



**UNIVERSITY OF MALAWI - THE POLYTECHNIC
POLYTECHNIC DIGITAL LIBRARY**

NATIONAL ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY

1996-1999

Consultancy Team

Irma Allen

Sosten S. Chiotha

Felix Kalowekamo

Monique Trudel

MAY 1996

**MINISTRY OF RESEARCH AND ENVIRONMENTAL AFFAIRS
USAID / UNDP/ WORLD BANK**

NATIONAL ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY

1996-1999

Consultancy Team

Irma Allen
Sosten S. Chiotha
Felix Kalowekamo
Monique Trudel

MAY 1996

MINISTRY OF RESEARCH AND ENVIRONMENTAL AFFAIRS
USAID / UNDP/ WORLD BANK

ACKNOWLEDGEMENTS

Many people were involved in making the development of a National Environmental Education and Communication (EE&C) Strategy possible. First, it required the vision of the Government of Malawi (GoM) to plan for the development of a coordinated strategy for EE&C. Secondly, it required the support of three collaborating donors, United State Agency for International Development (USAID), United Nations Development Program (UNDP), and World Bank (WB), to provide the needed resources. Third, it required the participation of the stakeholders in EE&C to freely spare their time and share experiences to distill the best of what has been learned in their endeavours in order to compile a practical, feasible EE&C Strategy.

The consulting team wishes to express its deep appreciation at the strong support and full cooperation that it received from all the stakeholders in EE&C who participated, in one way or another, in this endeavour. Special thanks to Mrs.E.Mede, Mr.R. Kabwaza, Mr. M. Mwanyongo, Dr. Z Vokhiwa, and Ms.R.Cammaer of Ministry of Research and Environmental Affairs (MOREA) and Dr. P. Sibale of World Bank (WB), whose assistance and involvement made the Strategy Development Workshop possible. We are also very grateful for the support and assistance which we received from Mr. D. Himelfarb and Mr.S. Machira of USAID, particularly for their patience in helping us solve logistical and technical problems. Furthermore, we would like to express warm appreciation to Mr. S. Southey, of UNDP, whose genuine interest and enthusiasm for the process made our work specially meaningful.

Last, but not least, we thank the people in local communities with whom we interacted, who provided the focus for the Strategy, and the “Gule Wamkulu”, who joined us at the Strategy Development Workshop, and infused this initiative with the animating spirit of Malawi culture.

LIST OF ACRONYMS

ACB	Agriculture Communication Branch
ADRA	Adventist Development and Relief Agency
BAM	Beekeepers Association of Malawi
CBO	Community-based Organisation
CCAP	Church of Central Africa Presbyterian
CCM	Christian Council of Malawi
CDTC	Community Development Training College
CIDA	Canadian International Development Agency
CONGOMA	Council of Non-Governmental Organisations of Malawi
CODE	Canadian Organisation for Development of Education
CPAR	Canadian Physicians for Aid and Relief
CSC	Christian Services Committee
CU	Concern Universal
CURE	Coordination Unit for the Rehabilitation of the Environment
CPSP	Country Program Strategic Plan
DDC	District Development Committee
DCE	Domasi College of Education
DNPW	Department of National Parks and Wildlife
DOF	Department of Forestry
EE&C	Environmental Education and Communication
EFP	Environmental Focal Point
ELDP	Evangelical Lutheran Development Programme
EMB	Environmental Management Bill
EP&D	Economic Planning and Development
ESP	Environmental Support Program
EU	European Union
EVARD	Evangelical Alliance for Relief and Development
FAO	Food and Agriculture Organisation
GABLE	Girls Attainment in Basic Education and Literacy
GoM	Government of Malawi
GTZ	Deutsche Gesellschaft Fur Technische Zusammenarbeit
HfH	Habitat for Humanity
ICLARM	International Centre for Living Aquatic Resources Management
IRALAS	Innovative Rural Action Learning Area
KCN	Kamuzu College of Nursing
LA	Local Authority
MANEB	Malawi National Examination Board
MCDE	Malawi College of Distance Education
MBC	Malawi Broadcasting Corporation
MBS	Malawi Bureau of Standard
MIE	Malawi Institute of Education
MIJ	Malawi Institute of Journalism
MIWD	Ministry of Irrigation and Water Development
MNR	Ministry of Natural Resources
MOALD	Ministry of Agriculture and Livestock Development
MOE	Ministry of Education
MOHP	Ministry of Health and Population
MOIBTC	Ministry of Information, Broadcasting and Telecommunications

MOLGRD	Ministry of Local Government and Rural Development
MOLV	Ministry of Lands and Valuation
MOREA	Ministry of Research and Environmental Affairs
MOT	Ministry of Tourism
MOYSC	Ministry of Youth, Sports and Culture
MWCCASW	Ministry of Women's, Children's and Community Affairs and Social Welfare
NATURE	Natural Resource Management and Environmental Support Program
NEAP	National Environmental Action Plan
NEP	National Environmental Policy
NGO	Non-governmental Organisation
NYC	National Youth Council
ODA	Overseas Development Administration
SCF	Save the Children Federation
SDNP	Sustainable Development Network Program
SHS	School of Health Sciences
TTC	Teacher Training College
TH	Traditional Herbalist
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNESCO	United Nations Educational, Scientific and Culture Organisation
USAID	United State Agency for International Development
WB	World Bank
WHO	World Health Organisation
WSM	Wildlife Society of Malawi
WUSC	World University Services of Canada
WVI	World Vision International
ZIPA	Zipatso Association of Malawi

EXECUTIVE SUMMARY

The development of a National Environmental Education Strategy represents another step in the implementation of Malawi's National Environmental Action Plan.

The purpose of developing a National Environmental Education Strategy is to provide a common vision for EE&C and a framework for action which will ensure the fullest possible participation by all sectors and levels of the community. It is also meant to enhance ongoing efforts in environmental education and resource management, and provide an indication of EE&C priorities which need to be addressed.

A team of consultants was engaged by the Government of Malawi, with the support of USAID, UNDP, and World Bank to facilitate the process. A participatory approach was used (see Annex 11) consisting of several tasks. Relevant literature and documents were obtained and studied. A survey to interview a wide cross-section of stakeholders in EE&C was carried out (see Annex III) to determine what is presently going on, what is working, and what resources and opportunities exist for EE&C in Malawi. With this input, a draft Strategy document was produced and distributed to those interviewed, with an invitation to attend a Strategy Development Workshop. At the workshop, each section of the document was reviewed and suggestions for amendments were made. The participants had opportunities to discuss and experience (through field trips) various dimensions of EE&C. Inputs from the Strategy Development Workshop were then incorporated, and a second draft Strategy document was produced. This was distributed to the stakeholders for their final comments before adoption.

The first two sections of this National EE&C Strategy deal with the concept of EE&C...its meaning, objectives, special issues and considerations in relation to the situation in Malawi, methods and approaches.

The third section sets out the objectives, strategies and activities of the EE&C Strategy as identified by the stakeholders. It also presents the objectives and strategies as prioritised during the Strategy Development Workshop. A broad range of activities, recommended by the stakeholders, is listed under each strategy, with the assumption that implementors and donors will choose those they wish to implement and support, in relation to their own main interests and resources. There is also need to fully involve the private sector.

The fourth section of the EE&C Strategy is concerned with a mechanism to ensure coordination and facilitation for the Strategy, while section five offers a possible medium-term workplan, including lead implementors and possible donors, to provide a broad framework for developing specific time-phased plans. Monitoring and Assessment is the theme of section six. In this section, suggestions are given for different kinds of indicators, and specifically performance indicators for individual activities.

Some of the major findings and conclusions derived from the Strategy development process, which were integrated into of the Strategy document include the following:

- There are different perceptions about the meaning and objectives of EE&C. *The workshop participants, however, after discussions and field trips arrived at a common understanding;*
- The resources (material, human and financial) now being invested in EE&C are quite limited; *More resources need to be found, and opportunities to integrate EE&C into existing projects/programs need to be utilised;*
- The integration of EE&C into the formal system faces great constraints due to other major priorities in the provision of education for all. *Therefore, it is necessary to make EE&C a component of existing programmes, and to use limited resources in EE&C activities with a large multiplier effect, e.g. in-service training of teachers and development of simple materials for schoolchildren;*
- It was agreed that a major priority is to raise public awareness and participation in environmental concerns. *However, since almost half of the population are youth and children, and they are also the ones most likely to reap the benefits or suffer the consequences of any environmental changes, priority should be given to EE&C for this sector of the population;*
- Many NGOs in Malawi are involved in a broad range of activities with significant EE&C components. *Their efforts need to be encouraged and increased;*
- There are indigenous knowledge systems and traditional practices that promote environmental protection. *These should be studied, adapted (if needed), and used more intensively to reach certain target populations;*
- Stakeholders generally requested training in EE&C methods and approaches. *Expertise exists in various institutions for the development of short courses and training workshops for specific target groups, especially those with negative impacts on the environment;*
- Most of the current EE&C interventions have not been evaluated, thus it is difficult to know which have had the greatest impact. *Monitoring and assessment should be an integral part of all EE&C projects*
- EE&C is being carried out by NGOs, government ministries and parastatals. *Stakeholders in both formal and non-formal education need to work together to supplement and complement their endeavours. Formal EE&C activities which are costly and with long-term impacts should be supported by non-formal EE&C activities with shorter-term impacts.*

MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY

1.0 INTRODUCTION

1.1 Background

The Environmental Context

Malawi is a land-locked country with a unique and varied natural resource base which includes fertile soils, fresh water and forest resources. Twenty percent of the country is covered by water. Malawi is located in the southern part of the East African Rift Valley. It has a population of almost 11 million, growing at the rate of 3.2% per annum, and one of the highest population densities in the region (about 170 inhabitants per square km of arable land). Approximately 85% of the population live in rural areas and of these, 98% depend on smallholder agriculture. About 60% of the rural and 65% of the urban population live below the poverty level. Urbanization is currently proceeding at the rate of between 6.5% and 15% per annum. Literacy is low (39% of adults in 1987), and there are limited health and social services.

In the last few years, the Malawi Government (GoM) has become increasingly concerned with the loss of natural resources and consequent degradation of the environment in the country. Poverty has been identified as the root cause of environmental degradation. Rapidly expanding population and severe droughts (1991-1995), among other factors, have exacerbated the situation.

Because of the fast growing population and heavy dependency on wood, which is the source of about 90% of the nation's primary energy, deforestation is one of the major environmental problems that Malawi is facing. Current use of wood is fast diminishing existing forests, and a shortage of land and other resources precludes extensive reforestation. It is estimated that total forest cover declined by 41% between 1972 and 1990. Lack of ground cover and increased cultivation for food production, without proper conservation measures, are causing serious soil erosion (about 20 tons per hectare per annum from cultivated land). Consequent siltation of lakes and rivers is being accelerated, with deleterious effect on fish stocks, and disastrous effects on future food security. Increasing use of inorganic fertilisers and pesticides is also threatening fresh water resources.

Action Towards Improved Environmental Management

The government's overall development policy is sustainable and equitable development, and it is committed to achieving this through economic growth that will alleviate poverty, yet still ensure the sustainable use of Malawi's natural resources. The aim is to raise people's living standards by maximizing food production and income transfers, reversing natural resource degradation, and ensuring full participation of local communities in environmental management.

Several important steps have been taken in this direction. Among these are some which have a special focus on improving environmental management for sustainable development, and thus are relevant to the development of an Environmental Education and Communication (EE&C) Strategy.

Government Initiatives

In 1992, Malawi participated in the United Nations Conference on Environment and Development (UNCED), and is a signatory to several important international Conventions: Convention on Wetlands of Significant Importance; Convention on International Plant Protection; Convention Concerning the Protection of the World Cultural and Natural Heritage; Convention on Biological Diversity; Convention on Desertification; African Convention on Conservation of Nature and Natural Resources; FAO International Undertaking on Plant and Genetic Resources; United Nations Convention on the Law of the Sea; Montreal Protocol for Protection of the Ozone Layer; Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and the Convention on the Conservation of Migratory Species of Wild Animals.

In December 1994, through a participatory process which included 18 task forces investigating specific environmental issues, a comprehensive National Environmental Action Plan (NEAP) was completed and launched. The NEAP describes existing environmental problems and provides a plan of action for improved management of natural resources to ensure sustainable development. The nine key environmental issues which were identified are:

- a) soil erosion due to poor land management and overstocking;
- b) depletion of fish stocks from overfishing and pollution;
- c) water degradation due to pollution from agriculture, industry and human waste;
- d) deforestation contributing to soil erosion, flooding & siltation, and lack of fuelwood;
- e) high population growth rate causing increased pressure on the natural resource base;
- f) loss of biodiversity;
- g) degradation of human habitats;
- h) changing climate; and
- i) air pollution.

In the NEAP, the need for increased public environmental awareness and participation in environmental management was identified as a priority.

In May 1995, Malawi's new Constitution was adopted. Chapter III, Section 13d reflects a greater level of environmental commitment. It exhorts the government to : "manage the environment responsibly in order to-

- prevent the degradation of the environment;
- provide a healthy living and working environment for the people of Malawi;
- accord full recognition to the rights of future generations by means of environmental protection;
- conserve and enhance biological diversity in Malawi"

A national programme for environmental protection, the Environment Support Programme (ESP), is nearing completion with the mandate to ensure implementation of the NEAP. A major strategy is to utilise, build and strengthen national environmental management capacity to "conceive, plan, implement, monitor and enforce priority policies." In this respect, the ESP is assisting in strengthening the capacity of the Ministry of Research and Environmental Affairs (MOREA) to function as the institution responsible for facilitating and coordinating environmental management. The national programme will also assist other line ministries, district institutions, non-governmental organisations (NGOs) and local communities in environmental management activities to implement the NEAP.

Several other initiatives which are essential to facilitate environmental action have also been taken. These include (1) drafting of an Environment Management Bill, which is now being discussed in Parliament; (2) the development of a National Environmental Policy approved by Cabinet in February 1996; (3) the identification and appointment of environmental 'focal points' from line ministries and relevant institutions and organisations to establish a network for environmental activities; (4) a training needs and resource assessment for institutional and human resource development, and now (5) the development of a National Environmental Education and Communication Strategy for Malawi.

Support for implementation of the national environment programme is being undertaken to enhance:

- Environmental Law, Policy and Institutional Strengthening;
- Priority Environment Programmes and Investment Projects; and
- Co-Management of the Natural Environment

In the process of developing the national environment programme, five capacity gaps were identified which need to be resolved in order to implement the NEAP. These are : (1) Institutional Support; (2) Environmental Awareness and Education; (3) Information Management; (4) Environmental Monitoring; and (5) Environmental Impact Assessment.

Non-Governmental Initiatives

The private sector has also made important contributions towards improved environmental management.

A survey conducted in 1994 identified over 18 NGOs, 10 of them indigenous NGOs, which are involved in natural resource management activities. These include: Action Aid Malawi; Adventist Development and Relief Agency (ADRA); AFRICARE; Beekeepers Association of Malawi (BAM); Canadian Physicians for Aid and Relief (CPAR); Christian Council of Malawi (CCM); Christian Service Committee (CSC); Church of Central Africa Presbyterian (CCAP); Concern Universal (CU); Coordination Unit for the Rehabilitation of the Environment (CURE); Evangelical Alliance for Relief and Development (EVARD); Evangelical Lutheran Development Programme (ELDP); Habitat for Humanity (HfH); Plan International; Save the Children Fund; Wildlife Society of Malawi (WSM); World Vision International (WVI); and Zipatso Association of Malawi (ZIPA).

The scope of work of these NGOs varies widely. Some work at a national level, but the majority work with local and district level projects. Some are multi-sectoral, while others focus on specific sectors, such as agriculture, fisheries, health. Their activities include the promotion of income-generating activities (Action Aid, BAM), community forestry and soil conservation activities (HfH, Plan International, EVARD), tree-planting (WSM, ZIPA, CPAR), improved agricultural practices (WVI, CCM, CSM), environmental education materials development (WSM, CURE), and many other environmental activities. A few NGOs are promoting participatory community development techniques, e.g. training for transformation (CU, CPAR, Action Aid, CURE).

Increasingly, NGOs are being regarded by the GoM as partners in development, and their input has been sought in the development and implementation of national programmes, such as the National Environmental Action Plan, the Environment Support Programme, the Poverty Alleviation Programme, and the National Community Forestry Programme. Some NGOs have also been invited to serve as members of District Development Committees.

The role of NGOs is unique in several ways, and it is this that makes them essential partners in EE&C. Among their unique features are the following :

- they provide outreach to rural communities and have experience in the implementation of development projects;
- their primary base of operation is at local, grass-root level;
- they usually work in partnership with the local communities and require significant inputs from the participants;
- their small size and limited bureaucracy allows them to be responsive to local needs fairly quickly;
- they are able to provide small amounts of seed money for small individual or group initiatives;
- they undertake a broad range of development activities which impact on the environment;
- some of them are able to draw on expertise from national and international links and from other networking.

All in all, NGOs are filling a very important niche in the promotion of environmental management and EE&C. In an NGO workshop conducted in 1995 for the purpose of assessing the capacity of the NGO community, the main areas of concern about NGOs working in environmental rehabilitation activities were found to be : (1) limited technical capacity; (2) funding insecurity; (3) self-regulation; (4) weak coordination, collaboration, and information exchange; and (5) ambiguous relationship with Government. Since then, CURE has been given a coordinating and training role within the NGO community and between the NGO community and government. In addition, it serves as a dissemination centre for EE & C resources.

By the nature of their development activities, NGOs have been specially active in the area of environmental management and/or environmental education. Many of these have made valuable inputs towards the development of this EE&C Strategy. The lessons they have learned and the opportunities for EE&C which they have identified will be of value for any future EE & C projects and programmes (see Annex III).

1.2 Goals and Objectives of the Environmental Education and Communication (EE&C) Strategy

To formulate realistic goals and objectives for the EE&C Strategy, consideration was given to the needs as articulated by the stakeholders in EE. For example, in most of the initiatives taken to date to improve environmental management at national, district and local levels, by both governmental and non-governmental entities, and in the major environment plans and documents, the need to promote environmental awareness, education, training and communication for various target groups has been highlighted. Specifically, there is consensus on the fact that a common vision and a comprehensive, systematic approach to Environmental Education and Communication are urgently needed in order to facilitate the implementation of the NEAP.

Experience shows that although many environmental management projects have, and are being undertaken, one of the main reasons for failure, specially in the case of aforestation projects, is the lack of a feeling of ownership by the local communities. Also, many of the new approaches to environmental management, such as community management strategies, wildlife resource utilisation, and micro-projects, require high levels of understanding and commitment by the individual members of local communities. Clearly, the success of such endeavours will depend largely on effective environmental education and communication approaches, and in involving as many implementors as possible in carrying out EE&C. These are some of the considerations that helped shape the following goals and objectives.

Goal of the EE&C Strategy

The purpose of a national environmental education and communication strategy is to provide a common vision for EE&C in Malawi and a framework for action which will ensure the full participation of stakeholders across all levels and sectors of the community.

The strategy will be a means to enhance the effectiveness of ongoing and planned initiatives in environmental education and natural resource management, and to identify national priorities. It will thus assist in the sourcing of additional financial resources for EE&C. The ultimate goal is to promote environmental protection and wise use of natural resources for sustainable development.

Objectives of the EE & C Strategy

The main objectives of the EE & C Strategy, in order of priority, are to:

- Increase public environmental awareness and participation ;
- Integrate environmental education into the formal education system ;
- Build institutional and individual capacity for EE&C ;
- Increase the quantity and improve the quality and distribution of EE&C teaching/learning materials ;
- Increase environmental awareness and responsiveness of key individuals at all levels, e.g. decision-makers, traditional leaders, women, farmers, general public ; and
- Decentralise EE&C activities to the local level.

Gender Considerations

Men and women play different roles in the environment, thus there is need to be gender-sensitive with respect to environmental education and communication.

In the development and implementation of a national EE&C Strategy, several issues should be considered. Some of these are as follows :

- Women, particularly rural women, play a large role as natural resource users and managers, especially with respect to the collection of water and fuel wood. Thus, special efforts should be made to ensure that they are provided with skills and practical alternatives which will ensure that basic needs will be met with least harm to the environment ;
- Women are engaged in production activities, such as non-farm income earning activities to supplement household income, smallholder farming, and household tasks. Thus, there is need to develop and disseminate information with regard to environmentally-friendly income-generating activities e.g paper recycling and briquette making ;
- Women are the child-bearers and the first 'teachers' of the children. The women represent a key sector of the community for EE&C as they, in turn, have a multiplier effect for the promotion of environmentally-friendly behaviour in their homes;
- Presently, although initial enrolment of boys and girls is almost equal, the drop-out rate for girls is much higher. By Standard 8, the proportion of girls in school is only 38.4%. Therefore, environmental education and communication strategies must be developed to reach girls and women through other means as well, e.g. adult literacy materials and radio;

- Currently, men play a larger role at all levels of decision-making about natural resources than women. EE&C should give priority to facilitating greater participation of women at decision-making level in natural resource management;
- Women and children are very vulnerable to the effects of environmental degradation.

To ensure that EE&C is gender sensitive, it is recommended that all future EE&C projects and programmes incorporate gender considerations at the design and all other stages of the project/programme cycle. It is also recommended that ongoing EE&C projects and programmes carry out gender analysis and modify their activities accordingly.

Children and Youth Considerations

The population structure of Malawi, where the youth between 10 and 19 years old represent 43% of the population, strongly suggested that special consideration be given to this age group. If one includes all the children between five and ten years old, then this group represents a good majority of the population.

Children and youth are a unique target group, not only because they make up such a large part of the population, but because it is more likely that they will suffer most from the effects of present-day environmental degradation. It is imperative that special efforts be made now to make them aware of the state of the environment, so that they will become concerned enough to take action.

Furthermore, children and youth have a greater capacity to change their attitudes and learn faster than adults. All these features, supported by actual studies, point to the fact that the education and training of youth is a good investment. This certainly holds true for EE&C.

Currently, the youth in Malawi have relatively low school retention rates, and are difficult to reach, as many of them drop out of school. Therefore, various channels and media for communication need to be identified and tested. No effort should be spared to reach children and youth both in school and those out of school with the kind of EE&C which will ensure their knowledge, skills, enthusiasm, and energy will be harnessed and applied to the solution of environmental problems and participation in community development endeavours. NGOs and school committees can play an effective role by linking the school to the community. Furthermore, NGOs can assist the school by providing support to conservation activities and rehabilitation projects undertaken by students.

2.0 ENVIRONMENTAL EDUCATION AND COMMUNICATION EE&C

2.1 The Concept of Environmental Education

The meaning of environmental education has been evolving in the last fifty years. It was initially seen as the study of the natural environment (nature study): trees, soil, water, etc.. The focus was on appreciation of 'nature' and on the study of selected species. In the 1960's, education about the environment acquired an ecological and global perspective. It focused on inter-relationships of biotic and abiotic elements in ecosystems. In the 1970's, the term "environmental education" was coined, and ever since, there have been different perceptions about the exact interpretation of EE. However, the definition and objectives, ratified at the international EE conferences at Belgrade (1975) and Tbilisi (1977) are still widely accepted, as follows:

Environmental education is defined as *"a process aimed at developing a world population that is aware of, and concerned about the total environment and its associated problems, and which has the knowledge, value, attitudes, skills, motivation, and commitment to work individually and collectively towards solutions of current problems and the prevention of new ones"*.

The main objectives of environmental education are to help people acquire:

- an awareness and sensitivity to the environment and its problems through the development of the ability to perceive and discriminate among stimuli ; internalize and extend these perceptions; and use this new ability in a variety of contexts to improve their environment ;
- a basic understanding about how the environment functions, how people interact with it, how environmental issues and problems arise, and how they can be resolved;
- a set of values and feelings of concern for the environment, and the motivation and commitment to take action to conserve, improve and maintain the environment for current and future generations ;
- the knowledge and skills needed to identify and investigate environmental problems, and to contribute to their resolution through positive actions.

Malawi EE & C stakeholders have agreed on the definition and objectives above, with the stipulation that special emphasis be given to the acquisition of values for the environment.

2.2 Formal, Non-formal, and Informal Environmental Education

Environmental Education (EE) is often put into three categories: (1) Formal EE, referring to environmental education through the formal education system.... schools, training institutions, universities and other educational institutions; (2) Non-formal EE, referring to EE provided through extension services, NGO, officers, community development, church organisations, etc.; (3) Informal EE refers to environmental education which is acquired 'in passing', through conversations, news, and/or personal experience.

Formal Environmental Education

This is EE which is purposefully planned to achieve specific objectives and outcomes. Curriculum is designed for a specific target group for a definite purpose. Training programmes are generally designed to raise the level of knowledge and skills, and to influence attitudes of the participants.

Currently in Malawi, environmental education is being integrated into the formal environmental education system primarily through general studies, science and agriculture at primary level, through geography, biology and agriculture at secondary level, and through various individual subjects at tertiary level. This fragmented approach has resulted in 'overcrowding' the curriculum by simply adding new information and also in some cases in repetition or overlap between different topics and/or levels. For example, the issue of soil formation and composition in primary agriculture overlaps to some extent with biology at secondary level. Some of the information could be removed without seriously compromising the knowledge base required for successful primary- level agriculture. Better still, the opportunity could be used to introduce techniques for detection and soil erosion control in the early stages, thus empowering students to take action.

To date, there has not been a concerted national effort to integrate environmental education systematically, with specific desired outputs, across all levels of school curricula and into all teacher-training and university programmes. There is an imperative need to do this if EE & C through the formal education system is to be effective.

Although the GoM is primarily responsible for formal education, NGOs and the private sector can play a larger role in supporting special areas, e.g. the provision of low-cost supplementary materials, specialised in-service training sessions for teachers, and involvement of students and teachers in community initiatives in order to build closer school-community links.

Non-formal Environmental Education

This type of EE&C is also planned with specific target groups in mind to achieve certain desired outputs, but for that part of the population which is outside the formal education system. Non-formal environmental education may be provided through special EE&C activities, or by integrating environmental considerations into extension services, literacy programmes, income-generating strategies, and other development activities.

Currently in Malawi, non-formal environmental education is being provided by government, by NGOs, and by the private sector. From community based organisations to large international organisations, there is a wide range of non-formal EE&C activities taking place. With the increasing realization that development projects have environmental impacts and implications, most projects and programmes are building EE&C elements as part of their activities. Unfortunately, in many cases, they are built in as 'additional' components and implemented by technical staff in other fields, not by EE&C specialists.

The opportunity exists for NGOs to work closer with the formal education system, including vocational institutions, so that they can draw on their technical resources, and in turn contribute pragmatic perspectives for longer-term EE&C programmes in the formal system.

Informal Environmental Education

People are constantly learning by picking up bits of information here and there, through advertising, conversations, etc.. The media and social institutions (beginning with the family), in the country play a large role in informal environmental education. There are opportunities for capitalizing on this, and improving the quality of this type of education.

The integrating factor in all forms of environmental education is communication. Effective, meaningful exchange and dissemination of information is a requirement of every EE&C strategy, and a pre-requisite to public participation, because it is only to the degree that people are aware and concerned about their environment, that their attitudes and behaviour will change. Thus, the challenge exists to study target audience characteristics, needs and interests in order to improve the effectiveness of existing communication channels. With the multiplicity of players, another challenge lies in avoiding uncoordinated and often contradictory messages to the communities.

2.3 The Vision of EE&C in Malawi

A review of some of the past and current EE&C initiatives in Malawi shows that they are generally content-based. There is a tendency to present an environmental problem and to suggest ways of dealing with it. The target audience is usually admonished not to engage in activities which will degrade the environment. Another approach is to provide information on a technique, e.g. tree-planting which is being advocated.

More and more, EE&C is being seen in a new light, not solely as a subject for acquiring knowledge, but as a process to develop new forms of behaviour towards the environment, based on relevant knowledge, skills, attitudes and values. These behaviours will ultimately result in sustained development and improved quality of life. For this to happen, the environment should be used as the medium for education, and learning gained through the different subject areas should be consolidated by applying it to the solution of real-life environmental problems.

There are many factors which contribute to this process, i.e. (1) governance, (2) cultural beliefs and traditions; and (3) socio-economic and political conditions. In all these spheres, behaviour is influenced by key individuals who make an impact on others in one way or another. These include traditional and opinion leaders, politicians, extension workers, teachers, religious leaders, artists, businessmen, journalists and broadcasters. It is thus imperative that we reach these key individuals so that they may become increasingly environmentally literate, and model and promote environmentally-sound behaviour.

2.4 Issues in EE&C in Malawi

During the literature review and discussions with stakeholders, several issues emerged which need to be taken into consideration in the development and implementation of a national strategy for EE&C.

Poverty and rapid population growth are major causes of environmental degradation. They force people to exploit natural resources unsustainably. Thus EE&C will have to give priority to promoting poverty-alleviation measures with positive environmental effects. EE&C should also be the means to provide appropriate, alternatives to on-going activities which are degrading the environment.

The fact that Malawi has an agricultural-based economy, and that over 80% of the population derives its livelihood primarily from small-holder agriculture and obtains energy from fuelwood, presents an enormous challenge for environmental management. It highlights the importance of EE&C in communicating with and educating rural communities.

The integration of EE&C into the formal education system is an effective approach because of its multiplier effect. However, the initial cost of EE&C materials development and teacher training appears to be a constraint. Thus, existing opportunities should be utilised to integrate elements of EE&C into the teacher training materials and course of studies currently being designed. For example, the GoM is currently planning to train roughly up to 26,000 teachers in the next few years to meet the demand created by the introduction of free primary education. There is an opportunity to integrate EE & C into that project. Also, the University of Malawi is currently revising its curricula to integrate EE in its undergraduate and graduate programs.

In addition to the activities cited above, there is a need for regular training programmes for pre-service and in-service teachers to integrate EE&C issues and approaches.

The large pupil-teacher ratio (roughly 102 to 1) in primary schools, and the exams-oriented curricula in both primary and secondary schools are constraints to activity-based learning, which is the recommended approach for effective environmental education. The limited impact from tree planting campaigns and agriculture practicals in schools are attributed to these kinds of constraints. The situation is made worse by the limited availability of teaching and learning resources. Therefore, it becomes imperative that teachers be trained and assisted to use the environment as the medium for teaching and learning.

Urbanization in Malawi is currently proceeding at a rate of between 6.5 to 15%, yet it appears that most of the existing EE&C activities deal with the rural environment. There is thus a need to develop appropriate EE&C strategies and materials for urban and peri-urban populations. There is also a need to explore the impacts on urbanization on the rural environment, and vice versa.

In the absence of tangible alternatives, it is unrealistic to expect that people will forgo opportunities to use natural resources around them to meet their needs. Therefore, messages should propagate alternatives in simplified form and should be convincing of their value. Alternatives may not be as good as the original practices, but by adopting them, some natural resources that are threatened with extinction may be given an opportunity to recover and be used sustainably later.

It is essential to deliver appropriate and relevant messages to target groups. For example, messages discouraging charcoal production are being delivered primarily to the rural people. However, studies by the Forestry Department have shown that, contrary to the belief that charcoal production is an individual, rural enterprise, it is often the case that businessmen in urban centres are operating the charcoal-production syndicates.

The severity of environmental problems is made worse by conditions that 'enhance' the effects of pressure factors. These enabling conditions include market failures, government failures and institutional failures. This is why EE&C should be provided at all levels of society and include opinion-leaders, policy-makers and politicians.

2.5 Strategic principles and approaches to EE&C

Guiding Principles for the EE&C Strategy

Taking into consideration existing constraints highlighted previously, the following principles are applicable to the development and implementation of the National EE&C Strategy :

- a) EE & C will be *made available to the widest possible audience*, pupils and students in formal education and training institutions, individuals in key positions (from decision-makers and opinion leaders to people degrading the environment), out-of-school youth, urban and rural dwellers, staff of governmental and non-governmental institutions and organisations ;
- b) A *participatory approach* will be used for planning and implementing EE&C activities. It will help ensure relevancy, and create a sense of ownership by stakeholders which is essential for sustainability. It will also ensure that the views and rights of women and other groups are taken

into consideration ;

- c) EE&C initiatives will *build on past accomplishments, and benefit from lessons learned* ;
- d) EE&C initiatives will *take advantage of existing opportunities*, e.g. people's special interests, indigenous knowledge and traditional practices. For example, traditional herbalists are interested in conserving and propagating indigenous trees because their occupation is threatened by the current trend of deforestation ;
- e) Research studies will be implemented to *identify the characteristics and needs* of different target audiences in order to select appropriate communication channels and materials ;
- f) EE&C activities will be designed to *make maximum use of existing facilities, resources and infrastructure*. For example, Bunda College, during vacation, was the site of short courses for traditional herbalists. Other colleges, in collaboration with other institutions, could mount short vacation courses to build capacity for EE&C ;
- g) EE&C programmes will be value-driven and designed to assist the *acquisition of knowledge, skills and attitudes* which are necessary to solve actual environmental problems ;
- h) EE&C activities for non-formal EE and formal EE will *complement and supplement one another*, and be jointly planned for maximum impact ;
- i) Constant *positive interaction* with the rural and urban environment will be promoted, and *active community participation* in solving environmental problems by identifying environmentally-friendly alternatives will be the basis for EE&C ;
- j) All EE&C activities will be *designed to be sustainable*, even in the case where assistance is required to initiate them;
- k) *Monitoring and evaluation will be an integral part of EE&C* activities in order to ensure real progress and success.

Specific Approaches

- a) **Traditional Rites and Media** (e.g. ceremonies, folklore) - Use of traditional media is a very effective way to transfer messages specially in rural areas. Traditional ceremonies often have links to environmental issues, and take into account the history of the area and the perceptions and relationships of the people to the environment. Stories may encompass a wide range of topics. The tales or legends told by elders can serve as a means of transferring feelings of respect and appreciation for animals, forests and other wildlife.
- b) **Drama** - In this technique, humor is often used to transmit messages. This technique is popular, inexpensive, and easy to mount. “Gule Wankulu” has been used to depict existing environmental problems and explore possible solutions in a variety of ways. Drama plays on the radio also reach a wide audience.
- c) **Puppet Shows** - These feature puppets, which can be made from all kinds of materials, to

convey simple messages. Because puppet shows combine sound, colour and human figures they provide entertainment and so attract large crowds, specially in rural areas. Questions, discussions and problems and solutions about the environment can be dramatised and production is relatively inexpensive.

d) **Simulations/Role Playing** - This technique is useful for finding out about new issues and gaining other people's perspectives to similar situations. It is useful for finding alternatives and solutions to existing problems.

e) **Exhibits** - A properly managed show of artifacts and pictures, with simple explanations, will enable viewers to learn at their own pace. They allow use of realistic, three-dimensional models that facilitate understanding through use of sight, sound, and touch. This technique can be used over a period of time and thus cover a wider population.

f) **Magazines** - Environmental /comic magazines can present various environmental topics through a variety of methods, e.g. games, cross-word puzzles, activities, stories, cartoons, and so are very effective teaching tools. A special teacher's page can assist the teacher to use the material in existing subjects in the curriculum. In addition, these magazines supplement the limited reading materials for children in places, such as schools, rural libraries and literacy centres.

g) **Newsletters** - This technique has the advantage of being able to provide information about current events that have environmental implications. They can be used to inform readers about ongoing studies and projects in Malawi.

h) **Worksheets** - Individual activity-based worksheets for environmental 'encounters', e.g. explorations, investigations, experiments, projects on different subjects, are useful for ensuring that individuals have productive learning experiences in a variety of settings, such as environmental education centres, parks and reserves, local surroundings, schools.

i) **Bulletin boards** - A bulletin board that is regularly updated with newsletters, posters and leaflets and placed in a strategic area in school, village, training college, and the like, is an attraction and a good source of information for the general population. The bulletin board is cost effective in the sense that it provides access to information for a large audience from a single copy.

j) **Posters** - Posters are cost effective, and opportunities for development and use of posters depicting national priorities exist. MOREA and the Visual Arts Association recently organised a workshop to develop environmental posters. This technique could be used in many different ways and even to produce a "wall news- paper" on specific issues. Posters can convey messages with only drawings and a few words, but the product should be pre-tested before large-scale production and distribution.

k) **Games** - Games are always popular and can bring thought and reflexion on specific issues and ways of implementing actions. Through the production of games related to environmental issues, it is possible to discuss, improve knowledge and better understand the relationship between the use of natural resources and sustainable development.

l) **Flannel board** - This "GRAAP" technique is very effective to visualize environmental issues, and has been successfully-used over the last fifteen years in West Africa. The flannel board helps

the participants to build the statement of their environment (past and present) . By having it visually in front of them, they are able to discover the inter-relationships among the problems and to find solutions by themselves. They can usually identify opportunities and ways of improving their activities in sustainable use of their resources. This technique is also useful as a teaching-approach in schools. It has the advantage of being easy to replicate and update, and it is relatively inexpensive as it can be constructed with local materials.

m) **Radio** - A powerful medium, radio reaches a large number of people with relatively few inputs. Use of different techniques, e.g. quizzes, competitions, talks, music, radio drama, interviews, jingles, folk stories in different types of programs catering for different age and/or interest groups, can be effective in raising awareness.

n) **Slide Presentations** - A good series of high quality slides, arranged in a carefully planned sequence, is an effective teaching medium. Learners' understanding is enhanced by the combination of sound and sight stimuli, yet production cost is relatively low compared to films. Slide presentations afford the presenter the flexibility of adapting the presentation for different levels of audiences by varying the number of slides and the commentary. The slides can also easily be updated as needed.

o) **Videos/Films/Television** - These techniques combine picture, sound, colour and motion, and are thus the closest medium to reality. In a movie, a complete process can be shown in a short time. Environmental issues, development processes, technologies can be captured and shown to the learners at a convenient time and place. They also combine entertainment and education and so have wide appeal. With proper management, they can be used extensively and thus reach many learners. The major constraint is that they are expensive to produce and to show as they require expensive equipment, electricity and trained manpower. Television when it becomes accessible in Malawi, will also be an effective way to make people aware of ongoing issues and activities throughout the country.

p) **Projects** - This teaching/learning technique in the formal education system is excellent for the integration of several subjects and activities around an environmental theme or issue. The best projects are those where the participants actually engage in an activity to protect and/or rehabilitate the environment.

q) **Demonstrations** - Experience shows that demonstration of a proposed activity, located within easy access of the target population, is an effective technique. This technique can be supplemented by involving key people such as chiefs, political leaders, prominent farmers, businessmen, opinion leaders, and others. It takes special effort and skills to identify “ordinary” people of influence and high regard in the society. However numerous success stories with the ICLARM/GTZ Project on fish farming, and the IRALAS project on innovative farmers confirm that role models within the community can be very effective.

r) **Critical Incidents** - Learning about disaster management and finding mitigation measures and solutions is an effective way of learning. For example, solving flood problems through stabilization techniques for preventing collapse of the river banks, is being done successfully in integrated fish farming and river stabilization.

s) **Research** - Simple research, carried out by participants, where they can actually see the impact of an intervention, will go a long way towards helping change behaviour. Research data is useful in helping target groups comprehend the value of a change of practice.

t) **Field Trips** - This technique is a popular one. Participants look forward to a 'trip', and having new experiences. Field trips are widely used to motivate wildlife school clubs in Malawi.

u) **Exchange Visits** - These visits are planned to look at what other people have done. They are useful for sharing successful interventions, and allow the participants to compare their achievements with those of others from other areas. Field trips for farmers are also useful in helping them adopt successful farming practices which they see for themselves and then want to replicate.

v) **Environmental Sites** - Through exploration of the surrounding environment, sites of special environmental significance, e.g. market place, waste dump, eroded land, forest, pond, farm, enterprise, can be identified and used for EE&C.

w) **Participatory Monitoring and Assessment** - Engaging the learners in some aspect of environmental monitoring and/or assessment, e.g., measuring rain, quality of their own water supplies, amount of wood available, is a useful strategy for teaching about interactions and demonstrating man's impact on the natural resource base.

Other effective teaching/learning approaches include the use of simple low-cost visual aids, such as flip charts, observation of nature, nature trails. They can all be easily developed to show environmental processes taking place. One may keep in mind that the simple materials and approaches are often more effective because they use available resources and can take into account local knowledge and existing communication channels.

2.6 CRITERIA FOR SELECTING PRIORITIES IN EE & C

Content

The NEAP identified nine key priority areas in the environment. They are: soil erosion; depletion of fish stocks; water degradation; deforestation; high population growth rate; loss of biodiversity; degradation of human habitats; changing climate; and air pollution. Of these, the three singled out in the ESP for special attention are soil erosion, deforestation and water degradation. The nine issues will be the focus of EE&C initiatives. Through various teaching/learning techniques and communication media, the knowledge, skills and attitudes required by the people of Malawi to conserve and rehabilitate their environment and achieve sustainable development, will be acquired.

Within the scope of the national priorities, however, primary consideration will be given to local priorities and interests. Resources and opportunities for effective EE&C will differ from place to place. For example, it is natural to expect that people making a living on fishing in Lake Malawi will be more interested in EE&C activities dealing with fish than in those concerning air pollution.

Type of Action

Initially, a medium term 3-year plan is proposed. Since it is not possible to carry out all EE&C interventions suggested by stakeholders, several criteria can be used as a basis for selecting the strategies in the initial plan.

➤ **Ongoing Initiatives**

Activities to integrate EE&C into existing programmes, e.g. school programmes, and which use existing infrastructure, such as extension services, make the best use of resources, strengthen institutions, and build capacity.

➤ **Cost Effectiveness**

In the present climate of resource constraints, there is the need to ensure not only that the EE&C activities carried out are cost effective, but that they are low cost. If this is the case, there is a higher likelihood that the activities will be able to be replicated and sustained.

➤ **Wide Outreach**

Since one of the main objectives of the National EE&C Strategy is to raise public environmental awareness and increase public participation, activities which have a wide outreach into the community, such as the use of radio, are more desirable than others which reach only a few people at a time.

➤ **Multiplier Effect**

Strategies with a multiplier or cascade effect, such as training of trainers programs or in-service programmes for teachers, ultimately reach a wide population and are thus cost effective and make good use of available resources.

➤ **Sustainability**

Activities which respond to and support local initiatives, e.g. joint community/school projects, projects by women's groups and other community-based organisations have a greater likelihood of success because they are valued by the stakeholders.

➤ **Integration**

Many environmental processes are linked to each other and a productive enterprise with an integrated approach would have a significant positive impact on the environment, as well as improve the livelihood of the people.

➤ **Community Participation**

Activities which have a high level of community participation should be given priority, as it is imperative that self-help initiatives achieve a large measure of success and result in gains for the largest number of people in the community.

3. EE&C OBJECTIVES STRATEGIES AND ACTIVITIES

Through a process of consultation and consensus-building, the objectives, strategies, and activities for the National Environmental Education and Communication Strategy were determined, taking into consideration both formal and non-formal sectors. At the strategy development workshop with EE&C stakeholders, both the objectives and strategies were prioritized in relation to national priorities. In this section of the document, the objectives are listed in order of priority (with objectives 2 & 3 being considered equally important) Under each objective, the strategies to achieve the objective are also listed according to highest priority. The activities were not prioritised. It was decided to let the various implementors choose those which they feel they can implement, according to their own programme priorities and resources. It is further recommended that a monitoring and evaluation component be built into each EE&C activity.

It should be noted that the prioritisation exercise was carried out by the EE&C stakeholders present at the workshop, and although every effort was made to ensure that a representative cross-section of all stakeholders participate in this exercise (as they did in the development of the document) the private sector and NGOs were not well-represented.

OBJECTIVE 1 INCREASE PUBLIC ENVIRONMENTAL AWARENESS AND PARTICIPATION

Strategies

- 1.1 *Use all available channels of communication to inform the public about environmental issues and problems and target specific levels and sectors of the Malawi community*

Activities:

- systematic use of newspapers;
- special newspaper supplements (for public and schools) ;
- national competitions and campaigns ;
- environment awards scheme ;
- environmental news reporting;
- environmental radio programs;
- environmental news in existing publications ;
- articles in “Bomalathu”;
- research on characteristics and needs of target audiences;
- evaluate existing environmental radio programmes ;
- video production for outreach ;
- traditional folk media ;
- music bands and choirs (local & others) ;
- electronic media (internet) ;
- commercial distribution channels ;
- T-shirts, posters, etc...

OBJECTIVE 2 INTEGRATE EE&C INTO THE FORMAL EDUCATION SYSTEM

Strategies:**2.1** *Integrate EE&C into existing curricula***Activities:**

- integrate EE into primary and secondary school curriculum ;
- design special activity modules to complement secondary school curriculum ;
- integrate EE into teacher-training programs at university and other colleges ;

2.2 *Strengthen capacity for formal EE&C***Activities:**

- systematic in-service training of teachers;
- research activities at University level;
- EE&C for curriculum developers ;
- EE&C for methods advisors and other education officers

2.3 *Increase environmental awareness in schools and other educational institutions***Activities:**

- include teachers in extension programs;
- include EE displays and materials at education events;
- establish environmental education centers;
- produce low-cost easy-to-read materials for primary schools

2.4 *Develop close school-community links***Activities:**

- promote participation of students and teachers in community development activities;
- encourage use of human resources in the community to enrich school experiences.

2.5 *Increase individual participation in environmental protection and rehabilitation***Activities:**

- establishment of conservation clubs;
- workshops for conservation club leaders/officers;

OBJECTIVE 3

BUILD CAPACITY FOR EE&C

Strategies:

3.1 *Support key agencies/organisations that provide EE&C services*

Activities:

- Strengthen existing EE&C Centres (develop, equip, maintain);
- EE&C training for MOREA staff;
- EE&C training for focal points;

3.2 *Integrate EE&C into extension services*

Activities:

- EE&C in-service training to GoM extension staff, i.e. Agriculture, Health, Forestry, Fisheries, Wildlife, Community Development. (The training should include cost-benefit analysis for decision-making, and other environmental economic strategies);
- Support ongoing activities by extension workers and improve EE integration (by training and networking with stakeholders).

3.3 *Develop mechanisms for participatory EE&C*

Activities:

- EE&C training for NGO staff;
- Increase collaboration and networking in EE&C among stakeholders;
- Produce and/or support existing newsletters for EE&C stakeholders (CURE, WSM and others)

OBJECTIVE 4

INCREASE QUALITY AND IMPROVE QUANTITY OF EE&C TEACHING/LEARNING MATERIALS

Strategies:

4.1 *Build additional capacity for EE&C materials production*

Activities:

- Organize writers' workshops for EE&C materials

4.2 *Additional resources to improve quality of existing materials*

Activities:

- Evaluation of EE newsletters eg "Nantchengwa" ;
- Identify needs of different levels of students ;
- Design newsletters to be more target-specific (i.e. higher primary and lower secondary);

4.3 *Production of new materials***Activities:**

- Provide an environmental magazine (with a teachers' page) for lower primary students;
- Produce a primary teachers' resource book, help them integrate EE into existing subjects in schools, use the local environment in teaching and carrying out EE&C projects within their school and community ;
- Produce booklets on environmental topics for adult literacy for distribution through the National Library Services and other channels.

4.4 *Introduce other relevant EE&C materials from the region***Activities:**

- Investigate EE & C materials being produced in the region for possible collaboration in materials-development

OBJECTIVE 5 PROMOTE EE&C FOR KEY PEOPLE**Strategies:****5.1 *Develop and implement relevant training in EE&C for key people in different strata of society*****Activities:**

- special short workshops and/or retreats for high level government officers. (The training should include cost-benefit analysis for decision-making, and other environmental economic strategies) ;
- workshop on environmental management guidelines for planning officers ;
- EE&C training for local, area, district and regional leaders ;
- EE&C training for people in the mass media ;
- EE&C training for religious leaders ;
- EE&C training for members of parliament ;

5.2 *Target specific groups, such as women and out-of-school youth*

Activities:

- EE&C training workshops for women ;
- EE&C training workshops for youth;
- EE&C training on activities using indigenous knowledge (such as indigenous tree propagation).

OBJECTIVE 6 **DECENTRALIZE EE&C ACTIVITIES**

Strategies:

6.1 *Identify mechanisms for facilitating and coordinating EE&C at national level.*

Activities:

- Support the establishment of an EE&C Steering Group ;
- Facilitate the establishment of two task forces; one for formal EE&C and the other for non-formal EE&C ;
- Linking activities with the local groups ;

6.2 *Identify and utilize existing infrastructure in the districts and communities*

- Utilize existing District Development Committees in promoting EE&C ;
- Identify and utilise structures for EE&C at community level, (CBOs, e.g. Village Development Committees, womens' groups, farmers' groups, traditional leaders) to promote and coordinate EE&C ;
- Workshop for District Development Committees (DDCs) and District Environmental Committees (subcommittees of DDCs);

4.0 IMPLEMENTATION OF THE ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY

The Ministry of Research and Environmental Affairs (MOREA) was created in September 1994 with the mandate to coordinate environmental enhancement and protection in Malawi. To enable it to discharge its functions, MOREA needs to have vertical and horizontal linkages with relevant line ministries, institutions, as well as with non-governmental organisations and with groups and individuals at community level. As a mechanism for establishing some of these important links, MOREA has established a country-wide network of environmental focal points from numerous relevant government ministries, non-governmental organisations, district staff, private sector and donors. Following are some suggested mechanisms for strengthening the existing infrastructure.

4.1 Local and District Level Coordination

At local level, appropriate groups (local committees) should be identified from existing community- based organisations. CBOs, e.g. Village Development Committees, women or farmers groups, or those specifically established to be responsible for environmental management and EE&C. These committees would ensure that environment would be taken into account when planning and implementing local development activities. In addition, these committees would mobilise community resources towards the identification, formulation and implementation of solutions to actual local environmental problems, and coordinate activities, including EE&C, at that level. Support for EE&C through community based-organisations is currently being provided through extension services and through NGOs. This would continue, and be strengthened by EE&C training to extension and NGO field staff.

The local committees should link with their respective Area Development Committees and District Development Committees (or their constituted District Committees for the Environment) who will, in turn, be responsible for integrating environmental considerations into development activities, and catalyzing EE&C at District level. These district structures through a Regional Committee, have links to line ministries.

4.2 National Level Coordinating Mechanism for Implementation of the EE&C Strategy

The stakeholders in the development of this Strategy have recommended that an EE&C Steering Committee, with representation from a cross-section of the stakeholders, be constituted with the specific responsibility of steering the implementation of the National EE&C Strategy. It will, in turn, appoint two sub-committees to assist it ; one for coordinating formal EE&C, and the other for coordinating non-formal EE&C.

This structure is in line with the current practice of MOREA of establishing sector-specific steering committees, e.g. Climate Change, to assist with the coordination in specific areas. These committees fall under the umbrella of the Technical Committee for the Environment which, in turn, reports to the National Council or Environment at the highest level.

4.2.1 The EE&C Steering Committee

It is suggested that representatives of institutions and organisations coming from different sectors such as government, non-government and private, should be included in the Steering Group. The secretariat for this committee could be MOREA.

Composition of the steering committee

The Committee will initially have the following composition:

MOREA (Secretariat)
CURE
Chancellor College
Malawi Institute of Education
Wildlife Society
Malawi Broadcasting Corporation
Theological Board
Ministry of Health and Population
Ministry of Natural Resources

The terms of reference are as follows:

- To promote education, training, research and communication activities in Environmental Education ;
- To provide guidance for coordination and implementation of the National Environmental Education and Communication Strategy and Workplan ;
- To ensure systematic planning, coordination and monitoring of EE&C in Malawi ;
- To monitor and assess the progress and impact of EE&C initiatives;
- To support the commemoration of special environment days, e.g. World Environment Day, Tree Planting Day, Earth Day, and other related events ;

4.3 Sub-Committees

The institutions and organisations in the following sub-committees could be represented by the appointed environmental focal points, if appropriate. Also, each sub-committee will have representation from government, non-governmental organisations and the private sector.

4.3.1 Non-Formal EE&C Sub-Committee

This sub-committee, to be facilitated by CURE, will have the major task of catalyzing, facilitating and coordinating the implementation of the EE&C Strategy through the extension services and the NGO community.

Composition of the Non-Formal EE&C Sub-Committee

The initial composition of this sub-committee is suggested as follows:

CURE (Secretariat)
MOREA
Malawi Institute of Journalism
Wildlife Society
MOWCACS (Community Development)
Agriculture Communications Branch
Department of Forestry
National Library Services
Herbalist Association
Visual Arts Association
Christian Service Committee
Malawi Institute of Education
Malawi Broadcasting Corporation
Department of National Parks and Wildlife

The terms of reference are as follows :

- To guide and facilitate the implementation of the non-formal EE&C components of the National Environmental Education Strategy and Workplan ;
- To facilitate the development of systematic time-phased action plans for non-formal EE&C;
- To coordinate non-formal EE&C activities and projects to raise the environmental awareness and participation of the general public ;
- To facilitate the integration of EE&C into existing extension/outreach services of governmental and non-governmental agencies ;

- To facilitate the development and use of EE&C centres for the collection, storage and distribution of EE&C resources ;
- To facilitate the monitoring and assessment of non-formal EE&C activities ;
- To compile and disseminate information on non-formal EE&C activities ;

4.3.2 Formal Environmental Education Sub-Committee

Formal environmental education rests largely within the government, through various departments and institutions. It is important to have a sub-committee to coordinate the different elements in order to ensure a comprehensive, holistic approach which makes the best use of existing resources and initiatives.

Composition of the Formal EE&C Sub-Committee

The initial composition of the Formal EE&C Sub-Committee is recommended as follows:

Malawi Institute of Education (Secretariat)
 Chancellor College
 CURE
 MOREA
 Bunda College
 Natural Resources College
 Ministry of Education
 Malawi College of Forestry
 Theological Board
 Moslem Association
 Malawi College of Distance Education
 Pre-school Groups Association
 Domasi College of Education
 Ministry of Health

The terms of reference are as follows:

- To guide and promote the implementation of the formal environmental education components of the National Environmental Education Strategy and Workplan ;
- To facilitate systematic planning and coordination of formal environmental education activities;
- To promote, review and integrate EE&C into curricula at primary, secondary, and tertiary levels ;
- To review existing curricula, and integrate EE&C into pre-service and in-service teacher training programs ;

- To facilitate the review of existing environmental education resources (e.g. textbooks, materials, study sites) available in educational institutions and in libraries and promote development and dissemination of new ones, and ;
- To promote research on the impact and quality of formal EE&C activities.

Following is a work plan for initial implementation of the National EE&C Strategy which was developed collaboratively with stakeholders. The Objectives have been listed in order of priority . The Strategies listed under each Objective have also been prioritized. Under each Strategy, a wide range of activities have been proposed to enable implementors to choose those which best fit their own capacity and resources for implementation.

5. IMPLEMENTATION WORK PLAN

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
IMPLEMENTATION WORK PLAN**

OBJECTIVE 1: INCREASE PUBLIC ENVIRONMENTAL AWARENESS AND PARTICIPATION							
Strategies	Activities	Year 1	Year 2	Year 3	Main Implementor	Estimated Cost	Possible Donors
<p>1.1 Use all available channels of communication</p> <p>- To Inform the public about environmental issues and problems</p> <p>- Target all levels and alls sectors of the Malawi community</p>	<p>. Systematic use of newspapers</p> <p>. National competitions and campaigns ; environment awards scheme,</p> <p>. Commemorative activities on special environment days</p> <p>. Research characteristics and needs of target audiences</p> <p>. Radio &TV programmes : systematic coverage in news programmes, special environmental theme programmes, integration of environment themes into radio drama and other programmes</p> <p>. Integration of environmental issues into existing publications</p> <p>. Carry out an evaluation of existing EE&C radio programmes</p> <p>. TV &Video production and effecient distribution of Malawi environmental issues</p> <p>. Innovative use of traditional folk media to reach communities</p> <p>. Encourage use of local music bands, choirs, drama to do EE&C</p> <p>. Use traditional dances & stories which have environmental significance such as “Gule Wamkulu”</p> <p>. Use Electronic media, ie SDNP</p>				<p>All</p> <p>CURE</p> <p>MOE</p> <p>MOREA</p> <p>MBC</p> <p>DNPW</p> <p>FD/GTZ</p> <p>MBC</p> <p>WSM</p> <p>CURE</p> <p>MOI</p> <p>MBC</p> <p>WSM/CURE</p> <p>NGOs</p> <p>NGOs</p> <p>GoM/NGOs</p>		<p>All</p> <p>UNDP</p> <p>UNICEF</p> <p>WB</p> <p>All</p> <p>All</p> <p>UNDP</p> <p>UNDP & Others</p> <p>UNDP</p>
<p>1.2 Increase individual participation in environmental protection and rehabilitation.</p>	<p>. Establishment of conservation clubs</p> <p>. Workshop for conservation club leaders/officers</p>				<p>WSM</p> <p>MOE</p> <p>NGOs</p> <p>CBOs</p>		<p>UNDP</p> <p>All</p>

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
IMPLEMENTATION WORK PLAN**

OBJECTIVE 2 : INTEGRATE EE & C INTO THE FORMAL EDUCATION SYSTEM							
Strategies	Activities	Year 1	Year 2	Year 3	Main Implementor	Estimated Cost	Possible Donors
2.1 Integrate EE & C into existing curricula	<ul style="list-style-type: none"> . Integrate EE into primary and secondary school curriculum . Design special activity modules to complement secondary school curriculum . Integrate EE into teacher-training programs and university and vocational institutions. 				MIE/SHS MIE DCE University University NRC MIE/KCN		CIDA ODA WB
2.2 Strengthen and intensify capacity for formal EE&C	<ul style="list-style-type: none"> . Systematic inservice EE&C training of teachers . EE&C for curriculum developers . EE&C for methods advisors & other education officers 				MIE MOE /MIE University MIE /MOE		ODA WB
2.3 Increase environmental awareness in schools and educational institutions	<ul style="list-style-type: none"> . Include EE displays and materials at education vents . Establish environmental education centers . Produce low-cost, easy to read materials for primary schools. 				MOE DNPW NGOs		EU WWF USAID

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
IMPLEMENTATION WORK PLAN**

OBJECTIVE 3 : BUILD CAPACITY FOR EE&C							
Strategies	Activities	Year 1	Year 2	Year 3	Main Implementor	Estimated Cost	Possible Donors
3.1 Support key agencies/ institutions that provide EE&C services	. Develop and strengthen existing EE&C Centres (manpower, equip, maintain)				CURE		USAID
	. EE&C training for NGO staff . EE&C training to MOREA staff and line Ministries.				NGOs Ministries		USAID UNDP
3.2 Integrate EE into literacy programs and extension services	EE&C training to GoM staff in extension, i.e. Agriculture, Health, Forestry, Fisheries, Wildlife, Community Development.				BUNDA University NRC		UNDP / Others
	. Provide technical assistance for literacy materials				MWCCASW MWCCASW		
	. Workshop/s for writers of literacy materials				University		UNDP
	. EE&C training of trainers of CDAs.. In service						
3.3 Develop mechanisms for more participatory EE&C	. Increase collaboration and networking in EE&C among stakeholders				MOREA WSM		USAID
	. Integrate environment into existing newsletter				CURE		

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
IMPLEMENTATION WORK PLAN**

OBJECTIVE 4 : INCREASE QUALITY AND IMPROVE QUANTITY OF EE&C TEACHING AND LEARNING MATERIALS							
Strategies	Activities	Year 1	Year 2	Year 3	Main Implementor	Estimated Cost	Possible Donors
4.1 Build additional capacity for EE&C materials production	. Organize writers' workshop for EE&C materials				MIJ Chancellor College		EU
4.2 Provisional of additional resources to improve quality of existing materials	. Evaluation of existing EE&C's newsletter such as "Nantchengwa" and other educational materials . Research needs of different levels of students . Produce more copies per school and design "Nantchengwa" more target specific (i.e. higher primary & lower secondary)				WSM MIE University		Press Corp. Private sector CIDA
4.3 Production of new materials	. Provide an environmental magazine (with a teacher's page) for lower primary students . Provide a primary teachers' resource book to help teachers integrate EE into existing subjects in schools, eg mathematics, language, science, agriculture, using local environment and carrying out EE&C projects in their school and community. . Produce booklets on environmental topics for adults literacy groups for distribution through the National Library Services and other channels				NGOs MIE MWCCAWS CODE NLS ACB		USAID UNESCO UNDP UNICEF
4.4 Introduce other relevant materials	. Acquire and distribute "Action magazine" for schools . Collaborate in SADC material development activities				CURE WSM		Rockefeller Foundation USAID

MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
IMPLEMENTATION WORK PLAN

OBJECTIVE 5 : PROMOTE EE&C FOR KEY PEOPLE							
Strategies	Activities	Year 1	Year 2	Year 3	Main Implementor	Estimated Cost	Possible Donors
5.1 Develop and implement relevant training in EE&C for key people in different strata of society	<ul style="list-style-type: none"> . Special short workshops and/or retreats for high level government officers. . EE for private sector (eg industry) . Workshop on environmental management guidelines for planning officers . EE&C for chiefs and councillors . EE & C training for local, area, district and regional leaders (political and administration) . EE & C training for people in the mass media . EE&C for municipal staff . EE & C training for religious leaders . EE&C training for members of the National Council on the Environment . EE & C training for members of parliament 				NBS/MIM Polytechnic Industry CDTC NGOs Line Ministry CDTC MOLGRD NGOs NGOs MIJ NGOs NGOs MOREA NGOs		WB/ UNDP Industry EU UNDP UNDP EU EU WB UNDP WB & UNDP
5.2 Target special groups, e.g. women and, youth out of schools and others	<ul style="list-style-type: none"> . EE & C training workshops for women . EE&C Training for technicians, craftsmen, and other groups . EE & C training workshops for youth . EE&C EE&C training on activities using indigenous knowledge. 				MWCCASW MIRTDC University MOYSC DNPW		EU UNICEF EU IUCN

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
IMPLEMENTATION WORK PLAN**

OBJECTIVE 6 : DECENTRALIZE EE&C ACTIVITIES							
Strategies	Activities	Year 1	Year 2	Year 3	Main Implementor	Estimated Cost	Possible Donors
6.1 Identify mechanisms for facilitate and coordinating EE&C at national level	<ul style="list-style-type: none"> . Establish an Environmental Education & Communication Steering Group . Establish two national sub-committees ; one for formal EE&C and the other for non formal EE&C. . Link activities with local groups 				MOREA CURE/MIE Line Ministries NGOs		
6.2 Identify and utilize existing infrastructure in the district and communities	<ul style="list-style-type: none"> . Promote formation of District Committees for the Environment . Identify and utilise structures for EE&C at community level. 				MOLGRD NGO's		UNDP UNDP USAID

6. MONITORING AND EVALUATION

During the course of the development of the EE&C Strategy and Workplan, it became evident that one of the greatest limitations in the selection of future EE&C programs and activities, is that monitoring and evaluation of ongoing EE&C activities has generally been lacking. Although many EE&C initiatives are taking place, there is little, if any, knowledge about the impact they have made or are making on their learners. There are valid reasons for this.

In the case of many NGOs, funds for programme implementation are limited and therefore evaluation is not carried out. In the case of many of the extension services, transportation is a problem and field visits are limited primarily to delivery of training and for other special purposes. Follow-up to assess impact is difficult, and sometimes impossible, because of the problem of differentiation causal relationships.

In the case of projects and activities within the formal education system, only those aspects which are covered in examinations are evaluated. Since environment is being integrated into existing subjects, it has not been evaluated per se.

Without valid feedback, it is not possible to make wise decisions about how best to allocate limited resources for EE&C, and about how best to strengthen ongoing initiatives. It is essential, therefore, that elements of simple monitoring and evaluation should be built into future EE&C activities at the time of their design so that the cost element is taken into consideration.

One of the most important tasks of the Environmental Education Steering Committee will be to ensure that monitoring and evaluation of EE&C initiatives is taking place.

6.1 Monitoring and Evaluation of Individual Projects and Activities

Monitoring should be a continuous, regular feature of each activity, and the results used to make needed changes and adjustments to ensure that progress towards achievement of objectives is being made. Simple evaluations should be conducted at appropriate stages of an initiative. If possible, evaluations should be based on impact assessment, for it is real, lasting change that is being sought.

Participatory assessment procedures, involving the learners, are most useful, and help to bring about better understanding by all those involved in the project or initiative. For this to be successful, clear objectives and outputs for each activity should be specified and clearly understood by the participants, and measurable indicators of progress towards their achievement, identified and agreed upon by all concerned. In the development of this National EE & C Strategy and Workplan, objectives, activities, outputs, and the kinds of possible indicators of progress towards achievement were identified. However, it is only when time-phased plans are made, that measurable objectives and indicators can be specified.

It is suggested that the three-year workplan for the implementation of the Strategy be used as a framework for action, but that shorter time-phased action plans be developed with clearly defined time-frames, specified inputs, specific objectives and activities, each with measurable indicators to be used to monitor and evaluate its progress.

6.2 Monitoring and Evaluation of the Implementation Plan for the EE&C Strategy

In addition to promoting monitoring and evaluation of specific projects and activities, the Environmental Education and Communication Steering Committee will monitor and evaluate its own progress in implementing the National Environmental Education and Communication Workplan.

The implementation of the EE&C Strategy will be undertaken with different processes taking place simultaneously and interacting with, and making inputs into others. These processes include development of policies which will facilitate EE&C, capacity-building at different levels for EE&C, institutional development, and implementation of certain programmes and projects. As such, indicators for each of these processes should be identified and used to keep track of the implementation of the plan, to modify it when necessary, and to facilitate the kind of evaluations required to implement effective EE&C, and maintain political and public support.

Below are some examples of these indicators:

Policy Development Indicators:

- Adoption of the Malawi Environmental Policy (specifically Section 4.5, Environmental Education and Public Awareness) ;
- Development of a policy at the University of Malawi to ensure that every university of student achieves a standard of environmental literacy ; and,
- Development and implementation of an Environmental Education Policy by the Ministry of Education at all levels.

Capacity Building Indicators :

- Regular environmental management retreats for Principal Secretaries;
- Scheduled short courses on EE&C for NGO field officers;
- Systematic EE&C training for extension workers ;
- Increase in the number of EE&C resource centres ,

Institutional Indicators:

- Appointment of environmental focal points in each Ministry;
- Appointment of a regular environmental news reporter in each of the daily newspapers;
- Establishment of a formal EE&C Task Force to catalyze the integration of EE&C into the education system

Project/Programme Indicators:

- Project/Programme implemented on schedule;
- Regular reports of EE&C activities from Strategy/Workplan stakeholders;
- Degree of participation by stakeholders (number of activities, networking, etc.)
- Increased public awareness (as measured through surveys or other means)

In general, a simple but meaningful monitoring and evaluation system is required to ensure that the implementation of the national EE&C Strategy is progressing towards its goal, is proceeding as scheduled, is making the best use of resources, and is improved and modified to keep pace with other developments.

Following are objectives, strategies and, activities, with suggested types of indicators (which should be stated in measurable terms) for consideration during the development of the first action plan.

6.3 PERFORMANCE INDICATORS

MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
PERFORMANCE INDICATORS

OBJECTIVE 1: INCREASE PUBLIC ENVIRONMENTAL AWARENESS AND PARTICIPATION		
Strategies	Activities	Performance Indicators
<p>1.1 Use all available channels of communication</p> <p>- To inform the public about environmental issues and problems</p> <p>- Target all levels and all sectors of the Malawi community</p>	<ul style="list-style-type: none"> . Systematic use of newspapers; . National competitions and campaigns ; . Environment awards scheme; . Commemorative activities on special environment days; . Research characteristics and needs of target audiences; . Radio &TV programmes : systematic coverage in news programmes, special environmental theme programmes, integration of environment themes into radio drama and other programmes; . Integration of environmental issues into existing publications; . Carry out an evaluation of existing EE&C radio programmes; . TV &Video production and efficient distribution of Malawi environmental issues; . Innovative use of traditional folk media to reach communities; . Encourage use of local music bands, choirs, drama for EE&C; . Use traditional dances & stories which have environmental significance such as “Gule Wamkulu”. 	<ul style="list-style-type: none"> . Number and articles written/week/month/year +letters received . Participation in the competitions (No of entries & issues . Numbers of participants (schools, individuals) . Days commemorated and nature of activities . Target-specific programmes . Number and time for discussing specific issues . Number of letters or calls for information . Number of publications featuring environment and articles on specific EE&C issues. . Coverage of the survey, plus survey results . Number of videos produced on Malawi environment issues and their accessibility . Increasing use of each of these and variety of messages being disseminated . Survey of audience’s receptivity.
<p>1.2 Increase individual participation in environmental protection and rehabilitation</p>	<ul style="list-style-type: none"> . Establish conservation clubs . Workshop for conservation club leaders/officers 	<ul style="list-style-type: none"> . Number of new conservation clubs and increased number of initiatives . Activities and specific programme for club leaders

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
PERFORMANCE INDICATOR**

OBJECTIVE 2 : INTEGRATE EE & C INTO THE FORMAL EDUCATION SYSTEM		
Strategies	Activities	Performance Indicators
2.1 Integrate EE & C into existing curricula	<ul style="list-style-type: none"> . Integrate EE into primary and secondary school curriculum; . Design special activity modules to complement secondary school curriculum; . Integrate EE into teacher-training programmes and university and vocational institutions. 	<ul style="list-style-type: none"> . Environmental modules in curriculum subjects related to environmental issues . Modules produced for secondary school curriculum and uses . Training courses and activities for TT programs
2.2 Strengthen and increase capacity for formal EE&C	<ul style="list-style-type: none"> . Systematic inservice EE&C training of teachers; . EE&C for curriculum developers; . EE&C for methods advisors & other education officers. 	<ul style="list-style-type: none"> . Specific courses on EE&C for teacher training, plus results of evaluation . Additional curriculum materials . Methods advisors and officers active in EE&C
2.3 Increase environmental awareness in schools and educational institutions	<ul style="list-style-type: none"> . Include EE displays and materials at education events; . Establish environmental education centers. . Produce low cost, easy to read materials for primary schools 	<ul style="list-style-type: none"> . Displays produced and where (how many are used and for which purpose) . Number of centres and number of visitors . New materials for primary students . Impact assessment of the materials

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
PERFORMANCE INDICATORS**

OBJECTIVE 3 : BUILD CAPACITY FOR EE&C		
Strategies	Activities	Performance Indicators
3.1 Support key agencies/ institutions that provide EE&C services	<ul style="list-style-type: none"> . Develop and strengthen existing EE&C Centres (manpower, equip, maintain); . EE&C training for NGO staff; . EE&C training to MOREA staff 	<ul style="list-style-type: none"> . Books and resources material available and uses of material by others organizations and NGOs . Number of well-equipped centres, reports of activities . Reports of Training activities, frequency of training . Number of staff trained and reports of training and new EE&C activities
3.2 Integrate EE into literacy programmes and extension services	<ul style="list-style-type: none"> EE&C training to GoM staff in extension, i.e. Agriculture, Health, Forestry, Fisheries, Wildlife, Community Development; . Provide technical assistance for literacy materials; . Workshop/s for writers of literacy materials; . EE&C in-service training of trainers of CDAs 	<ul style="list-style-type: none"> . Reports of training for extension workers and reports of field activities . Workshop on production of simple literacy written material . Number of booklets produced for neo-literates and number of library materials on environmental topics . Programme for systematic training of CDAs. . Evidence of new EE&C initiatives mobilized by CDAs
3.3 Develop mechanisms for participatory EE&C	<ul style="list-style-type: none"> . Increase collaboration and networking in EE&C among stakeholders; . Integrate environment into existing newsletters. 	<ul style="list-style-type: none"> . Reports of collaborative activities, steering groups on specific initiatives . Number of articles on environmental issues and letters from readers

**MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
IMPLEMENTATION WORK PLAN**

OBJECTIVE 4 : INCREASE QUANTITY AND QUALITY OF EE&C TEACHING AND LEARNING MATERIALS		
Strategies	Activities	Performance Indicators
4.1 Build additional capacity for EE&C materials production	. Conduct writers' workshops for EE&C materials.	. Increased EE&C materials produced by writers . More writers on environmental issues
4.2 Provide additional resources to improve quality of existing materials	. Evaluation of existing EE&C's newsletters, i.e. "Nantchengwa" and other educational materials; . Research needs of different levels of students; . Produce more copies per school and design "Nantchengwa" more target specific (i.e. higher primary & lower secondary).	. Improvement and changes in the newsletter related to specific groups . Survey results . Specific materials produced for different levels of students . New design and special issues of Nantchengwa . Increased number of EE&C materials getting to schools
4.3 Produce new materials	. Provide an environmental magazine (with a teacher's page) for lower primary students; . Provide a primary teachers' resource book to help teachers integrate EE into existing subjects in schools, eg mathematics, language, science, agriculture, using local environment and carrying out EE&C projects in their school and community; . Produce booklets on environmental topics for adult literacy groups for distribution through the National Library Services, ACB, and other channels.	. New magazine or bulletin for lower primary students, teacher's page . Teacher resource book (factsheets, activities, games, etc..) . Number of booklets produced for neo-literates and number of library materials on environmental topics
4.4 Introduce other relevant materials	. Acquire and distribute "Action" magazine for schools; . Collaborate in SADC EE&C material development activities.	. Number of subscribers to "Action" . Number and type of material produced and used for EE&C

MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
PERFORMANCE INDICATORS

OBJECTIVE 5 : PROMOTE EE&C FOR KEY PEOPLE		
Strategies	Activities	Performance Indicators
5.1 Develop and implement relevant training in EE&C for key people in different strata and sectors of society	<ul style="list-style-type: none"> . Special short workshops and/or retreats for high level government officers; . EE&C for private sector (eg industry); . Workshops on environmental management guidelines for planning officers ; . EE&C for chiefs and councillors; . EE & C training for local, area, district and regional leaders (political and administrative); . EE & C training for people in the mass media; . EE&C for municipal staff; . EE & C training for religious leaders; . EE&C training for members of the National Council on the Environment . EE & C training for members of parliament. 	<ul style="list-style-type: none"> . Number of workshops for high level government officers . Number of workshops for industry . Projects and plans including environmental considerations . Number of workshop and material produced for chiefs and councillors . Reports of training and training materials and articles for specific target groups . Reports and training materials and articles produced by the media . Evidence of initiatives in environmental management at town-council level . Reports of training and number of church related environmental activities . Evidence of increased interest in EE&C. . News articles of members of parliament promoting environmental considerations
5.2 Target special groups, e.g. women and, youth out of schools and others	<ul style="list-style-type: none"> . EE & C training workshops for women; . EE&C Training for technicians, craftsmen, and other special groups . EE & C training workshops for youth; . Training on EE&C activities using indigenous knowledge. 	<ul style="list-style-type: none"> . Reports of training and new women-led environmental initiatives . Scheduled training for groups that impact strongly on the environment . List of environmental activities carried out by youth and other groups in the community. . Evidence of activities and projects using indigenous knowledge and/or practices

MALAWI ENVIRONMENTAL EDUCATION AND COMMUNICATION STRATEGY
PERFORMANCE INDICATORS

OBJECTIVE 6 : DECENTRALIZE EE&C ACTIVITIES		
Strategies	Activities	Performance Indicators
6.1 Facilitate and coordinate EE&C at national level	<ul style="list-style-type: none"> . Establish an Environmental Education and Communication Steering Committee; . Establish two national task forces; one for formal EE&C and the other for non formal EE&C. 	<ul style="list-style-type: none"> . Steering Committee with time-phased workplan . Task forces active at all levels . Newsletter for focal points
6.2 Identify and utilize existing infrastructure in the district and communities	<ul style="list-style-type: none"> . Promote formation of District Committees for the Environment by District Development Committees; . Identify and utilise structures for EE&C at community level. 	<ul style="list-style-type: none"> . Committees promoting EE at District level . Active community structures implementing EE&C initiatives . Traditional leaders advocating for their resources

REFERENCES

1. Barlett P., Domatob A, Twea P.1995. Information, Education, and Communication (IEC) Strategy for the Support To Aids and Family Health (STAFH) Project. USAID
2. British Council, 1995. Establishment of a Regional Wildlife Conservation Education Unit for the Southern African Development Community. Report on a SADC Regional Workshop, Blantyre, 18-22 September 1995.
3. British Development Division in Central Africa (BDDCA), 1994. Malawi Primary Community Schools Project, 1995-2002.
4. Cammaer, R. 1996. Environmental Awareness Workshop for the Media and Artists. Mangochi 18-19 December 1995. Ministry of Research & Environmental Affairs.
5. Chiotha S.S., Banda M., Chimphamba J.B., Materechera S.A., Lowoke J. 19. Innovative Farming and Sustainable Production. “Innovative Rural Action Learning Area (IRALAS)” Case Studies from Malawi. University of Malawi, SADC-Environmental and Land Management Sector Unit.
6. Chiotha, S.S. ; Dzimbiri, L. & Kalowekamo, F.M. 1995. Training Needs Assesment for Institutional and Human Resource Development. Ministry of Research & Environmental Affairs. ESP/CU.
7. CURE, 1994. Directory of Non-Governmental Organisations involved in Natural Resource Management Activities. CURE, CONGOMA.
8. Coordination Unit for the Rehabilitation of the Environment (CURE), 1995. An Assessment of the Capacity of the NGO Community in Malawi to utilise the Global Environment Facility Small Grants Programme.
9. Department of Forestry, 1990. Action Plan on Deforestation. October 1990. Ministry of Forestry and Natural Resources.
10. Department of Research and Environmental Affairs, 1991. National Policy on Science and Technology, April 1991. Department of Research and Environmental Affairs, Office of the President and Cabinet.
11. Forestry Department, UNDP, FAO, 1995. Malawi National Community Forestry Programme. Government of Malawi.
12. Machira, S. 1994. “Education and Public Information” NEAP Task Force No 17 Report. Ministry of Research & Environmental Affairs.
13. Makawa, E.M., 1995. Report of the National Workshop on the Environmental Management Bill. Ministry of Research & Environmental Affairs.

14. Malawi Institute of Education, 1995. Report of the National Workshop for Key Educational Personnel in Environmental Education for Sustainable Development in Africa. Mangochi, November 1995. MIE, Ministry of Education and UNESCO.
15. Malawi National Commission for UNESCO, 1996. Utilisation of Solar and Other Energy Sources by Rural Women of Malawi with reference to the Cape Maclear enclave villages. Mangochi.
16. Malawi National Commission for UNESCO, 1993. Environmental Education and Sustainable Development for Rural Women. UNESCO-UNEP & International Environmental Education Programme (IEEP).
17. Masamba, C. 1995. Deforestation and Environmental Degradation in Malawi. Forestry Research Institute of Malawi.
18. Ministry of Agriculture, 1995. The Agricultural and Livestock Development Strategy and Action Plan for Malawi.
19. Ministry of Economic Planning and Development, 1995. Policy Framework for Poverty Alleviation Programme.
20. Ministry of Economic Planning and Development, 1996. Report of the First Malawi Vision 2020 workshop. Vision 2020 Project, Lilongwe.
21. Ministry of Education, 1995. Project Request from Government of Malawi to The European Union. "In-service Education and Training of Secondary Schools Teachers of Geography and Tutors from Distance Education Centres in Environmental Education. Ministry of Education.
22. Ministry of Education, 1995. Development and Production of a Content-methodology Source Book on Environmental Education for the Secondary School Geography Curriculum in Malawi. Project request to UNDP.
23. Ministry of Education and Culture, 1991. Malawi Primary School Teaching Syllabus "General Studies" Standard 1-4. Malawi Institute of Education, Domasi.
24. Ministry of Education and Culture, 1991. Malawi Primary School Teaching Syllabus "Social Studies" Standard 5-8. Malawi Institute of Education, Domasi.
25. Ministry of Forestry and Natural Resources, 1993. Report on The Consultative Workshop on Natural Resources Management for Non-Governmental Organisations. GOM-UNDP Fifth Country Program, Programme 1-Smallholder Agricultural Productivity, Natural Resources Management Component. Mangochi 27-29 October 1993.
26. Ministry of Natural resources, July 1995. Proposed Malawi Forest Policy.

27. Mkanda, F. X. 1996. Review of the Southern African Development Community (SADC) Onland Fisheries, Forestry and Wildlife (IFFW) sectors. UNDP Malawi.
28. MOREA, 1995. Environment Support Programme (ESP), Draft, October 1995. Ministry of Research & Environmental Affairs.
29. MOREA, 1995. Draft Malawi National Environmental Policy. September 1995. Ministry of Research & Environmental Affairs.
30. MOREA, 1995. Directory of Environmental Focal Points. Network of Environmental Focal Points. Ministry of Research & Environmental Affairs
31. MOREA, 1994. National Environmental Action Plan (NEAP). Volume 1: The Action Plan. June 1994. Ministry of Research & Environmental Affairs.
32. MOREA, 1994. National Environmental Action Plan (NEAP). Volume 2: Initial District Environmental Action Suggestions. June 1994 Ministry of Research & Environmental Affairs.
33. MOWCACS, UNDP, UNICEF, 1993. Situation Analysis of Poverty in Malawi. The Ministry of Women and Children's Affairs and Community Services, United Nations Children's Fund, United Nations Development Programme.
34. National Family Welfare Council of Malawi, 1994. The Malawi National Family Planning Strategy, NFPS, 1994-1998. Malawi Government.
35. Njie, N., Chenoweth, F., Chiotha, S.S., Dzimbiri, L., Kalowekamo, F.M., & Banda, A. 1995. Training Needs & Resource Assessment for Institutional and Human Resource Development. Ministry of Research & Environmental Affairs.
36. Royal Danish Ministry of Foreign Affairs. 1996. Seminar on Strategy for Danish Development Assistance to Malawi.
37. Stewart, Howard Macdonald, 1995. Capacity 21 Monitoring & Reporting Strategy. Capacity 21 UNIT, UNDP.
38. UNDP, 1995. Malawi Programme Support Document. "Capacity Building for Community-Based Sustainable Environment Management". UNDP
39. UNDP, 1995. Malawi Programme Support Document. "Sustainable Development Networking Programme (SDNP)". GoM/UNDP-Capacity 21.
40. United Nations, 1995. Population and Development. Programme of Action adopted at the International Conference on Population and Development, Cairo, 5-13 September 1994, Volume 1, United Nations, New York.
41. United Nations 1994. Report of the International Conference on Population and Development, United Nations, New York.

42. United Nations Development Programme, Global Environmental Facility. 1994. Assistance to the Government of Malawi for the Promotion of Solar and Other Renewable Energy Utilization in Malawi.
43. UNDP, FAO, 1993. Report on Assistance to the Forestry Sector in Malawi. "Projects Findings and Recommendations".
44. UNESCO, 1983. The Importance of Environmental Education in the Development of Malawi. Malawi National Commission for UNESCO.
45. United Nations Population Fund, 1994. "Advocating Change", Population Empowerment Development, United Nations, New York.
46. United Nations Population Fund, 1994. Safeguarding the Future. "Kuteteza Tsogolo", Montfort Press, Blantyre.
47. USAID, 1995. Natural Resources Management and Environmental Support Program "NATURE". USAID Malawi.
48. USAID, 1995. "Malawi 2000" Country Program Strategic Plan (CPSP) 1995-2000. US Agency for International Development, Washington DC. USA.
49. Wildlife Society of Malawi, WSM. "STEP" School Tree Education Project "Kabukhu ka nazale ya mitendo". Montfort Press, Blantyre.
50. Wildlife Society of Malawi, WSM. "Nantchengwa" magazine "Dimba La Kumpana", October 1995 No. 25; Montfort Press, Limbe.

ANNEX I

LIST OF ORGANISATIONS, INSTITUTIONS AND INDIVIDUALS CONSULTED IN THE DEVELOPMENT OF THE NATIONAL EE&C STRATEGY

15 April - 30 May 1996

I. BLANTYRE

1. Press

Newspaper Daily Times Mr PAC. Mtenje
Mr G. Mzumara

2. Radio MBC

Mr. P. Mphaka
Mr. G.Kadzaka,
Mr. G.A. Mwandira

3. Polytechnic

Dr. D. Chingakule
Mr.E Chibambo
Mr. K.C. Tembo

4. CURE

Mr. V. Chipofya
Ms R. Whyatt
Mr. A.Z.Banda
Mr. T. Rogge

5. Wildlife Society of Malawi (WSM)

Mr. Carl Bruessow
Mr J. Wilson
Mr R. Nkwazi
Mr. J. Stanway

6. World Vision International

Mr. W. Nkhoma

7. Carlsberg Breweries Ltd

Mr. W.K. Mbisa

8. Malawi Bureau of Standards

Mr. Kamangira
Ms. Sungiza

9. Ministry of Tourism

Mr. M. Matola
Mrs. F. Masimbe
Mr. J. Kanyinji

10. MIRTDC Malawi Industrial & Technology Research Centre

Mr C. W. Guta
Mr. K. Kafatia
Mr. S. Kachale

11. Museum of Malawi

Mr. M.E.D. Nhlane
Mr. G. Sambereka
Mr. L. Mwandira

II. LILONGWE

1. MNR National Parks & Wildlife

Mr. J. Mphande

2. Ministry of Education

Mr. C. Gunsaru
Dr. D. Safuli

3. MOREA

Mrs. E.J. Mede
Mr R.P. Kabwaza
Mr. A.M. Kamperewera
Mr. J.B. Chuma
Mr. S.Y.Z. Chibaka
Mr. M.K.M. Mwanyongo
Mrs R. Cammaer
Dr. Z. Vokhiwa
Mr. F. Tukula

4. Ministry of Women's, Children's and Community Affairs and Social Welfare

Mrs M. Shaba
Mr. Kangombe
Mr. J. Kalemera

5. Ministry of Youth, Sports and Culture

Mr. A. Mseka

6. Ministry of Agriculture and Livestock Development

Mr. L.P. Tembo
Mr. Kabuye
Mr. E.E. Kanyenda

7. World Bank

Mr R.Clement-Jones
Mr P. Sibale
Mr Cotz

8. UNDP

Mr T. Jones
Mrs H. Komatsu
Mr J. Mbeye
Mr. S. Southey
Mr. El-Mostafa Berhamish
Mrs L.J.Dokken
Mr. G. Zmalirana

9. UNESCO Commission

Mr. C.M.B. Majiga

10. UNFPA

Mr. H. T. Mwanza

11. WUSC	Mr B. Finkelstein
12. CIDA	Mr. C. George Mrs A. Green
13. British Council	Mr. J. Kennedy Mrs. A. Nair Mr. H. Chingowe
14. Herbalist Association of Malawi	Mr. Gangire Mr. W.Kukanene
15. DGIS Directorate General for Development Cooperatives	Mr Theo Olthater
16. National Library Service	Mr. C. S. Momba
17. Vision 2020	Dr. A. Mawanya Dr. N. Ngwira Dr. Mkwezalamba Mrs. Giva Mr. Kumwenda
18. Forestry Department	Mr. Leo C. Zulu
19. Magwero Primary School	Mr. B.J. Samu
20. USAID	Mrs. C. Rozell Mr. D. Himelfarb Mr. S. K. Machira Mr. G. Rozell Mrs. J.K. Parker
21. Bunda College of Agriculture	Prof. Z.M.Kasomekera Dr. M. Kwapata
22. Lilongwe Nature Sanctuary	Mr. M.W. Matemba
23. Peace Corps of the United States	Mr. V. Owens

III. ZOMBA

-
- | | |
|--|--|
| 1. Chancellor College | Dr. E. Fabiano
Dr. E. Y. Sambo
Dr. P. Munyenyebe
Dr. E. Henry
Dr. W. Masamba
Mrs. M.P. Kalindekafe
Mr. J.K.E. Mfuné
Mr. M. Chiwambo |
| 2. Malawi Institute of Education | Dr. D.D. Chimwenje
Mr. D. R. Jere
Mr. E. K. Simbeye
Mr. D.F. Namate
Mr. N. T. Kaperemera
Mr.B.M. Kanjala |
| 3. National Herbarium and Botanical Gardens | Mr. I. H. Patel |
| 4. Community Development Training College | Mr S. Mkandawire
Mr. A. Chidumu
Mr. E. Mphulumba |
| 5. ICLARM | Dr. R. Brumett |
| 6. GTZ /MAGFAD | Dr. Uwe Scholtz |
| 7. University Office | Prof. B. B. Chimphamba |
| 8. Land Husbandry Training Centre | Mr. H. Kandaya |
| 9. Theological College | Rev. W.E. Chikakula |
| 10. National Herbarium & Botanical Garden | Mr. I.A. Malota |
| 11. Malawi Institute of Management | Prof. C. Kamlongera |

IV. OTHERS

1. EE Centres Dept of Parks & Wildlife

1.1 Lake Malawi National Park (Monkey Bay)

Mr E. C. Zakochera

Mr. Chimbe

Ms J. Spagnolo

Mr. C. Cull

1.2 Michiru (Blantyre)

Ms. D. Novak, EE advisor

Ms. C. Chumbler, EE advisor

1.3 Mzuzu

Ms. E. Spenner

1.4 Vwaza Marsh Wildlife reserve

Ms. S. Jayne

1.5 Nyika National Park

Ms. J. Graham

2. Phwezi Foundation

Mr. P.N. Chihana

3. Domasi College of Education

Mr. M.S. Gulule

4. Beekeeping Project, Thazima

Mr. M. Katha

5. Briquette Project, Stanlinks Organisation

Mr. Richard Stanley

6. Nkoto-Kota Fishing Village

Mr. S. Kandoro

Mr. P. Liwonde

Mr.E. Matuya

Mr. A. Kamitoni

7. Nkhozo F. Primary School

Mr. M. W. Lupwayi

8. Traditional Story Teller

Mr. S.K. Munthali

ANNEX II

SUGGESTED STEPS FOR THE DEVELOPMENT OF MALAWI'S NATIONAL EE&C STRATEGY

1. Review of literature
National Environmental Action Plan (NEAP), Environment Investment Plan (EIP),
NATURE Project, Inventory of Natural Resource Management (NRM) Activities in Malawi
2. Consultation with relevant individuals and organisations in Environmental Education.
 - a. Formal Environmental Education:
 - P.S. Education & Chief Inspectors
 - Institute of Education (Teacher Training, Curriculum and Materials Development)
 - Teacher Training College (Principal & staff members)
 - University (Chancellors College)
 - Polytechnic
 - Adult Literacy
 - Primary School
 - Secondary School
 - b. Non-formal Environmental Education:
 - NGOs (i.e.CURE, WSM, Christian Service Committee, Action Aid)
 - Ministry of Women & Children
 - UNICEF
 - Extension Services (i.e. Health, Agriculture & Livestock, Community Development)
 - c. Informal Environmental Education:
 - Newspaper
 - Radio
3. Resources for EE Inventory
 - Organisations/manpower
 - Teaching/learning materials
 - Funding Sources
4. Development of first draft of EE Strategy
5. Workshop to review draft and approve framework (Action Plan)
6. Revision and refinement to draft EE Strategy and production of final document
7. Presentation to high-level committee (GoM, NGO, Private Sector)
8. Reproduction of EE Strategy/Plan.