gov/environment/greencom>

The Environmental Education and Communication (GreenCOM) Project is jointly funded and managed by the Center for Environment; Center for Human Capacity Development; and Office for Women in Development of the Bureau for Global Programs, Field Support, and Research at the United States Agency for International Development and by USAID Missions at collaborating sites. Technical Services are provided by the Academy for Educational Development; subcontractors Chemonics International, Global Vision, North American Association for Environmental Education, Futures Group, PRC Environmental Management, Porter Novelli, World Resources Institute; and other subcontractors and partners under USAID Contract Numbers PCE-5839-C-00-3068-00 and PCE-5839-Q-00-3069-00.

Acknowledgements

This study has been made possible through the cooperation and assistance of many people who are specially interested in and/or working actively with one of the School Conservation Club organizations in Tanzania.

We wish to express our deep appreciation.....

- To Orlando Hernandez, GreenCOM's Applied Research Director for providing the general orientation to this piece of action research
- To the visionaries, whose strong convictions of the important role which conservation clubs play in linking schools and communities are providing the energy and inspiration for the young people in these clubs, i.e. Dr. Jane Goodall (Roots and Shoots), Ms. Bukholi of WCST and Mr. Peter Ottaru of Mali Hai Clubs for providing us with the vision and mission of the organizations;
- To the technical officers who are helping to transform these ideals into activities and projects in the field, i.e. Megan Nelson, Constantine Magavilla, Ibrahim Abbassy (Roots and Shoots), Annette Mwakimi and Nicholas Kinyau (WCST) and Mr. Godfrey Mwangi for taking their time to help us arrange the interviews, to locate the clubs, and to accompany us to many of them.

We are especially grateful to the many heads of schools, club patrons, students and community members, who are carrying out, with enthusiasm and dedication, a myriad of interesting activities in their various schools and communities, for the stimulating interactions which we had in the field and for sharing your experiences with us.

Thank you all for your participation in this endeavor, and we wish you much success with the development of your respective organizations and the achievement of your goals.

Irma Allen and Bruce Downie

TABLE OF CONTENTS

1.0	Introduction	1
1.1	Tanzania and Environmental Education and Communication	1
1.2	Conservation Clubs in Tanzania	2
1.3	The Study	4
2.0	Study Design	4
2.1	Interviews	4
2.2	Observations	7
2.3	Review of Materials	7
2.4	Constraints	7
3.0	Interview Results	8
3.1	Roots and Shoots	8
3.2	Wildlife Conservation Society of Tanzania	11
3.3	Malihai Clubs of Tanzania	14
3.4	Results of Observations	17
3.5	Review of Materials	19
4.0	Analysis	20
4.1	Clarity and focus of goals and objectives	21
4.2	Broadening the Target Audience	22
4.3	Environmental information/educational materials	22
4.4	Environmental awareness	23
4.5	Links to community	23
4.6	Sustainability	24
5.0	Conclusions	25

ANNEXES

A.1	People Contacted and Schedule of Interviews
A.2	Interview Data Tables

Introduction

1.1 Tanzania and Environmental Education and Communication

Tanzania is one of the leading countries in the world in terms of biodiversity. With a broad range of habitats including marine ecosystems, savannah, forests, lakes, it also contains some of the largest remaining herds of wildlife in the world. Nevertheless, a combination of factors has resulted in increasing pressure on its natural resources and, consequently, on increasing environmental degradation. These factors include rapid population growth, economic liberalization, influx of refugees from surrounding countries, poaching, reliance on firewood, and competing demands on natural resources among agriculture, tourism, mining and other sectors.

Various studies, including those conducted for the development of Tanzania's National Environment Action Plan (NEAP), have identified six major environmental problems which need to be urgently addressed. These are: (1) loss of wildlife habitats, and thus biodiversity; (2) deforestation; (3) land degradation; (4) deterioration of aquatic systems; (5) lack of accessible, clean water; and (6) pollution.

The government has recognized the need for Environmental Education and Communication (EE&C) to promote improved management of natural resources, which is a pre-requisite for sustainable development. It has also recognized the any EE&C has to reach down to the community level, for it is there where changes in behavior towards the environment will result in meaningful improvement. NEAP, launched in 1994, called for a National Environmental Education and Public Awareness Program which would utilize a combination of measures to improve public environmental awareness and would promote both formal and non-formal Environmental Education.

The National Conservation Strategy for Sustainable Development (1995) called for government to assist NGOs, groups, communities, and individuals to promote public participation and involvement in environmental issues. This call was echoed in the National Environment Policy (1997) in one of its objectives **S** "to raise public awareness and understanding of the essential linkages between environment and development, and to promote individual and community participation in environmental action."

The Government's commitment to EE&C is evident by the fact that it is one of the priorities of the National Environment Management Council (NEMC). The Council's Strategic Plan for 1998-2002 emphasizes the need to provide EE&C to strategic stakeholders such as parliamentarians and teachers; to disseminate environmentally friendly technology; and to produce EE&C learning/teaching materials. NEMC has a Directorate of Research, Environmental Education and Documentation which is actively working with the Ministry of Education and other governmental and non-governmental agencies to promote both formal and non-formal EE&C in the country.

It is in this context, then, that GreenCOM conducted a study into one of the means by which EE&C is being promoted in this country, that is, through the development and mobilization of conservation clubs in schools.

1.2 Conservation Clubs in Tanzania

In Tanzania, the formation of conservation clubs is a relatively new endeavor. There are three different organizations which are establishing school clubs and are focusing on environmental education for youth. The oldest of these organizations is Malihai Clubs of Tanzania, which was established in 1985 and has been working in secondary schools. The other two, Roots and Shoots and the Wildlife Conservation Society of Tanzania (WCST) were formed in the early 1990s and cater to both primary- and secondary-school children.

Roots and Shoots

Roots and Shoots sprang from a discussion held by several youth with Jane Goodall in her back porch in 1991. The topic being discussed was the poor treatment of animals. The need for youth to get involved was agreed upon, and when the youth returned to their respective schools, they founded conservation clubs. From this simple beginning, the idea spread and has now been adopted as an integral part of the global activities of The Jane Goodall Institute (JTI), currently active in forty countries. There are now roughly 85 Roots and Shoots clubs, most of them in the United States and in Tanzania.

Roots and Shoots has a mission to (1) foster respect and compassion for all living things; (2) promote understanding of all cultures and beliefs; and (3) inspire each individual to take action to make the world a better place for animals, the environment and the human community. The goals of Roots and Shoots are to:

- Implement positive change through learning about, caring for and interacting with the environment;
- Demonstrate care and concern for all non-human animals;
- Encourage youth to plan and take action to help others in their community;
- Enhance understanding between individuals of different cultures, ethnic groups, religions, socio-economic levels and nations through our global communication network.

There are roughly 30 Roots and Shoots clubs in Tanzania catering to both primary and secondary schools, primarily around Dar es Salaam, Kigoma, and Tabora. Support for these clubs comes from a small administrative office in USAID's Natural Support Unit. This unit is made up of two co-coordinators who are volunteers from the United States and two local coordinators, one for primary school clubs and the other for secondary school clubs.

The nature of the school community linkage within Roots and Shoots is that the club

serves as a catalyst for promoting appropriate environmental behaviors. This is done first among students, and second through them and through their outreach activities which in turn have an impact on the community at large.

Wildlife Conservation Society of Tanzania (WCST) Clubs

The Wildlife Conservation Society of Tanzania was formed in Tanzania in 1988, with its main goal “the preservation of the natural flora, fauna and environment of Tanzania for the benefit of mankind.” In order to achieve this, WCST has given a high priority to raising public awareness about the environment.

In 1990, the Society established its first school clubs as a means of reaching the younger generation. But the establishment of conservation clubs has not been the end in itself; rather, WCST has established school clubs in areas where it is carrying out special conservation projects, such as its Conservation of Forests Project in Kisarawe District.

Presently, there are thirty-one WCST clubs in Tanzania in both primary and secondary schools (12 in Kisarawe District, 3 in Lindi, 6 in Morogoro, 2 in Kibaha, and 8 in Dar es Salaam). The clubs are supported through a small unit consisting of an Education Officer at Headquarters and two Field Officers, based at Kisarawe and at the Coast.

The WCST clubs are funded through the various projects which they support, e.g., the Forest Project in Kisarawe District. Where clubs have been established, but there are no longer existing projects, the clubs are funded through membership fees and the general operational funds for WCST.

Malihai Clubs of Tanzania

The Malihai Clubs of Tanzania began in 1985 and were originally operated under the Public Relations Department of the Tanzania National Parks (TANAPA). The organization was established for the purpose of creating environmental awareness in youth. Its objectives are to:

- Inspire and educate the people of Tanzania, especially the youth, about the environment in totality;
- Increase the awareness and understanding of the economic, cultural, scientific, and aesthetic values of our living natural resources;
- Promote a spirit of conservation and wise use of land, so that people can live in harmony and benefit from one another for centuries to come

There are now 270 Malihai Clubs, all in secondary schools. The headquarters is in Arusha and the clubs were originally formed in and around that area. Now the clubs are organized into two main zones: the northern zone which embraces Tanga, Kilimanjaro and Arusha and is operated from headquarters; and the Lake Zone which embraces Shinyanga, Kagera Mara and Mwanza. There are also some Malihai clubs at Dodoma, Singida and Tabora which are directly supported by headquarters. The Lake Zone has a

small secretariat composed of a Zonal Coordinator, a Deputy and an Education Officer. At headquarters there is a Director, a one-man Publications Unit, a two-man Outreach Program, an accountant, and a secretary.

The Malihai Clubs organization is now run by a Board which includes the heads of Wildlife Division, Tanzania National Parks, Ngorongoro Conservation Area Authority, Tanzania Wildlife Corporation and two other members, also appointed by the minister responsible for Natural Resources. Its chair is appointed by the President. Since the beginning, the Malihai clubs have been funded by the Tanzania Wildlife Protection Fund, and have also received assistance from organizations such as the Danish organization DANIDA, the African Wildlife Fund (AWF), the World Wildlife Fund (WWF) and the Global Environmental Facility (GEF) and NORAD.

1.3 The Study

This study is one of three country studies being conducted by USAID's Global Environmental Education and Communication Project. The purpose of these studies is to learn lessons gained in Environmental Education, and specifically to look at school/community linkages to identify those factors which have made certain efforts successful. The goal is that, by identifying those factors, they may be replicated in similar Environmental Education activities elsewhere.

The unique situations of these three different conservation club organizations found in Tanzania presented a challenge. But the overall aim remains to investigate the strengths of these club programs to determine and explain their effectiveness in achieving their environmental education goals and creating positive impacts in their communities.

2.0 Study Design

The strategies used to conduct the study were interviews, observations, and review of the materials being produced and used by the clubs.

2.1 Interviews

Interviews were conducted at each organization at four different levels: club administration (at headquarters); club members; club patron/leader; and community members. The interviews were generally conducted by a team of two interviewers, one asking questions and the other recording. The questions were asked in conversation form, but following an agreed pattern on agreed topics in order to obtain the same kind of information from each club.

Interviews at Headquarters

These interviews were held with the persons in charge of the conservation clubs. We sought the following type of information about each club:

- Historical (how it evolved)...when did it start (how and why)?
- Original goals and objectives Have they changed? Do you think they can be improved? How?
- Funding over time (How is it allocated?)
- Structure (personnel, vehicles, etc.)
- What kind of communication goes back and forth to the groups (bulleting/newsletters)?
- How is the program delivered?
- What other kind of support does headquarters provide to the clubs?
- Materials (what comes out of head office?)
- Capacity building – Does headquarters provide training?
- How does the organization link with other Environment efforts? Why those?
- What are the strengths and the weaknesses of the clubs?
- Are you achieving what you intend to achieve (as headquarters)?
- How much planning takes place at headquarters? How much within the club?)

Interviews with Club Members

These were held at the school with groups of club members. The groups were restricted in size in order to be manageable, and varied from between 15 to 25 students. The kinds of questions asked included the following:

- What attracted you to becoming a member?
- What do you think environment means?
- What do you think are the major environmental problems?
- Are you taking any action in your clubs to address any of these problems?
If so, what is being done?
- Are there other activities which you think your club should engage in?
- How often does your club meet?
- What happens during these meetings?
- Where do you usually get your ideas for your activities?
- What are your sources of information?
- Do your parents know you belong to this club? How did they find out? Has your being a member of this club changed anybody's behavior towards the environment at home? If so, please explain.
- How do you make others in your community environmentally aware?

Each interview session closed by giving the students an opportunity to ask questions of the interviewers. These proved to be valuable sessions, where students mentioned their specific interests and in every case wanted to know about conservation clubs in other countries.

Interviews with the Club Patrons (Leaders)

These were individual interviews conducted with each club Patron (as he or she is called in Tanzania). The Patron in each case was a teacher who is responsible for guiding and supervising the club. Following are the kinds of questions asked during the interview:

- Why are you participating as a club leader?
- What are the club goal and objectives?
- Do you think you are achieving your goal and objectives?
- How are these being met? (activities)
- How often does the club meet?
- What happens at these meetings?
- How do you communicate with club headquarters?
- What kinds of support do you receive from club headquarters?
- What kind of additional support would you like to receive?
- What kinds of audio/visual materials do you receive and/or use in your club?
- Is the club making an impact on the school? If so, how?
- Is the club making an impact in the community? If so, how?

Interviews with Community Members

These were conducted with accessible parents or members of the community where at least one club activity had taken place. They were the most difficult interviews to arrange due to the limitations of time and means of communication.

The questions asked here were to assess the impact of club activities on members of the community. Questions depended on the nature of the club activities. The following information was sought:

- Are you aware that such a club exists?
- How did you become aware of the conservation club?
- Did you benefit in any way from the activity or activities of the club members?
- Did others in your community benefit, too? In what way?
- Do you think that having such a conservation club is a good idea?
- What other activities do you think the conservation club could carry out that would benefit the community?

2.2 Observations

The interviewing team visited the school where the conservation club being studied was located. Observations were conducted with the following objectives:

- To look for evidence of the conservation club's impact on the building and/or grounds;

- To see how the conservation club was regarded by the school administration;
- To assess the role of the patron, and his/her interaction with the club members

2.3 Review of Materials

Since one of the main objectives of all three conservation-club organizations was the raising of environmental awareness, it was deemed important to review the audio/visual materials being produced and disseminated. The purpose of this review was:

- To look for the quantity and quality of the materials being made available to the clubs;
- To look for areas of interest;
- To get an idea of priorities;
- To see the relevance of club activities to international, national and local environmental issues;
- To assess the level of difficulty of the materials, especially of newsletters;
- To learn more about the kinds of activities being carried out and how they were perceived by those writing about them.

2.4 Constraints

This study was conducted successfully, but there were constraints which limited the field work. These were:

- **Time** S The time allotted for the overall study was relatively short for the intensive field investigation which was required;
- **Specific time conflicts** S The time of this investigation coincided with a CST assessment process to which WCST personnel had to give priority;
- **Geographic distribution** S The three conservation club organizations are operating in different parts of Tanzania, thus distance was a factor in allocating time;
- **Accessibility to target groups** S Access to school people was sometimes difficult due to the lack of telephones in the majority of schools visited (this sometimes necessitated visits to make appointments for interviews), and also because of the need to hold interviews after school hours.

3.0 Interview Results

Annex 2 contains tables of the raw data obtained from the interviews. The results of the interviews were compiled for each of the three organizations and are presented below.

3.1 Roots and Shoots

Headquarters

Under the umbrella of the Jane Goodall Institute, the central Roots and Shoots organization within Tanzania operates with a number of volunteer coordinators. These people take on responsibility for maintaining contact with the clubs, encouraging and supporting their initiatives, and planning and carrying out events for all the various clubs in a community. They also attempt to build support through sponsorship and support from other community organizations. In the schools, teachers volunteer to take on the role of 'patron'. At the primary level this role is not only as the liaison and teacher sponsor but also as a key leader when it comes to program ideas and implementation. At the secondary level, the patron takes on a more supportive role and the club direction, and activities are developed by the students themselves through a management committee made up of usually about 10 students: chair, vice-chair, secretary, treasurer, and members at large. There are no fees and no strict membership regulations. Meetings of the club members are extremely variable but in the order of twice a month.

Volunteer in the program are older youth. In many instances they are former members of Roots and Shoots. They are important because they provide valuable, enthusiastic manpower who liaise between headquarters and the clubs, and vice-versa. There is almost an "evangelical" approach behind this strategy as enthusiastic, idealistic youth go to others to encourage them to form the conservation eco-clubs which are also humanitarian in nature.

Maintaining links to and support for a large number of clubs in a large urban area like Dar es Salaam, not to mention throughout the other centers in the country, is a difficult task for a volunteer organization. Materials are one tool Roots and Shoots is using to address this need. The Roots and Shoots pamphlet and the newsletter of the Jane Goodall Institute were an introduction for the clubs, but R&S has responded to a need for more program structure by preparing a manual (currently in development) for distribution to all the clubs. In addition, support for the clubs through a regular program of visits is seen to be very important. In the past, visits have tended to be irregular but now there is a commitment to develop a more prominent image through regular visits to the clubs.

The clubs are viewed by headquarters volunteers as having a significant impact on community awareness, with a prominent public profile developed through their activities. Links with other organizations have not been a focus of R&S clubs, although some linkages are developing through the production of the manual, which is seen as a positive resource that other organizations will use in school settings (e.g., Peace Corps, VSO). Financial sustainability remains a concern and Roots and Shoots is pursuing funding through a variety of sources such as the JGI and other donors, as well as through a grant from the Disney Corporation and a subcontract from USAID (through GreenCOM).

Teachers

In general, schools offer a fertile ground for eco-club formation and operation as schools provide the necessary infrastructure for club members to be able to meet and carry out their activities. In fact, schools may provide a place, supervision, information, material and often financial resources which support and facilitate the operation of eco-clubs. The experience of Roots and Shoots is no exception.

Interviews with teachers who were patrons of the clubs indicated a variable level of familiarity, comfort and commitment to the program. Variations were also attributed to the different roles played by teachers in the primary schools compared to those in the secondary schools.

There was frequently a genuine personal interest from teachers in some aspect of the program, usually paralleling their understanding of what the club was all about. The intended breadth of the R&S program was reflected in the teachers' response to questions concerning the role of the clubs. Responses were widespread including teaching soil conservation, personal development through participation in sports, making the environment a better place, service to the community and planting trees for shade.

There seemed to be consistent recognition among those teachers interviewed that the club was valuable and a good way for students to participate and contribute. Issues of the environment tended to focus significantly on tree planting (especially in the school environment, but also in the wider community) and on trash. Beautification and clean-up activities both at their own schools and on a city-wide basis organized by R&S headquarters were prominent activities.

Teachers were generally cautious about attributing learning and changing public attitudes directly to club activities. They acknowledged that certainly the community benefitted from clean-up campaigns and other community/club activities. Some teachers said that they had observed positive links and spin-offs to the community through club activities.

The most significant links to the R&S organization were the visits made by the volunteers. The teachers particularly commented on the enthusiasm and friendliness with which the volunteers connected with the students. Such youthful energy and commitment was seen to be contagious.

When considering the future, the teachers seemed unsure about how to expand or enhance club activities. Continuing visits, city-wide events, joint activities with other clubs, and receiving materials were important. In government schools, the additional resources are greatly appreciated and enable activities that would otherwise be struggling to blossom. In the private schools which were visited, lack of resources was not such an important issue.

Students

It is difficult to generalize on the basis of the student interviews, given the disparity between the primary and secondary levels. In the primary schools, the students were very much a reflection of the intensity, knowledge, experience and enthusiasm of the teacher. They were interested in cleaning the environment, participating in sports and planting trees. They had a general awareness of the environment and some of the current environmental issues. They wanted to make a difference and were enthusiastic about club activities at school and the possibility of communicating these values to others.

At the secondary level especially, the students' leadership in the clubs was very evident, as experience with the organization lengthened, in planning their own activities and events. Students were articulate, knowledgeable and committed to making a difference. They were comfortable discussing environmental issues and saw themselves in an important role of leadership both in the school and the community when it came to environmental improvements. Letting the students decide what to focus on is a good strategy in these clubs as students are more likely to follow through on something in which they have a genuine interest. Patrons assist the club by orienting them to some of the community problems, presenting options for the students to choose from. Yet, the final word about what work to focus on is often a responsibility of the eco-clubs.

The scope of the clubs' activities, while very broad in one sense, was also fairly narrow. The students saw the clubs as a variety of things: a vehicle for community service; a vehicle for personal development; a means of serving the environment. However, in most cases, the clubs generally focused on three specific activities: litter clean-up; planting trees; and sports. Some activities relating to communicating environmental messages were also reported, such as essays, drama, music, artwork, etc.

Most clubs expressed a need for more resources in the future for such improvements as more seedlings and for funding the purchase of rubbish bins. Similarly students acknowledged a need for more information and materials with the government schools being in a much more desperate situation when it came to basic library and information resources. Another concern expressed by students was the shortage of time. School demands are high and taking part in the club can be a time-consuming conflict.

Community Contacts

One community connection we observed was an R&S club formed in the community around a tree-nursery project. A member of a school-based R&S club recognized how tree planting could both benefit the community and serve as valuable income to people in his area. He talked over the idea of a R&S club with friends on his street and began a club. Another club member had a longstanding interest and involvement with tree planting and so together developed a nursery, starting with 100 trees and then expanding to about 1000 seedlings! This nursery operation is a benefit to the community through

sales and the planting of these trees by people in their garden areas, and provides an income for the participants. The participants also recognize the value of the R&S club, which helped them learn about the importance of caring for the environment, and how to pass on that knowledge to others. Club members also feel that there is a valuable social benefit in their activity since it provides a meaningful and positive activity for young people **S** a better use of time than getting into trouble. Members have maintained connections with the schools and often provide free trees to neighboring schools to support the R&S programs there.

3.2 Wildlife Conservation Society of Tanzania -

Headquarters

The Wildlife Conservation Society of Tanzania (WCST) started in 1988 with public environmental awareness as a significant component of its mandate. Developing school-based clubs was seen as a logical means of contributing to the objectives of the WCST. To facilitate this initiative, a dedicated position was established, and the current officer has now been in the post since 1992.

The Education Officer is a staff person within the WCST who coordinates the Society's conservation-club programs with support from field conservation officers who are assigned to specific conservation projects. Efforts to establish clubs in the schools are focused on specific areas where there is a logical link between the school and a particular WCST conservation project. The WCST then supports these clubs through regular visits, hosting of seminars and study tours, and providing materials. The WCST produces a newsletter, "Miombo," that is widely distributed. But since "Miombo" was not specifically targeted at a public-school audience, a student supplement has also been produced. Materials have been entirely dependent on external funding and tend therefore to be intermittent. In the past, some limited radio programs were also developed and aired, but now there is too much competition with the many independent stations playing popular music. Other activities the society provides include essay competitions for secondary schools and competitions on school environments for primary schools, and training workshops for teachers.

The WCST is a membership-based non-profit society, Its budget comes entirely from membership fees and external donor support for conservation projects. Its long-term projects have been a strong support for the school-based clubs. In addition the WCST fosters communication and cooperation with other organizations, which has resulted in a number of joint publications and other educational materials and events. WCST recently ran a successful study tour, developed in conjunction with the Malihai Clubs, and is enthusiastic about the cooperative relationship developing there. Relatively quick turn over of staff at R&S reportedly makes coordination with them difficult. On the other hand, there appears to be competition between WCST and Roots and Shoots as a result of

the R&S desire to expand their clubs into all areas.

Teachers

The interviews of WCST clubs were limited to primary schools. In one of the schools visited, the patron was not in attendance and the interview was held with the head teacher; in another, the club and the staff were all new. However, in each case there appeared to be a strong and supportive link between the field officer of WCST and the school, and the school leaders were both supportive and enthusiastic about the program.

There seemed to be genuine interest on the part of patrons and administration in the environment, especially the planting and care of trees and shrubs in the school yard. They saw this activity as a means of teaching and encouraging care of the environment in their students. There was a recognition of the difficulty in taking this message home and into the community because of the reality of families depending on charcoal production (for example) for their livelihood. At the same time they thought learning about the values of various species for all kinds of uses was important in demonstrating potential alternative uses of forest resources. The focus of club activities was specifically on protection of the forest.

The teachers appreciated the support of the WCST and especially the visits and communication with the field officer. They also appreciated the materials that were available but recognized the importance of having access to more sources of information. They particularly appreciated the opportunities to learn about efforts in other clubs and other environments which were made available through study tours and workshops. This was considered very valuable for them as resource people to their clubs.

The teachers recognized an important link between the clubs at school and the community through the homes of the children. However, they were realistic regarding the potential impact. They saw the benefits being tied to long-term environmental awareness and education of a new generation, and the consistency of this message with environmental conservation initiatives in the community, including the WCST projects in the area.

Students

Access to students in the Wildlife Clubs of the WCST was limited by logistical constraints in the study period (and also by heavy rains on poor dirt roads). As a result students in only two primary schools were interviewed. The students of these schools reflected their circumstances in a relatively poor and isolated rural area. In spite of its relative proximity to Dar es Salaam, the perspective of these students was very focused on their local area and the problems associated with forest management surrounding their community.

They were interested in activities relating to forest conservation, protecting the environment from destruction, avoiding soil erosion, planting trees, learning about the values of forest species, and maintaining a clean and healthy environment. They had a good awareness of the environment and the importance of its conservation. One school had done an extensive amount of work on the uses of a wide variety of forest plants and had members of the class present this material with examples of each plant. Their classroom was rich with examples of this data gathering and other study of plants done by the children.

The focus of activity was clearly around planting and the study of various species. The students at one school gave a tour of the improvements made to the school grounds which were extensive and described experimentation on which plants could be successfully grown on the particular conditions on their site. In spite of their appreciation of the support and information received from the WCST, the students had a desire for more information and materials and were also interested in traveling to other areas to learn about the environments and issues facing other people. They spoke positively about their communicating with others at home and in the community and they spoke of how supportive it was for them when other people at home and in their area are also involved in these issues in the community.

Concentration of focus around one general topic such as forest protection, which was the case in the schools visited, is a good and practical idea. It provides the school with technical expertise from somebody like a forester in charge of the local conservation project. It also allows plenty of time to study the natural forest and its associated problems and solutions over a long period of time with many interactions between the clubs and the communities. Also, while concentrating on one single topic such as forestry conservation children may come across other related topics and address those as well. Examples of those topics could be birds in the forest, the relationship between forests and water, causes and consequences of erosion, etc.

Community Contacts

One community connection was explored with respect to the Wildlife Clubs of the WCST. This was a meeting with representatives of the Environment Committee of Pugu Kajiungeni village. There are 15 members on the committee of different areas and ages, both men and women. The Committee's focus is on promoting forest conservation in the community including: educating the community people; enforcement of laws regarding utilization; and promoting reforestation. The effort stems from past experience of forest being cut down, resulting in drought and community hardship. To prevent a recurrence the community leaders welcomed the opportunity to work with WCST to promote forest conservation.

The committee acts as a go-between and facilitator of communication between WCST and the people. It facilitates public education and assists in enforcing forest

management. They also link with other committees at the sub-village level which deal with a variety of other community issues such as water, health and security.

The committee members were all aware of the clubs in the schools and felt they were very important as a long-term environmental awareness-building mechanism for the next generation. They felt the clubs were a good complement to the work of the committee so that both parents and children would be getting a forest conservation message and would be supportive of each other's views. Although there is little formal connection between the work of the Committee and the clubs at present, the members recognized the potential to cooperate on a variety of activities. They suggested they could organize cooperative ventures such as tree-planting activities, drama, and discussion groups.

They felt progress was being made in their community and were enthusiastic about developing partnerships among the committee, members of the community, school clubs, and other committees in addressing community issues.

Children seem to have taken home some of the content addressed through club activities. Because of the focus on forests, children were requested to ask parents whether they used any plants from the forest for medicinal purposes. Some families helped club members find the plants, teaching them how to identify them and indicating how the medicine is prepared. The involvement of parents in these activities was definitely a plus for this program.

3.3 Malihai Clubs of Tanzania

Headquarters

The Malihai Clubs of Tanzania (MCT) began as an outgrowth of the Public Relations Department of the Tanzania National Parks agency. This strong link to government is reflected in the current organization and support for the club system as well as the location of the headquarters operation in Arusha. The primary focus of the clubs has been on forestry conservation and soil conservation, although broader environmental interests have naturally evolved. A very small annual fee is paid as the MCT is a membership-based organization, however, the money stays with local clubs for their own activities.

The Secretariat in Arusha provides a significant level of support to clubs through a number of identified program functions. The outreach program provides coordination of the clubs and their activities. Staff coordinators visit the clubs on a regular basis, deliver information, show videos, recruit members and start new clubs. The publications program has been responsible for the development and distribution of newsletters, posters and a variety of other publications. These publications have typically been tied to outside funding and specific projects, often in conjunction with other organizations. There is presently an in-house capacity for publications with staff trained in cooperation

with a major project initiative. Similar in-house capacity has been developed in the area of audio-visual productions and the Secretariat has produced a series of their own productions which are used in club visits. The field-trip program is an effort to support clubs who apply for assistance with their field excursions, and may cover such items as fuel costs or accommodation at hostels in national parks. The Secretariat has made a major effort to support club leaders/patrons through the organization of workshops which are important opportunities to get together and share ideas, problems and solutions. Seminars for students have also been held to encourage stronger relationships between clubs. The Secretariat attempts to organize events at the zone level to reduce costs and alternates zones from year to year.

The MCT are supported by the Tanzania Wildlife Protection Fund (TWPF) as well as NGOs and other donors. Government commitment to the program also comes as direct support by paying some staff salaries through the Wildlife Department. The organization's budget has grown in recent years and the level of funding is also increasing. However, concern over possible leadership changes on the Board has created an interest in establishing MCT's own fund through an initial start-up grant from TWPF.

The MCT have their strongest links with their 'sister' organizations in Uganda and Kenya. Naturally their Board provides direct linkages with a wide array of government agencies and also provides them with opportunities for linking with donor-supported environmental programs in which the government is participating.

Teachers

The Malihai Clubs visited were in secondary schools and at post secondary training centres. The teachers involved tended to have strong environmental interests and were typically involved in teaching subject matter related to the environment and/or leading outdoor activities for students. They had a good awareness of the environmental issues of their area and were committed to helping students understand and participate in actions towards addressing such issues.

The teachers were very positive about the MCT Secretariat and the support the Secretariat provides in terms of materials, visits, information, workshops, and field-trip assistance. They recognized the limitations on the central organization but were also hoping for more, particularly information, workshops and study tours.

There was general belief that community impacts of the clubs' activity were not well developed in a formal sense but that change was more on an individual level. They believed that change resulting from the clubs was a long-term process that involved educating the younger generation so that they would be better informed and motivated leaders of the future. There was an acknowledgment that more could be done in the community but constraints relating to resources, time and receptivity were identified as significant.

Students

The students interviewed in the various institutions were quite different groups. The secondary-school students were very bright, knowledgeable, enthusiastic and committed individuals. They were very aware of their environmental circumstances and the issues that their communities faced. They were also very keen to participate as members of an environmental conservation organization because they believed that preparing themselves through better understanding and spreading that knowledge into the communities were important tasks. They also enjoyed the activities of discussion and learning, planting, cleaning up, and meeting people in the community. These students were very keen to get more information on a wide variety of issues. They appreciated the current support of the Malihai Clubs Secretariat but felt this was an area where the Secretariat could be of even greater assistance. The students recognized many of the difficulties of reaching out to the community, especially where the pressures to maintain traditional practices were so closely tied to a family's ability to support itself. On the other hand they were optimistic about change and their role in it.

The students of the teacher-training institute were similarly very knowledgeable and highly committed and concerned individuals. They had a strong sense of responsibility to their home communities and spoke clearly about their commitment to return and implement change. They were keen to establish clubs in their own areas and to develop meaningful and effective community connections with the activities in the schools. Concerns over their own time commitments and the isolation they experienced at the college seemed to limit their level of active involvement in the club presently. However, they were appreciative of the support from their club patrons and the Secretariat for the support and encouragement they were presently receiving.

The students of the community development institute had some significant projects both in progress and in the planning stages at their school, including a nursery with its own water-storage facility and the development and management of a spring on the school property to serve not only the school but also local adjacent areas. They were keen to be involved in the club. Activities which included an up-coming field excursion to a national park area, indicative of the group's interest, had been planned with support from the central office of MCT. Some areas where the group would benefit from assistance included assistance in identifying community connections and linkages with other organizations. There seemed also to be a real dependence on resources to stimulate action on the part of the group, a very real concern considering the lack of support for the institution and the role it is trying to fulfill.

Community Contacts

One example of community contact related to the Malihai Clubs was investigated. A

farmer in the village of Meserami was selected as one of twenty farmers to receive tree seedlings for planting as part of a program to reduce problems of drought and soil erosion. The seedlings were prepared at a Malihai Club in Arusha and eight Malihai Clubs came to assist in the planting on the farms. The project was a GEF-funded pilot project which MCT was able to link into. Farmers were selected on the basis of their interest, capability and water supply.

The farmer visited was very pleased with the program and was a strong advocate of planting as a way of protecting the soil on his farm. He has over 200 acres and plants maize and beans. He wants to expand the area he now has under trees and will be able to grow beans between the rows of trees. He was pleased with the support from the Malihai Clubs. This example illustrates how skills and knowledge from both the outside experts and a local farmer's knowledge was a good combination. The farmer suggested a slightly different planting technique using a trench with holes for each tree, which allowed him to water more efficiently, a whole row at a time.

His children participate in the local primary-school Malihai Club and he was pleased that they were learning the importance of these conservation measures. He thinks the clubs are helpful in spreading the word and indicated that the school ground itself was a good example of what can be done through planting. Now, as a result of the school example and with the farmers who participated in the pilot project, there was considerable interest among all his neighbours. He said people were anxious to get seedlings and would even pay if they were available.

3.4 Results of Observations

Special efforts were made to look for evidence of (1) the impact that the club was having on the school and school grounds; (2) the way in which the club was regarded by the school administration; and (3) effective interaction between the patron and the club members. Observation played a big part when interviewing community members, especially when the interview took place at the site where the club had undertaken a specific activity.

There were definitely individual differences among the various schools. The personality and interest of the patron appeared to be the biggest factors in determining how much the club was able to do for the school, how much it was valued by the administration and how the patron interacted with the club members themselves.

Nevertheless, it was possible to make some general observations:

Impact of Clubs on the School/School Grounds

In every one of the schools visited, reference was made by the school administration (usually the head teacher), or by the patron to the work which the club had undertaken in

the school grounds. Ornamental and fruit trees, shrubs and flowers were planted, paths were lined with whitewashed rocks, plant nurseries were established, etc. In some schools, land around the school was being cleared by club members to plant fruit trees and gardens. In several schools, there were nurseries which provided tree seedlings and other plants to the community. In three of the schools visited, a special room had been allocated for the club to meet, and these rooms were full of posters, pictures, and news cuttings displayed on the wall. In two schools, the rooms had a sign outside with the name of the club. The students were obviously very proud of their displays, and were anxious to talk about them. In the Community Development College, one room had been developed as a Resource Center. It was simple and the materials were not all current, but a lot of care and effort had gone into it, and it was there to be used by the rest of the College.

View of the Clubs by School Administration

In every case where the administration was interviewed about the contribution of the clubs to the school, there was a high regard for the club. Headmasters were proud to say that there was such a club in the school. The heads of schools who were interviewed all seemed willing to provide transport and other kinds of assistance to ensure that the children are able to have an occasional field trip or attend some special events. This was more possible in the private schools, which generally have more resources than government schools.

Interaction of Patron with Club Members

In most cases, the patron was a teacher who volunteered to be in charge of the school club. Those who were interviewed seemed to be proud of the fact that there was a club in the school. The interviewers attempted to assess the amount of leadership which the teacher took, as opposed to the amount of responsibility which the students themselves took in the running of the club. The differences observed appeared to be closely related to the personality of the patron and, more so, to the knowledge and experience of the patron in environmental matters. For example, in one school, the students were very concerned with global environmental problems and with a serious pollution problem being caused by a nearby industry, while the patron right then was giving priority to and personally working on whitewashing rocks which were lining a school path.

3.5 Review of Materials

During the visits to club headquarters and to the schools, the interviewers asked to see a range of materials being produced and/or used. It was clearly evident that educational materials on ecology and on environmental issues are valued, and the respondents felt that what they were presently receiving from headquarters was useful but it was not enough. There was great interest in having more materials made available,

Roots and Shoots The clubs receive some materials from Headquarters, whenever they become available, e.g., a few copies of the Jane Goodall Institute World Report and some circulars. Occasional newsletters are produced, but not on a regular basis. . However, a comprehensive manual for the R&S clubs, “Making Connections: A Roots and Shoots Guide to Empowering Students Through Environmental and Humanitarian Action Projects” is just being finalized. This manual will be a very useful tool as it provides information on a broad range of subjects from forming and operating a club, locating resources to providing basic information on priority environmental problems and issues.

Wildlife Conservation Society of Tanzania A regular quarterly magazine, “Miombo” is produced by the Society and is sent to all members of WCST covering all aspects of their work. Since August, 1998, with funding from The Royal Netherlands Embassy, a Students Supplement, specially designed for WCST club members, is being produced along with the newsletter. The presentation is good and the contents are varied and informative, ranging from stories and poetry to reports of club activities and information on national and international environmental events. There are also articles on the flora and fauna of Tanzania and on results of investigations. The supplement includes a substantial number of contributions from club members themselves. It includes some items in English and some in Kiswahili.

In addition to “Miombo” and now the Supplement for the Wildlife Clubs, the Society regularly produces a variety of posters, pamphlets, calendars, and learning/teaching materials on environmental issues for teachers. Many of the materials, along with a wide variety of materials from other sources, were prominently displayed in the schools which we visited. Also, WCST Coordinators occasionally organize video shows for schools and communities.

Malihai Clubs of Tanzania This organization produces a quarterly newsletter, “Malihai News,” which is made possible through financial support from the Norwegian Agency for Development Cooperation (NORAD). At headquarters, there is a Publication Unit which designs and prints the newsletter. There is also an editorial committee which edits it. The newsletter includes some articles in English and some in Kiswahili. It contains contributions from members and is divided into sections which include MTC news (reports from clubs); national and international news; a networking section; ideas for projects and activities; an environmental information part, and a games and riddles page. The contents are well illustrated and include illustrations and photos. Some posters and booklets have also been produced and are distributed during the Coordinators’ visits to schools.

The Malihai Club at the Community Development College proudly showed the interviewers the resource center which they maintain with all the materials which they have received and obtained. The one constraint was that the materials were generally quite old.

During the last two years, a Video Unit has been established at headquarters, which has been producing videos on some Tanzanian environmental problems and issues.

Following is the list of video tapes now available and produced in-house:

- Mzee Matata Na Mazingira
- Tamasha La Upandaji Miti
- Wetlands Around Mt. Kilimanjaro
- Mangrove Ecosystems
- Arohiowevu
- MCT General Activities
- Musoma Workshop
- Wetlands Around Lake Victoria
- Themu River (Pollution)
- USA Workshop
- Moshi Workshop
- MCT Activities in Arusha Region
- MCT Activities in Lake Zone
- Tanga Workshop

4.0 Analysis

The school-based conservation clubs investigated in this study have many different characteristics. It was the intent of this study to identify positive attributes of the environmental education programs that might be considered as potential elements in the creation of new programs elsewhere. Building on such positive aspects of the Tanzanian experience could provide significant benefits to new program development.

Some common characteristics were identified within all three programs. Other features were specific to certain programs because of the specific objectives or organizational structure established for each. All significant positive attributes have been described below regardless of how many programs they reflect. Each may have relevance to specific circumstances in other countries where new programs could be developed.

The attributes are categorized below so as to be most helpful in reflecting on their application to other potential programs. Within each of the categories, the specific positive features of the various programs in Tanzania are discussed.

4.1 Clarity and focus of goals and objectives

Improving community attitudes towards environment

A very strong focus of the WCST clubs was promoting change in community attitudes towards the environment, particularly with specific reference to a particular local environmental issue. This stemmed from the project-based nature of the clubs, where

they were only one small part of a broader community effort to implement change in resource protection and management. In the Kisarawe area for example, the focus was on protection of the forest resources and reducing the high impact of deforestation practices that were at the basis of the local economy, specifically firewood cutting and the making of charcoal. The school-based clubs clearly complemented the community efforts by focusing on the same fundamental issues through an appreciation of natural forest values and the benefits that could be accrued by maintaining those values.

Education and activism

The WCST club model also incorporated a strong component of general environmental education. While actions and attitudes were major components, a significant effort was placed on introducing students to the study of ecology. The students of Buyuni Primary School illustrated this focus of the program with their study of a wide array of local plants, not only investigating their characteristics and uses but gathering information on the traditional uses of plants from discussions with elders in the community.

The MCT also placed a strong emphasis on learning the principles of ecology and their application to local environmental issues. The school groups in both Arusha Day Secondary School and Enaboishu Secondary School were very articulate on a wide range of environmental concerns and the principles behind them. An expressed interest of the Secretariat was in seeing this knowledge used to influence community (local government) decisions. This involvement was evident at Arusha Day Secondary School where, through their interest and application for use of the land adjacent to the school and next to the river, the club was promoting and modeling environmentally sensitive land-use regulations along the Themis River in Arusha.

Inclusiveness

One of the hallmarks of the R&S organization with respect to the goals of the program was its conscious effort to be inclusive and involve as many people as possible. One means of achieving this was as fundamental as the broad mandate chosen for the organization, involving both an environmental and humanitarian emphasis. Specific recognition of learning about and caring for the environment and animals is inherent in the organization's goals along with helping people in the community, and understanding other cultures and groups. In addition the club places an emphasis on personal development and developing self-respect and confidence; sports activities were identified as a means of achieving these goals. For example, in both St. Mary's High School and Mbuyuni Primary School, learning and participating in sports (e.g., a recent football tournament for girls) was given as a prominent activity of the club and one which was significant in drawing interest from the students. While this breadth is an important aspect in attracting widespread participation, there can be a trade-off with the focus for activities in the group. It is harder to keep such a widely diverse group focused on a set of activities that provides continuity, coherence and a sense of group identity.

4.2 Broadening the Target Audience

Another aspect of goals and objectives of the organizations relates to the target audience. While all the organizations were fairly broad in this context, i.e., clubs were formed in both primary and secondary school (and in the R&S case even in the community), the MCT made a conscious effort to create a significant impact by targeting their program also at key groups of potential leaders. Forming clubs at the Monduli Teachers Training College and the Community Development Training Institute clearly is an efficient way of reaching a key group that will expand the area of influence of the organization and its ideals exponentially into schools and communities across the country. All club members at the Monduli Teachers Training College indicated a strong interest in starting their own clubs at schools they would be posted to in their own areas. A clear example of this outcome in action was found in a new and supportive head teacher at a school in the Kisarawe District who had been a member of the Malihai Club at Monduli.

4.3 Environmental information / educational materials

All groups indicated a tremendous need for information and materials for learning. Students were keen to learn and recognized the severe limitations of their libraries (if any even existed in the schools) and their access to information sources. Teachers, too, identified materials as a critical need both for themselves and the students of the school and the club. What materials were available stimulated interest and activity among the students and there was a great desire for more among all those interviewed.

Organizations that have developed materials, especially those specifically geared for their audiences, achieve a good return on their effort. For example, the MCT newsletters and posters were inevitably mentioned as an important source of information and a way of connecting with the organization. The video productions shown on school visits by the Coordinators from the MCT were also recognized as valuable, and greater frequency was suggested. Similarly, the WCST organized video showings in the communities that were very well received and many requests were recorded for expansion of that aspect of their program. The WCST also has an extensive program of publications and posters that cover a wide range of topics. These were highly valued by both students and teachers, especially the student supplements and similar materials that communicated information at a very appropriate level for primary-school students, addressing their needs specifically.

4.4 Environmental awareness

Creating a strong sense of awareness of environmental issues was an element shared by all of the programs to varying degrees. Two important linkages were noted in this regard. The first was a link to community environmental issues. Students' attention was drawn to the need to address problems in their own communities and understand the

implications of these issues not only for their own lives but on a larger scale. An example of this was the R&S focus on litter and clean-up of market and other community areas. Students were well aware of the concerns related to health hazards of such pollution and saw this as an important local issue in which they could become involved. The WCST also provided a strong link to community issues in the clubs of the Kisarawe District through their focus on the issue of local deforestation. Understanding of the implications of current forest-use practices was clearly evident in the primary-school clubs, attesting to the prominence of awareness raising on this issue in the club program.

The second important linkage was to the school curriculum. Drawing connections between what the students were learning in subject areas such as science, geography and biology and the environmental issues that affected their area was an important reinforcement for their learning. Examples of this connection included a strong interest and awareness of industrial air pollution by the R&S club of St. Anthony's Secondary School which was located adjacent to a significant industrial complex that affected their school environment. Similarly the Malihai club at Enaboishu Secondary School was very aware and concerned about water pollution in the Them River.

4.5 Links to community

An important focus of this study is the relationship between the clubs and the broader community. This focus was not just in terms of making students aware of community issues but in making the community members themselves more aware of environmental issues in their own communities. In other words, are the clubs having an impact in raising the environmental awareness of community people? The ways clubs were achieving this was primarily through cooperative community action. Events and actions were not necessarily initiated by the school-based clubs themselves, but their participation was a key element and drew attention to the issues both in families of the students and the broader community.

Two important examples of this were especially prominent in the present review of programs. The first was the example from the MCT where concerns of drought and soil erosion were being addressed through a tree-planting program. School clubs prepared seedlings in their nurseries and then assisted in the planting of trees on selected farmers' properties. While their efforts were part of a larger pilot program sponsored by government agencies, their participation highlighted the importance of the effort and created a very personal connection to the local community. The students were directly involved at all stages of the project and the Malihai clubs were identified by the community as being key to its success.

A second example was the deforestation issues being addressed by the WCST. Involvement of the primary-school clubs was recognized on two levels. In the first place the students at Buyuni Primary School led by example in generating a major planting effort in their school yard, experimenting with a wide variety of species to find those

most suitable to the conditions and most effective in addressing the concerns of soil erosion. Community people recognized their efforts and learned from their activity. In the second place, the community environmental committees saw the activity of the clubs' as being an important contribution to the total community-awareness effort. Such recognition of the clubs' involvement in community issues speaks highly of the value of the clubs' activity and effort.

4.6 Sustainability

A critical factor in the success of any group is the ability of the group to sustain itself. While there are many aspects of a group that contribute to its sustainability (e.g., adherence to a strong sense of purpose), funding is a critical factor, especially for organizations of groups over a wide area. Financial resources within the organization are needed to develop program initiatives, materials, identity, training and networking. The prominence of this aspect, at both the club level and the headquarters level, attests to its importance in the on-going operations and development of the clubs.

Each organization has developed on the basis of certain strengths in this regard. The strongest basis seemed to be within the MCT which operates with on-going financial support from the Tanzania Wildlife Protection Fund and staff-salary support from the Government of Tanzania. This base is supplemented with specific project-related funds drawn into the program through the many connections to donors by the agencies represented on the MCT Board. The MCT also draws on its active links to partner associations in neighboring countries. Partnering on projects and activities strengthens the organization and increases the efficiency of funds available for a variety of program activities such as publications or training and networking events.

The WCST also provides a relatively strong base of support because of the direct link between the clubs and donor-funded projects specific to the area. Clubs are developed as part of the community-outreach component of the projects and thus have support built into the overall project budget. In addition, the WCST supports the clubs through its own mandate for environmental awareness and directs funds from its own budget to support the club program. The WCST is a membership-based organization, so annual allocations to the club program are also based on funds raised from a wide variety of sources through the membership activities and direct fees.

The R&S organization is a direct program element of the JGI. The JGI is also an organization funded by donations and membership, but draws almost exclusively on international funding for its support.

However, sustainability needs to be viewed from both a supply and demand perspective. A concern for all organizations is how to grow when funds are limited. Often the desire to expand outstrips the capability of the organization to support and sustain the growth. Increasing the funding available is only one approach. Limiting or controlling growth is

another. The WCST is an example of an organization that, in attempting to develop clubs only as connections to major project activities, ensures for the support of those clubs. Once established and built up during the course of the project it is the hope that the club will be able to sustain itself independently, thereby reducing the on-going financial commitment of the WCST. Sustainability is a major objective of the WCST, addressed not only through this approach but also through the WCST's willingness to cooperate with other organizations, to complement rather than compete with those other groups.

5.0 CONCLUSIONS

- Although some comparisons can be drawn among the three Conservation Club organisations, this was not a comparative study. Rather it focused on looking for characteristics and strategies which enabled these clubs to successfully achieve their goals and objectives
- Among the salient success factors identified were (1) clarity and focus of goals and objectives; (2) well-defined target population with multiplier effect; (3) effective audio/visual materials; (4) priority to addressing local environmental problems; (5) good knowledge of environmental issues; (6) formation of useful links to different sectors of the community; and (7) sustainability.
- Some general strengths found in all three organizations were as follows:
 - S the membership is made up of an age group which is young, idealistic, impressionable, and energetic, thus more likely to act;
 - S investing time and resources in schools (in a captive audience with multiplier effect) is a good investment;
 - S members form a direct link between school and community (in an environment that presently tends to separate school and community);
 - S clubs provide a very necessary forum for youth to learn about their environment, debate issues and begin to plan and take action to solve problems In a type of educational system which is still generally structured and formal, clubs provide a unique opportunity for stimulating individual initiative.
 - S students of all three club organizations strongly believe that they are being effective in changing the behavior of those around them as a result of what they are learning and doing in their clubs. For example, students gave specific examples of how they had gotten their parents to change, e.g., boil water to make it safe to drink, stop littering, recycle, save energy, etc.

Some specific strengths found in the three organizations were as follows:

- **R&S** is especially strong in attracting idealistic, self-sacrificing members (with a passion for the environment). With its humanitarian/environmental focus, it is especially strong in channeling idealism to promote welfare **S** health as well as the protection of the environment. It has a specific role to play in urban areas.
- **WCST** is especially strong in being able to form strong school-community links by being associated with projects which adults in the community are engaged in and have considered as priorities. WCST promotes the formation of a true partnership between the school and community. It is especially strong in providing support from headquarters through field officers based where the clubs are located or, at least, very close by. This enables WCST to provide support as needed and to have continuous follow-up of club activities. Another strength is a purposely planned slow expansion, allowing groups to mature and solidify before becoming more independent.
- **Malihai** is strong in having a solid base and close links to the National Agenda through its Board. This close link ‘opens the door’ to international community resources. In turn, this puts Malihai in a stronger position in terms of sustainability. The organization seems to benefit from support such as Biodiversity Funds from GEF. The publication of its newsletter is financially supported by NORAD. Also it is well known and recognized by governmental and non-governmental organizations. This organization appears to have longer-term plans and a system to expand throughout the country. Another strength is that Malihai is attempting to engage potential community leadership, i.e., teachers and community-development workers, by establishing clubs in teacher-training colleges and community-development colleges. This is paying off. The interviewers met several teachers who were members of Malihai clubs while training to be teachers, and who are now club patrons. One specific case was the headmaster of a school at Kisarawe, who had been a Malihai club member at Monduli TTC, and who is now fully supporting and working with the Malihai club at his school.

ANNEX 1
People Contacted and Schedule of Interviews

Day	Time		Region	Location	Contact	Position
15/3	AM	R&S	Dar es Salaam	Headquarters	Ms. Megan Nelson Mr. Ibrahim Abbassy Mr. Constantine Magavilla	Coordinator Coordinator Coordinator
15/3	PM	R&S	Dar es Salaam	St. Mary's High School	Mr. Arnold Tchalewa	Patron
16/3	AM	R&S	Dar es Salaam	Mbuyumi Primary School	Mrs. Naida Nigemera Ms. Grace Kado Mr. Anther Pastory	Head Teacher Patron Assitant Patron
16/3	AM	WCST	Dar es Salaam	Headquarters	Mrs. A. Bukholi Ms. Annette Mwakimi Mr. Nicholas Kinyau	Coordinator Education Officer Forest Conservation Field Officer
16/3	PM	R&S	Dar es Salaam	St. Anthony's Secondary School	Bro. Martin Masabo Mr. Turuk Mr. Mayo	Headmaster Dean of Students Patron
17/3	AM	WCST	Kisarawe	Sanze Primary School	Mr. Mustapha Julius	Head Teacher
17/3	PM	WCST	Icaca D'sacaam	Buyuni Primary School	Mr. Joseph Katungutu Mr. Mauya Chiuira	Head Teacher Patron
18/3	PM	MCT	Arusha	Headquarters	Mr. Peter Ottaru Mr. Godfrey Mwango Mr. Stephen Shemnkande	Coordinator A/V Coordinator Assist. A/V Coordinator
19/3	AM	MCT	Meserani	farm visit	Mr. Mbarnot	farmer
19/3	PM	MCT	Arusha	Enaboishu Secondary School	Mr. Ole Sakinoy Mr. Victor Swai	Dep. Headmaster Patron

19/3	PM	MCT	Tangeru	Community Development Training Institute	Mr. Anselmi Ngangarumo Mr. Thomas C. Mzinga Mr. Ngitoria Lemunduli	Patron Chairman Vice Chairman
22/3	PM	MCT	Arusha	Arusha Day Secondary School	Mr. H.K.M. Makange Mr. Asseri	Headmaster Patron
23/3		MCT	Monduli	Monduli Teachers Training College	Mr. David Marandu Mr. Jackson Mwandri ?	Principal Patron Assist. Patron
24/3	PM	R&S	Dar es Salaam	Magomeni Roots & Shoots Street Club	Stamili Mlinde Gwamaka Eliudi	Chairman Coordinator
24/3	PM	R&S	Dar es Salaam	Miauzimi Primary School	Mrs. Maura Kilasara Mrs. Zebida Mugasa Mr. Ally Abbakari Mr. Bahati Shomari	Head Teacher Patron Patron Patron
25/3	AM	WCST	Kisarawe	Kisanga Primary School	Mr. James E. Chisanda Miss Jane Lyimo Mr. Halid Lubiki Mrs. Lilian Yessaya	Head Teacher Second Head Teacher Teacher Teacher
25/3	PM	WCST	Pugu Kajiungeni	Pugu Kajiungeni Environment Committee	Salehe Lumango Salum Chotala Athumani Nyangala Mariam Lumayo Kondo Kihiki Leocadia Zumba	Chairperson CCM Branch Member, Environment Comm. Vice-Chairperson, Env. Comm. Secretary, Env. Committee Chair, Env. Comm. Pugu Station Member, Env. Comm.
26/3	AM	R&S	Dar es Salaam	Forodham Secondary School	Mrs. Zainab Nidemy	Patron
26/3	PM	R&S	Dar es Salaam	Azania Secondary School	* club members only	

On March 7 and March 18, informal discussions were held with Dr. Jane Goodell, the founder of Roots & Shoots.

Interview Contacts

Location	Contact	Position
Roots & Shoots P.O. Box 727 Dar es Salaam, Tanzania	Ms. Megan Nelson Mr. Ibrahim Abbassy Mr. Constantine Magavilla Dr. Jane Goodall	Coordinator Coordinator Coordinator Founder
St. Mary's High School	Mr. Arnold Tchalewa	Patron
Mbuyumi Primary School P.O. Box 23452 Dar es Salaam, Tanzania	Mrs. Maida Ngemera Ms. Grace Kado Mr. Anther Pastory	Head Teacher Patron Assitant Patron
Wildlife Conservation Society of Tanzania P.O. Box 70919 Dar es Salaam, Tanzania	Mrs. A. Bukholi Ms. Annette Mwakimi Mr. Nicholas Kinyau	Coordinator Education Officer Forest Conservation Field Officer
St. Anthony's Secondary School P.O. Box 7490 Dar es Salaam, Tanzania	Bro. Martin Masabo Mr. Turuk Mr. Mayo	Headmaster Dean of Students Patron
Sanze Primary School P.O. Box 28010 Kisarawe, Tanzania	Mr. Mustapha Julius	Head Teacher
Buyuni Primary School P.O. Box 15486 Icaca D'sacaam, Tanzania	Mr. Joseph Katungutu Mr. Mauya Chiuiira	Head Teacher Patron
Malihai Clubs of Tanzania P.O. Box 1541 Arusha, Tanzania	Mr. Peter Ottaru Mr. Godfrey Mwango Mr. Stephen Shemnkande	Coordinator A/V Coordinator Assist. A/V Coordinator
farm visit	Mr. Mbarnot	farmer
Enaboishu Secondary School P.O. Box 3120 Arusha, Tanzania	Mr. Ole Sakinoy Mr. Victor Swai	Dep. Headmaster Patron
Community Development Training Institute	?	
Arusha Day Secondary School P.O. Box 2444 Arusha, Tanzania	Mr. H.K.M. Makange Mr. Asseri	Headmaster Patron
Monduli Teachers Training College P.O. Box 5 Monduli, Tanzania	Mr. David Marandu Mr. Jackson Mwandri ?	Principal Patron Assist. Patron
Magomeni Roots & Shoots Street Club	Stamili Mlinde Gwamaka Eliudi	Chairman Coordinator
Miauzimi Primary School P.O. Box 75694 Dar es Salaam, Tanzania	Mrs. Maura Kilasara Mrs. Zebida Mugasa Mr. Ally Abbakari Mr. Bahati Shomari	Head Teacher Patron Patron Patron
Kisanga Primary School P.O. Box 28043 Kisarawe, Tanzania	Mr. James E. Chisanda Miss Jane Lyimo Mr. Halid Lubiki Mrs. Lilian Yessaya	Head Teacher Second Head Teacher Teacher Teacher

Pugu Kajiungeni Environment Committee	Salehe Lumango Salum Chotala Athumani Nyangala Mariam Lumayo Kondo Kihiki Leocadia Zumba	Chairperson CCM Branch Member, Environment Comm. Vice-Chairperson, Env. Comm. Secretary, Env. Committee Chair, Env. Comm. Pugu Station Member, Env. Comm.
Forodham Secondary School P.O. Box 3107 Dar es Salaam, Tanzania	Mrs. Zainab Nidemy	Patron
Azania Secondary School P.O. Box 9074 Dar es Salaam, Tanzania	* club members only	

Club: Malihai School: Arusha Day Secondary School

	School Leadership	Club Members
Name/Numbers:	Mr. H.K.M. Makange: Headmaster Mr. Asseri (Patron)	
Level:	- Secondary	- Secondary
Club membership:	- 45 members determined by fee paid - many others participate	
Meeting frequency:	- once a week; special day for clubs	
Period of club existence:	- 2 years - patron at school for 4 years; no club before	
Interest/Incentive:	- encouraged by Mr. Ottaru - had interest and awareness of environment - was interested in starting the club	- like the environment; help improve surroundings at school - to keep environment safe; conserve - to encourage others to protect environment - know more about our environment
Club objectives:	- to make students aware of the environment; take care of environment; conserve and protect environment	
Describe environment:		- everything around us - plants; atmosphere; water; buildings; land - biosphere (man, animals)
Environmental issues:		- deforestation; tree cutting - air pollution; industry, cars, dust - overgrazing - thermal pollution; in streams - global warming; affected by chemicals released into the atmosphere - natural disasters; el nino - over utilization of resources - noise pollution
Actions for improvement:		- educate people - plant trees - make laws to protect environment - reducing consumption - keeping environment clean; for fresh air - be an example to others
Club activities:	- sometimes invite guest speakers - discussion / teaching - students do planning; they have an annual plan written out for their programs and activities; on a form from MCT	- talk to people when you see hem doing something wrong and explain what to do and why - plant trees in school environment and nearby; plot by river to prevent soil erosion - visit factories to see how things work and how pollution originates - trip to national park (last term) Manyara & Ngorogoro; funded by contributions from students

Information sources & materials:		<ul style="list-style-type: none"> - pollution is a topic in the syllabus; also in biology - TV, videos - magazines, newspapers - friends; exchanging ideas
Relationship to / support central org:	<ul style="list-style-type: none"> - helpful with program ideas and direction - seminars for teachers and students - support for publishing articles and will help to produce the schools own newsletter - booklets and magazines - encouraged their micro forestry project and have asked for a proposal to seek outside support on behalf of the school 	<ul style="list-style-type: none"> - enough support so far - support for newsletter
Raising community awareness:	<ul style="list-style-type: none"> - benefits to the community are not clear yet; takes time; minimal up to now - there are potential benefits in the club plan now but they haven't accomplished these things yet - modeling by the students is good and worthwhile 	<ul style="list-style-type: none"> - we go out to the community - people are beginning to plant more
Discussion with parents:		<ul style="list-style-type: none"> - parents all support participation - one parent with agriculture dept.; good to have understanding of environment in family - they like to see us learning something - they are becoming more aware too - garden at home now and parents appreciate it - change by example; neighbours are now planting too
Desired activities:	<ul style="list-style-type: none"> - headmaster keen to do much gardening for the revenue it can generate for the school; wants to sell products - good market 	<ul style="list-style-type: none"> - arrange trips; visit villages to talk about issues such as tree planting (planning to do this but haven't done it yet) - trying to write a news;letter; invited submission; have collected submissions from classes; still gathering and preparing material; wanted to publish in Arusha Times (but paper doesn't exist anymore); seeking help from MCT to publish material - want to start a nursery - building a fish pond - would like to raise funds - travel to other countries
Program strengths:		
Program weaknesses:		
Club difficulties:	<ul style="list-style-type: none"> - time; trying to fit activities into the school program; some teachers don't support - resources: don't have money to do the things we want - how to involve students; need time to educate them 	<ul style="list-style-type: none"> - need working tools

Potential improvements:		
-------------------------	--	--

Club: Malihai

School: Community Development Training Institute

	School Leadership	Club Members
Name/Numbers:	Mr. Anselmi: A. Ngangarumo (Patron)	-Thomas C. Masinga (Chairman) -Ngitoria Lemunduli (Vice Chairman) Group of 27 (10 girls, 17 young men)
Level:		- Tertiary secondary institution; trains community development workers in a variety of areas - entrance qualifications minimal; provides programs for in-service and pre-service students
Club membership:	- 95 Club members - 63% of institute are members	- 95
Meeting frequency:		- once a month - meet to plan activities
Period of club existence:	- 15 Years	- 15 Years
Interest/Incentive:		- like nature - a recreational activity - values places that are natural and where man hasn't degraded; sees places that have been degraded and wants to rehabilitate - enjoys the activities - planting trees; protecting environment - wants to see Africa keep its tradition/heritage which includes a healthy natural environment
Club objectives:	- Learn about the environment - Make others aware of environmental issues	
Describe environment:		- all our surroundings - plants; trees; animals; water; soil; air
Environmental issues:	- Pollution - Desertification	- exploitation of natural resources: using faster than being replaced - deforestation: cutting trees - air pollution - soil erosion - dirty and unsafe water
Actions for improvement:		- now building a nursery to provide seedlings to the community
Club activities:	- field trips - drama - working with surrounding communities - running an environmental resource center	- plant trees - educating others - visit other places to learn from them - consulting with community about regulating / planning resource use e.g. use of water from spring by community people

Information sources & materials:	- have their own resource center	- magazines; books - agricultural education institute (neighbour) - programs on TV - radio programs: e.g. "Forest is Life"
Relationship to / support central org:	- receive assistance, materials, videos but visits from coordinators very few	- field trip support (planning a trip to a national park and have fuel support from head office) - use of their library of materials - other information (regular newsletters) and contacts
Raising community awareness:	- give talk in nearby schools	- teaching others e.g. plowing in terraces to avoid soil erosion - provide a good example to others; good way to communicate
Discussion with parents:	- would like to produce audio/visual materials to use with the communities	- only a few; were interested and keen
Desired activities:		- improvements to campus - tree nursery - debating - increased public awareness
Program strengths:		- an improved environment on campus - opportunity to train nearby community: a direct relationship with grass roots - work with the local primary school - committed members: have other responsibilities (especially school) but still devote time and energy
Program weaknesses:		
Club difficulties:	- lack of computer and photocopier	- lack of time - lack of facilities: e.g. communications, videos on weekends

Club: Malihai
School: Enaboishu

	School Leadership	Club Members
Name/Numbers:	Mr. L. Ole Sakinoy: Dep. Headmaster Mr. Victor Swai: Patron (took part with the students in their discussion but had to leave early)	9 boys; 10 girls - most new members (6 months)
Level:	secondary	- secondary school - starting ages 13 - 15
Club membership:	282 members	- 282 members
Meeting frequency:	Once a month	- once a month
Period of club existence:	- 15 years	- club started in 1983

Interest/Incentive:	<ul style="list-style-type: none"> - enjoys the subject matter - believes it is a worthwhile thing to be involved with both for the students and the community 	<ul style="list-style-type: none"> - to keep environment green - to learn about environmental issues - to be able to do something to improve the environment after leaving school - to teach others about the environment and the importance for personal health e.g. cholera - as a way of studying the environment in more detail - to improve the school environment
Club objectives:	<ul style="list-style-type: none"> - to promote appropriate behaviour towards the environment in young people - to take action to solve environmental problems 	
Describe environment:		<ul style="list-style-type: none"> - where people live - the natural resources around us - water; trees; plants; soil; forests; animals
Environmental issues:		<ul style="list-style-type: none"> - soil erosion (water and wind) - keeping air clean; air pollution (dust, smog) - tree cutting (overcutting) - overstocking - poor agricultural practices e.g. erosion, monoculture
Actions for improvement:		
Club activities:		<ul style="list-style-type: none"> - tree planting at school and in community - planting flowers and grass in school grounds - educating people around the school - mtn. climbing group
Information sources & materials:		<ul style="list-style-type: none"> - reading books (library at school) - from teachers; taught in curriculum - discussion to share ideas - magazines; TV; radio (some specific radio programs produced by NGO's) - Malihai newsletters
Relationship to / support central org:	<ul style="list-style-type: none"> - happy with the support from Malihai headquarters 	<ul style="list-style-type: none"> - newsletters; receive and make submissions
Raising community awareness:	<ul style="list-style-type: none"> - club activities and knowledge which students take home are having an impact 	<ul style="list-style-type: none"> - tell villagers not to burn grass - advise people to replant trees (before cutting) - protecting water sources e.g. dig beyond 30 m from water sources - keep animal levels sustainable so as not to degrade environment - community people visit their school and inquire about the planting and the work they are doing
Discussion with parents:		<ul style="list-style-type: none"> - parents all aware - very supportive - influences behaviour at home (esp. by example)

Desired activities:		<ul style="list-style-type: none"> - visiting national parks - parks are important to pursue wildlife issues which they don't have ready access to as far as learning and becoming involved - fund-raising projects for club
Program strengths:		<ul style="list-style-type: none"> - conveying the environmental message; telling others - targets the new generation; reaches a concentration of people in school and makes it easier to get the message across; efficient at reaching a large number of people who in the long term will make a difference
Program weaknesses:		<ul style="list-style-type: none"> - financial resources; for activities, communications, study resources - equipment: seeds, fertilizers,
Club difficulties:		<ul style="list-style-type: none"> - resources to carry out programs
Potential improvements:		<ul style="list-style-type: none"> - trips to other places - links to other clubs - awareness of environmental issues on a broader global scale

Club: Malihai Clubs

School: Monduli Teachers' Training College

	School Leadership	Club Members
Name/Numbers:	Mr. David E.F. Mavandu: Principal Mr. Jackson Mwandri: Patron ****: Assistant Patron	
Level:	<ul style="list-style-type: none"> - student teachers - a 2 year program leading to a diploma required for teaching in the secondary school system - most students come with no teaching experience; less than 10% have primary experience - one 8 week practicum (reduced to 5 by fiscal constraints); single subject practicums weekly in nearby schools 	
Club membership:	<ul style="list-style-type: none"> - school capacity 600 (240 girls; and 360 men; determined by facilities); residential - not at full capacity because: economic conditions (students can't always afford fees); lack of qualified students (school has a science focus; more difficult) 	<ul style="list-style-type: none"> - 61 members; 31 1st yr; 30 2nd yr. - Management Committee of 10 students
Meeting frequency:		
Period of club existence:	<ul style="list-style-type: none"> - started in 1992/93; grew out of scouting movement and a reforestation project on campus; college given a challenge by political leaders to demonstrate to local people the importance of trees in prevention of soil erosion - recognized by Malihai in 1994 	

Interest/Incentive:	<ul style="list-style-type: none"> - interest the primary factor - patrons come from different disciplines (Chem & Geography) - patron was with the club in the beginning; the Assistant patron is new (2 yrs) 	<ul style="list-style-type: none"> - came from a place where the environment was destroyed; wanted to get knowledge from the club so he can pass knowledge back to the people of his area - knows the effects without biodiversity; wants to work to avoid that; wants our past environment; wants to find alternative solutions and solve problems facing our people - previously attended agro-forestry program and wanted to share his knowledge with others - interested in tree planting; wants to share knowledge back home - wants to use current knowledge and learn more - wants skills and knowledge in environmental education - wants to change the institute to serve as an example in the community - home area being devastated (environmentally) by refugees; wants environmental knowledge (both actions and the education of others) so he can organize efforts back home to restore environment
Club objectives:	<ul style="list-style-type: none"> - concern for the environment - learn how to conserve environment - totality of environment; not just trees 	
Describe environment:		<ul style="list-style-type: none"> - everything which surrounds us - resources without which we cannot live
Environmental issues:		<ul style="list-style-type: none"> - degradation of vegetation - pollutants we are creating - air pollution; industry - water pollution; sewage systems - noise pollution - drought affecting crop production - decreased number of animals; decreasing biodiversity - concern over the abundance of plastic
Actions for improvement:		
Club activities:		<ul style="list-style-type: none"> - planting trees and plants in the college grounds - providing seedlings to neighbouring schools (they have a nursery) - providing education amongst ourselves; discussion; sharing skills and knowledge; ideas on environmental education (not just trees but all topics); we're from different disciplines which enriches our discussion and our learning - mobilization for special events; trip for Women and Environment Day; workshop in Kenya - established a choir within the club to perform and carry the message

Information sources & materials:		<ul style="list-style-type: none"> - Malihai newsletters, posters, leaflets - input from speakers (like you) - video tapes - textbooks, library (not good) - asking others - study tours - TV programs, radio programs - extension officers; especially techniques - newspapers: difficulty with access; only in urban areas, not rural; no specific environmental newspapers
Relationship to / support central org:	<ul style="list-style-type: none"> - more organized than independent club - connections to lots of different groups - links to other institutions 	<ul style="list-style-type: none"> - supporting study trip to Ngorogoro - advice; visits - help with transport
Raising community awareness:		<ul style="list-style-type: none"> - important to pass on our knowledge to others - how do you teach others; by example; by responding to people's inquiries; spread knowledge, establish clubs and generate enthusiasm and interest - practice good environmental conservation ourselves on our own lands as a model to family and friends
Discussion with parents:		<ul style="list-style-type: none"> - parents have very little environmental knowledge; very difficult to change old patterns especially when there are few realistic alternatives for rural lifestyle
Desired activities:		<ul style="list-style-type: none"> - raise more seedlings for ourselves and neighbours - increase education efforts with neighbours - study tours
Program strengths:	<ul style="list-style-type: none"> - links among disciplines - practical knowledge - spreading awareness 	
Program weaknesses:		
Club difficulties:		<ul style="list-style-type: none"> - resources: both information and financial - lack network of contacts
Potential improvements:		

ANNEX 2
Interviews - Data Tables

Club: Roots & Shoots
School: Azania Secondary School

	School Leadership	Club Members
Name/Numbers:		
Level:	- secondary	- secondary school
Club membership:		- 130 members - school population: 2000
Meeting frequency:		
Period of club existence:		
Interest/Incentive:		- like to work with friends to help environment - need to know about environment; preparing for future - care for environment - educate others about environment; help society know about the importance of environment - to leave environment in good condition for future generations
Club objectives:		- care for nature - educate students about the environment - planting trees and taking care of them - caring for ourselves; knowing the importance of the environment for us
Describe environment:		- anything that surrounds you: bldgs, trees, people, animals, air - wildlife
Environmental issues:		- pollution: e.g. air pollution; ozone layer depletion - deforestation - land pollution: disease
Actions for improvement:		
Club activities:		- talk to others; educate others - write articles for publication; essays - clean up activities - discussions - posters, art work - plant trees

Information sources & materials:		<ul style="list-style-type: none"> - magazines - radio & TV - attending assemblies - observation - subjects at school - political meetings
Relationship to / support central org:		- establish competitions between schools: debates; drama (learning while being exciting)
Raising community awareness:		
Discussion with parents:		
Desired activities:		<ul style="list-style-type: none"> - send leaders to talk to government people - link with other organizations - drama productions
Program strengths:		
Program weaknesses:		
Club difficulties:		<ul style="list-style-type: none"> - getting information - translating ideas into action - cooperation from others

Club: Roots & Shoots

School: Forodham Secondary School

	School Leadership	Club Members
Name/Numbers:	- Mrs. Zainab Nidemy, Patron	
Level:		- secondary school
Club membership:	<ul style="list-style-type: none"> - 40 members - 2000 students in school 	
Meeting frequency:		
Period of club existence:		
Interest/Incentive:	<ul style="list-style-type: none"> - geography background; has always had an interest in the environment; don't like the environmental degradation going on - member of WCST - also involved with environment in previous school 	<ul style="list-style-type: none"> - to learn about environment in society - to know about animals - to learn how to deal with environmental problems - to educate society - seeing environment being destroyed; want to be able to care for the environment, to prevent destruction
Club objectives:		<ul style="list-style-type: none"> - care for the environment around school; also other environments e.g. at home and in the community - care for plants and animals - love each other - to address environmental issues

Describe environment:		<ul style="list-style-type: none"> - area surrounding us; school, home, streets - source of everything - where people are
Environmental issues:		<ul style="list-style-type: none"> - burning of trees; deforestation - air pollution (industry) - poaching - dynamite fishing - water polluted
Actions for improvement:		
Club activities:		<ul style="list-style-type: none"> - pick up litter; be an example - participated in market clean-up - tell others about the important of a clean environment - help in planting trees - discussion of issues; also with other schools
Information sources & materials:	- need more materials; library resources are limited	
Relationship to / support central org:	<ul style="list-style-type: none"> - provide a variety of speakers; to promote and provide interest - international program is an important drawing card 	<ul style="list-style-type: none"> - local field trips - encourage teachers to help - connections in other countries
Raising community awareness:		<ul style="list-style-type: none"> - market clean-up: talking to others; modeling - promoting R&S - assisting people in villages (grandparents) with tree planting
Discussion with parents:	- very few take it home	<ul style="list-style-type: none"> - yes - garbage dumps at home
Desired activities:		<ul style="list-style-type: none"> - financial support for activities; T shirts for sports - visits to other clubs - visit national parks - more books and information
Program strengths:	- students are keen; if you mobilize, they will come	
Program weaknesses:	<ul style="list-style-type: none"> - teacher support: teachers (esp. in gov schools) can't afford to volunteer the time to help; salary issues - also no knowledge among young teachers 	<ul style="list-style-type: none"> - not enough time - recruiting more teachers

Club: Roots & Shoots
School: Mbuyumi Primary School

	School Leadership	Club Members
--	--------------------------	---------------------

Name/Numbers:	Mrs Maida Nigeemera (Head Teacher) Mr. Arther Pastory (Patron) Miss Grace Kado (Patron)	- 23 students: 10 boys; 13 girls
Level:	- school has 2,000 students; 65 teachers; 21 classrooms; 2 staff rooms; 1 office; 1 store room; split shift	- primary
Club membership:	- 40 students	
Meeting frequency:	- 3 times a week; MWF after school	- 2 or 3 times a week; they decide what they are going to do
Period of club existence:		
Interest/Incentive:	- interested in learning more; process of learning through interacting - interested in activities - interest in environment through study as Geography teacher; wants to contribute	- wanted to be involved in making school environment better - wanted to make a difference; trash; clean up the environment - interested in sports; exercise - to learn things about the environment - to sensitize others - building friendships with other countries
Club objectives:	- to educate children & people in general about the importance of keeping the environment clean and using sports as one of the means - prevention of drought: planting trees - combating problems facing the environment; changes you don't expect; be prepared	- to clean environment - to improve themselves in sports - plant trees - taking care of animals
Describe environment:		- area that surrounds us: trees, flowers, grass, forests - trash - water bodies: lakes, rivers, ocean - buildings
Environmental issues:	- Pollution - Desertification - Many others	- dirty environment - problems because people don't understand the importance of a clean environment; not enough education
Actions for improvement:		- clean environment to avoid disease, make it more attractive, keep healthy (clean air)
Club activities:	- tree planting - picking up trash - plays; artwork - discuss issues; speakers - teachers plan activities and consult with head teacher for permission; talk to children about plans; students have input; there is a group leader	- discuss issues amongst ourselves - plant trees - educate people; tell them when we see them throwing trash; collect trash; put up trash bins - artwork; put up at school - involve in sports; examples for others
Information sources & materials:	- very few resources - information from R&S	

Relationship to / support central org:	<ul style="list-style-type: none"> - information - books as gifts & prizes - visits - program ideas <p>invitations to participate in city wide clean-up activates</p>	
Raising community awareness:	<ul style="list-style-type: none"> - people are a bit more conscious - impact because visitors see the school as having a different environment - students go home and try to act on what they do at school 	
Discussion with parents:	<ul style="list-style-type: none"> - Children teach parents - Parents are invited to some club activities e.g. plays 	<ul style="list-style-type: none"> - parents know about their participation - talk to parents; tell their labourers - purchased a trash bin at home - planted trees and flowers
Desired activities:		<ul style="list-style-type: none"> - trips to other places to learn about environment
Program strengths:		
Program weaknesses:		
Club difficulties:		
Potential improvements:		<ul style="list-style-type: none"> - jerseys for team; sporting equipment - tools for gardening

Club: Roots & Shoots

School: Miauzimi Primary School

	School Leadership	Club Members
Name/Numbers:	<p>Mrs. Maura Kilasara: Head Teacher</p> <p>Mrs. Zebida Mugasa</p> <p>Mr. Ally Abbakari</p> <p>Mr. Bahati Shomari</p>	<p>* Ibrahim was discussing questions on a survey from R&S covering a wide variety of knowledge and action questions</p> <p>* we had very little time as well so did not follow the usual discussion approach</p>
Level:	<ul style="list-style-type: none"> - primary school: 1800 students; 34 teachers (6 men, 28 women) 	
Club membership:	<ul style="list-style-type: none"> - 200 members - all students are members 	
Meeting frequency:	<ul style="list-style-type: none"> - use Fridays for school assembly focusing on different topics: e.g. R&S, Aids, etc. - break into groups for activities 	
Period of club existence:	<ul style="list-style-type: none"> - August '98 	
Interest/Incentive:	<ul style="list-style-type: none"> - teachers volunteer; interested and enjoy it - rotate responsibilities 	
Club objectives:	<ul style="list-style-type: none"> - teach people soil conservation - conserve nature - plant trees for shade 	

Describe environment:		
Environmental issues:		
Actions for improvement:		
Club activities:	<ul style="list-style-type: none"> - students learn how to plant trees; trees donated by R&S - R&S brought postcards for penpals - go out to visit with other schools, meet students and discuss things - student share knowledge with other students; seminars - participate in R&S clean-up - visited international school - participate in Environment Day 	
Information sources & materials:		
Relationship to / support central org:		
Raising community awareness:	<ul style="list-style-type: none"> - changes at home: planting at houses, trees and flowers - parents appreciate what school is doing - parents support with funds for tours 	<ul style="list-style-type: none"> - show by example - tell other (family and friends) about how to care for the environment
Discussion with parents:		- talk to parents and they are interested and learn from us
Desired activities:		
Program strengths:	<ul style="list-style-type: none"> - club is a good thing; students enjoy it and benefit from it - benefits for students: discipline has changed; working together; helping each other; willing to work 	
Program weaknesses:		

Club: Roots & Shoots
School: St. Anthony's

	School Leadership	Club Members
Name/Numbers:	<ul style="list-style-type: none"> - Bro. Martin M. Masabo, Headmaster - Mr. Turuk, Dean of Students - Mr. Mayo, Patron 	Edward Mkong, Chairman <ul style="list-style-type: none"> - 14 boys - 4 girls
Level:	- Secondary School 1200 Students 70 Teachers	- secondary school
Club membership:		
Meeting frequency:		- meet when necessary: determined by club leaders
Period of club existence:	- 1 year	- 1 year

Interest/Incentive:	<ul style="list-style-type: none"> - Ensure that students have a good learning environment inside and outside the classroom - The club promotes the right attitudes about the environment to others in the school 	<ul style="list-style-type: none"> - the activities - keeping the environment clean - making other people aware of the importance of the environment; convincing people to care - interest in animals - environmental pollution (especially air); industrial development
Club objectives:		<ul style="list-style-type: none"> - Create a cleaner more beautiful school - Make others aware about the environment
Describe environment:	- Water, air, things around us	
Environmental issues:	<ul style="list-style-type: none"> - Nature conservation - Pollution 	<ul style="list-style-type: none"> - we depend on the environment; a healthy environment is necessary for our survival and that of other animals and plants - air, water and soil pollution are important issues; we can improve our health by addressing these issues; do away with disease - extinction of wild animals; we should value their protection
Actions for improvement:		
Club activities:	<ul style="list-style-type: none"> - contributing to student government - cleaning of campus - Tree planting in school grounds 	<ul style="list-style-type: none"> - clean up: school grounds; Kariakoo market - discussions: e.g. soil pollution - plant trees: prevents erosion and restores soil - debates: teaches students as they prepare; educates others; we can't always have the solutions - presenting ideas to school administration - explore (study) how to prevent major pollution issues
Information sources & materials:	- A teacher engaged to teach classes about nature conservation	<ul style="list-style-type: none"> - taught in class: science; env. biology - books (library) - documentaries on TV (CNN) - lectures by Jane Goodall - guest lectures at museum (WCST) - contact organizations and companies for information (hold competitions e.g. BP) - magazine (WCST) - music
Relationship to / support central org:	- Through visits from coordinator who was a former head boy of this school	<ul style="list-style-type: none"> - information on activities - annual magazines & other materials - we should discuss and suggest to them things that could be done

Raising community awareness:	- Club participates in community clean ups, e.g. in Kariko (market nearby)	- modeling for people: e.g. market clean-up - talk to people: e.g. market - need to discuss issues to make people aware; people don't understand - difficulty is that things people do are important to them (e.g. cutting trees) and it is hard to provide alternatives; poverty is an important issue
Discussion with parents:		- yes, all tell their parents - parents pass on instructions to their housekeepers - grandmother now cooking outside and avoiding harmful fumes
Desired activities:		- RRR would like to start it here; done elsewhere - external support (e.g. donors): buy equipment; tools; dust bins - invite leaders to encourage dissemination of knowledge - conference (annual): invite other students from other schools to discuss issues; 2 or 3 days, 1 day not enough
Program strengths:	- R&S members are initiators; they lead and other students follow - fits with the school's approach to and valuing of education	- contributes significantly to the environment of the school - share knowledge: lead by example
Program weaknesses:		
Club difficulties:		- we are in school too long: don't have time - shortage of press availability
Potential improvements:		- Through big events like a rally with follow up

Club: Roots & Shoots

School: St. Mary's High School

	School Leadership	Club Members
Name/Numbers:	Mr. Arnold F.M. Tchalewa	
Level:	Secondary School	secondary school
Club membership:	69	23 (17 girls, 6 boys)
Meeting frequency:	- Tues. & Thurs. are club days for all clubs in the school. R&S meet according to need as students are also involved in other clubs - meet according to the topics of interest and need to plan activities	-Meet whenever they want to plan some activity
Period of club existence:	August 1998	

Interest/Incentive:	<ul style="list-style-type: none"> - started became involved in clean up at a hospital organized by R&S as a volunteer coordinator at his previous elementary school. Met R&S staff and found out about club. - was a patron at previous school. - the club at this school when he came with the support ad encouragement of the administration 	<ul style="list-style-type: none"> - to keep environment healthy - because I love animals - as a way of expressing feelings about the env.
Club objectives:	<ul style="list-style-type: none"> - to make he environment a better place - pushed the idea of commitment and service to the community 	
Describe environment:		
Environmental issues:		<ul style="list-style-type: none"> - throwing litter; cutting trees; wasting water; industry; over crowding; not recycling properly; poaching; fishing with dynamite; pollutants - result in impacts on marine life; workers health in industry; destruction of ozone layer; threats to wildlife populations; polluted soil
Actions for improvement:		
Club activities:	<ul style="list-style-type: none"> - clean-up and beautification of school grounds - joint activities with other clubs - cleaning areas in the community e.g.. market and explaining to people what they are doing - planting trees; turtles; fish pond - debates, drama, sports 	<ul style="list-style-type: none"> - clean-up programs in school grounds, in local areas around the school, and with other schools in R&S organized events - debates; drama - sports: girls football tournament - planting trees in school yard and elsewhere in conjunction with R&S
Information sources & materials:	<ul style="list-style-type: none"> - R&S is a charitable organization and doesn't have the resources the school does - uses school resources mostly 	
Relationship to / support central org:	<ul style="list-style-type: none"> - important for organizing joint activities with other schools - come and talk to the students 	
Raising community awareness:	<ul style="list-style-type: none"> - talk with people in community in conjunction with clean-up activities to explain what they are doing and the importance of caring for the env. 	<ul style="list-style-type: none"> - lobbying; questions of industry and government
Discussion with parents:	<ul style="list-style-type: none"> - Individual students teach their own parents about the environment 	<ul style="list-style-type: none"> - Are teaching their parents how to protect and not pollute the environment
Desired activities:	<ul style="list-style-type: none"> - planning a concert on a specific theme using drama, music, etc. and inviting other schools 	<ul style="list-style-type: none"> - go out to rural areas for visits (a week) to meet with other students of same age and discuss env. concerns - would like to take trips
Program strengths:	<ul style="list-style-type: none"> - hdqs. volunteers do a good job - activity events organized well - leaders (Megan & Jennifer) mix well and lead by example 	<ul style="list-style-type: none"> - focused on a topic that everyone thinks about and can relate to
Program weaknesses:	<ul style="list-style-type: none"> - delivering the message to so many people - communicating throughout the organization 	

Club difficulties:		<ul style="list-style-type: none">- need more seedlings- funding for rubbish bins- don't have enough time to prepare for things- would like more information / materials
--------------------	--	---

Club: WCST
School: Buyuni Primary

	School Leadership	Club Members
Name/Numbers:	Mr. Joseph J. Katungutu, Head Teacher Mr. Mauya Chiura, Patron	- Group of 39 students (20 boys, 19 girls)
Level:	- primary	- primary
Club membership:	- about 50 students (50% girls; 50% boys) - school population about 500; 12 teachers	50 members
Meeting frequency:	- every end of the month - talk about the club and plan its activities; organize responsibilities; decision come from members; Secretary keeps minutes and send to WCST	- once a month , sometimes more
Period of club existence:	- a year	- 1 yr.
Interest/Incentive:	- strong personal interest in the environment, and specially in the tropical forest area in which they live but is threatened by urbanization and development	- to keep environment beautiful (e.g. for tourists) - to improve environment - for a clean environment - to protect environment
Club objectives:	- provide a model of appropriate care of the environment for the community to follow	
Describe environment:		- anything that surrounds us: trees, ponds, animals, houses - all living things; also non-living e.g. rocks, ponds, air - everything is important to sustain us as human beings
Environmental issues:	- Deforestation - Bush fires - Water pollution	- soil erosion: leads to floods and deserts - lack of rain: too hot; we become dirty, hungry, plants dry up, water sources dry up; animals die. we die
Actions for improvement:		
Club activities:	- visits to educate community: e.g. visited local farmer	- tree planting - clean up surroundings - plant grass to protect against soil erosion - create gardens; collect seeds; make compost - collect medicinal plants - create a nursery - learn about living things in the environment

Information sources & materials:	<ul style="list-style-type: none"> - Miambo (WCST) newsletter - WCST posters and teaching materials - information from WCST field officer 	<ul style="list-style-type: none"> - Miambo newsletter - teachers - videos - radio (gov't & NGO programs) - info from other countries through WCST project
Relationship to / support central org:	<ul style="list-style-type: none"> - visits from field officer very helpful and frequent - seminars excellent - seeds and bags for planting Miambo newsletter; posters; etc. 	
Raising community awareness:	<ul style="list-style-type: none"> - community helps a lot with club program; getting seeds from farmers - community members coming to school to ask questions; asking for trees; word is spreading and more people come 	<ul style="list-style-type: none"> - go tell people (as individuals)
Discussion with parents:	<ul style="list-style-type: none"> - students talk to parents - parents supportive 	<ul style="list-style-type: none"> - yes, tell parents about club and activities - parents also do conservation activities e.g. plant trees and flowers (can see the difference with homes of non-members)
Desired activities:		<ul style="list-style-type: none"> - visit national parks - become involved in managing forest - visit other schools - make a leaflet and other materials - open a bank account
Program strengths:	<ul style="list-style-type: none"> - changed behaviour of students: more responsible (even when teachers' not around) - recognition to school (through education system) - children willing to do volunteer work 	
Program weaknesses:		
Club difficulties:	<ul style="list-style-type: none"> - insufficient resources 	<ul style="list-style-type: none"> - need funds to expand activities
Potential improvements:		

Club: WCST

School: Kisanga Primary School

	School Leadership	Club Members
Name/Numbers:	Mr. James E. Chisanda, Head Teacher Miss Jane Lyimo, Second Head Teacher Mr. Halid Lubiki, Teacher Mrs. Lilian Yessaya, Teacher	
Level:	<ul style="list-style-type: none"> - primary school - 232 students in school 	

Club membership:	<ul style="list-style-type: none"> - includes almost all students - 14 committed participants: only 5 paid memberships 	
Meeting frequency:		
Period of club existence:	- former patron transferred and left with everything	
Interest/Incentive:	<ul style="list-style-type: none"> - head teacher a member of Malihai Club at Monduli TTC - one teacher attended WCST seminars (he was at another school) 	
Club objectives:	<ul style="list-style-type: none"> - to learn about the environment - to communicate their knowledge to others 	
Describe environment:		
Environmental issues:	<ul style="list-style-type: none"> - need to address forest conservation: soil erosion; wind damage; protection of water sources (catchment areas); deforestation for firewood, fuel and building materials 	
Actions for improvement:		
Club activities:	<ul style="list-style-type: none"> - tree planting; seed collection - cleaning grounds - meeting and discussion; teaching - drama; choir 	
Information sources & materials:	<ul style="list-style-type: none"> - calendars, posters, books: good but not enough - study tour to Malihai Clubs: some participated; very important and useful - appreciate the video shows brought to community by WCST: tree nursery management; demonstration plot; illustrates the connectivity between living things in the forest 	
Relationship to / support central org:	<ul style="list-style-type: none"> - seminars for teachers are very valuable and need to be expanded - seminars very good sources of information on tree nursery development, forest conservation; ecology of forest environment - very good to stimulate new ideas and activity in the schools - difficulty in selecting attendees: consistency vs equity; problem of certain teachers getting trained and then moving on; problem of bringing info back to the school 	

Raising community awareness:	<ul style="list-style-type: none"> - believes there is a good flow of information but does not know for sure; hard to see the direct effects - would like to see students participate in resource committee meetings and discuss issues with villagers - video programs are helpful: some people in community learning and applying the knowledge; not enough; still too many bad and illegal activities 	
Discussion with parents:	- students talk to their parents about what is being discussed at school	
Desired activities:		
Program strengths:		
Program weaknesses:		
Club difficulties:	<ul style="list-style-type: none"> - transferring of staff; continuity for clubs - work load on staff - materials; facilities; don't even have classrooms 	
Potential improvements:		

Club: WCST

School: Sanze Primary School

	School Leadership	Club Members
Name/Numbers:	Mr. Mustapha M. Julius, Head Teacher	- 30 students (12 boys; 18 girls)
Level:	- primary	- primary
Club membership:	<ul style="list-style-type: none"> - 50 members - student population 300 (all students involved in some activities) - student membership fees 200 Sh: a problem because students can't afford and the money goes to headquarters 	
Meeting frequency:	- at least 2x per month	- two to three times per month
Period of club existence:	- about 2 yrs	
Interest/Incentive:	strong personal interest by Patron and Headmaster	<ul style="list-style-type: none"> - to conserve the environment - to avoid creating a desert - to learn about fish - to visit the forest
Club objectives:	- to teach the community about forest management	
Describe environment:		

Environmental issues:	<ul style="list-style-type: none"> - birds and medicinal plants in the forest are disappearing, - charcoal-making - lack of water 	<ul style="list-style-type: none"> - soil erosion - water problems - tree cutting; charcoal making - bush fires - diseases
Actions for improvement:	<ul style="list-style-type: none"> - EE should be a part of the curriculum - Education Department should provide some support (funds) for club activities 	
Club activities:	<ul style="list-style-type: none"> - collecting species samples; identifying uses e.g. natural medicines - tree planting: teach methods; seed collecting; starting nursery plants at home and bring to school; care for trees - plant grass to protect against soil erosion - learning about forest conservation: e.g. reducing firewood consumption and charcoal production - learning about caring for birds: typically sling shot material - competitions: prizes are helpful (certificate for club; sports equipment; chalks) 	<ul style="list-style-type: none"> - planting trees - planting grass: control of soil erosion and gully rehabilitation - watering and caring for plants - preventing tree cutting: educating others; explaining the importance of the forest - visits to other school to exchange information
Information sources & materials:	<ul style="list-style-type: none"> - teachers use the Miambo newsletter and then teach the children but even the teachers have difficulty sometimes with the newsletter 	<ul style="list-style-type: none"> - stories from parents; elders / grandparents - newspapers; books (no library) - observation - teachers - films (WCST video programs)
Relationship to / support central org:	<ul style="list-style-type: none"> - Society rep (field officer) is always around, based locally: a real advantage - teach the teachers and students together - Central organisation organizes competitions and provides prizes 	
Raising community awareness:	<ul style="list-style-type: none"> - WCST involves the community in education programs: community meetings - programs sometimes bring community to the school: e.g. teach girls in school and women's club in the community regarding improved stoves - increasing interest in planting different species for different purposes 	
Discussion with parents:	<ul style="list-style-type: none"> - students take the information home and talk to parents: parents also come to school to ask (shows the information is going home) - a lot of interest by parents 	<ul style="list-style-type: none"> - yes, talk with parents; they are happy because the school has a club - parents responding: planting trees at home; protecting small trees at home; not cutting trees (using dead wood)
Desired activities:	<ul style="list-style-type: none"> - more visits to other schools to exchange information 	<ul style="list-style-type: none"> - visit national parks e.g. Ngorogoro - construct a water supply for a school nursery
Program strengths:	<ul style="list-style-type: none"> - children learn about conservation: important for the future of the community - people are learning to take care of the forest, land, birds, etc. 	

Program weaknesses:		
Club difficulties:	<ul style="list-style-type: none">- environmental topics not in school curriculum- transport- WCST has a lack of funds and can't support to the extent that the clubs would like	
Potential improvements:		