
Nile Basin Initiative

Transboundary Environmental Action Project

THE STATE OF ENVIRONMENTAL EDUCATION AND AWARENESS IN ETHIOPIA

**An assessment Report on environmental Education
and awareness**

Prepared by Kidane Abebe

Admas College

P.O.Box 41023, Addis Ababa, Ethiopia

E-mail:kidanab@telcom.net.et

December 2004

Table of Contents

1. *EXECUTIVE SUMMARY*
2. *INTROUDCTION*
3. *THE STATE OF ENVIRONMENTAL EDUCATION IN ETHIOPIA*
 - a. Background
 - b. Legal and Institutional Framework
4. *ENVINROMENTAL EDUCASTION IN THE FORMAL EDUCATION SYSTEM*
 - a. Primary Education
 - i) Basic Primary education
 - ii) General Primary education
 - b. Secondary Education
 - c. Environmental Education at territory level
 - d. ZOA – Refugee Care
 - e. Institute For Sustainable Development
5. *NON-FORMAL ENVIRONMENTAL EDUCATION*
 - a. Ethiopian Wildlife and Natural History Society (EWNHS)
 - b. Lem-Ethiopia Environment and Development Society.
 - c. Center for Human Environment (CHE)
6. *OTHER STAKEHOLDERS*
 - a. Ministry of Water Development
 - b. Ministry of Agriculture and Rural Development
 - c. Ministry of Education

-
7. *THE MEDIA AND ENVIRONMENTAL EDUCATION*
 8. *OPPORTUNITIES AND CONSTRAINTS FOR ENVIRONMENTAL EDUCATION*
 - a. Opportunities
 - b. Possible Constraints
 9. *RECENT PROJECTS AND PROGRAMS*
 10. *LESSONS LEARNED*
 11. *CONCLUSIONS AND RECOMMENDATIONS*
 12. *ANNEXES*
 - a. Annex I - Possible indicators
 - b. Annex II - Treaties and agreements
 - c. Annex III - Interview sample group
 - c. Annex IV - People Interviewed
 - e. Annex V - A copy of the questionnaire

References

EXECUTIVE SUMMARY

Ethiopia's environment is degraded at an alarming rate impacting on the well being of the society in general, and the agricultural sector in which more than 85 % of the population depend upon. Because of the degradation of natural resources, the agricultural productivity is going down. At the same time, population growth is increasing. There is a problem of keeping the balance between the needs of the society and the capability of the sources. To reverse the trend, raising public awareness on the conservation of natural resources and utilization, was taken as one of the means. For that, Environmental Education Pilot Project was launched.

The Ministry of Education in collaboration with the Ministry of Agriculture, supported by Swedish International Agency (Sida), has conducted Environmental Education Pilot Project (1985-1995). The Project using four teachers' training institutes (Dessie, Debre Berhan, Awass and Harar), and 63 centers, had trained hundreds of teachers, staff and students. After the evaluation of the Project's performance recommendations were given. Based on the recommendations the Ministry of Education started to infuse environmental topics in the school curriculum.

The Government has also created the necessary institutional and legal means to enable the concerned agencies regulate and promote the cause of environment.

Currently, primary school textbooks are made to focus more on environment, where as in the secondary schools, environment topics are treated in some selected carrier subjects. Environment subjects or topics are not discussed in the business area of vocational and technical streams (TVET).

At the tertiary level, there are some courses offered here and there. Bahar Dar University, besides offering related courses/topics in various subjects, has launched 'Lake Tana' Watershed Resource Management two years ago. However, there are still a lot of challenging issues to be talked to promote environmental education, in the tertiary level of educational institutes.

There are few active NGOs involved in organizing students' environment clubs, support individuals and produce public awareness creation materials. The Ministry of Agriculture and Rural Development, the Ministry of Water Resources, The ministry of Education, and the Environmental Protection Authority are the key stakeholders in the conservation, awareness raising activities.

There are lessons learned from the Environmental Education Pilot Project (1985-1995) and that of other projects.

These projects laid the ground for environmental education, as a result environmental awareness has grown, some teaching materials are developed. Relevant environment topics are infused in the curriculum of the schools. One can witness the involvement and growth of NGOs environmental education. The weak points of the projects include, lack of continuity of the activities of the project after the phase out of the project. Lack of interest and inability of the media to address environmental issues seriously. In addition, one of the major shortcomings is the absence of networking of the activities among environmental NGOs, and Government offices.

These experiences could be taken as assets for the collaboration and cooperation of the regions, NGOs, and other stake holders in Ethiopia as well as other riparian countries.

Introduction

‘Environmental Education and awareness’ is one of the six components of the Nile Transboundary Environmental Action Project. This component is “on creating awareness on the River Nile environmental threats, while stimulating behavioral change at three levels, the general public, secondary schools and tertiary institutions of learning”.

A national consultant was recruited to undertake initial ‘Country Environmental Education And Awareness Reviews’, to have ‘a rapid assessment of a country’s Environmental Education and a quick, clear snapshot of the existing state of environmental education and awareness’. The Consultant was given 10-19 working days to come up with his findings.

1. The Consultant on the basis of the Terms of Reference (TOR), adopted the following method to address the task: The methods are:
 1. Conduct review of relevant documents.
 2. Identify organizations (Government NGO) and individuals dealing with environmental education, and discuss, the issue
 3. Prepare a questionnaire to those individuals outside of Addis Ababa to get their views.
2. Based on the above approach various documents were reviewed, information related to environmental education and awareness in the country were gathered, legal and institutional framework were identified, attempts were made to assess the delivery modules of environmental education and awareness at all levels of learning institutions; active NGO practitioners, were identified, discussions/interviews were held with some people, and a questioners was sent to some which they responded.

Gaps are indicated under constraints and lessons drawn; progress and impact indicators are also shown. Because of time constraint, and other reasons such as in availability of the appropriate person, the interview could not be conducted with more than the indicated people. A written questionnaire was sent to Bahar Dar town – to get the opinion of some concerned people there.

There were some difficulties in getting some people in Addis Ababa University, Bahr Dar University, Oromiya Bureau of Education who are said to be in charge of the issues as scheduled. There were lacks of interest in answering questions or to cooperate in giving information. Nevertheless, the Consultant had to use his own acquaintances, means and experiences to contact people whom he knows in the field, to widen the participation of the appropriate persons

The assessment deals in the background with the reflection of the state of the natural resource degradation in Ethiopia, the beginning of environmental education, legal and institutional framework, environmental education in the formal education system (primary – secondary – tertiary), and non-formal environmental education, under which active NGOs in environmental education are discussed. Opportunities and constraints, media in environmental education, and recent projects and programs in Environmental Education are discussed.

THE STATE OF ENVIRONMENTAL EDUCATION IN ETHIOPIA

A. Background

Ethiopia, one of the Nile riparian countries has a total land area of 1.126 million km². It is one of the countries with high population in the in Africa (around 70,000,000 people). Of these 49% are females and 51% are males. Ethiopia is a federal state constituting nine autonomous regional states and two-city administration. The country's diversified altitude ranges from 120 meters below sea level to 4,5000 meters of Ras Dashin. This is believed to be the reason for its diversified ecology and its rich biological resources. According to the Conservation Strategy of Ethiopia document, it has greatly diversified genetic resources, varied endemic wild flora and fauna (CSE-Vol. I, 1997, PP 55-56).

In spite of all these abundant resources, the country has been under cyclical drought, famine and persistent poverty. Environmental degradation is considered to be one of the factors that attributed to the country's poverty. Besides, traditional agricultural practices on one hand, population growth on the other made it difficult to keep the balance between the basic human needs and the capabilities of the resources.

Although there have been different traditional conservation practices in the country, they were marginalized as old methods to be used now. Moreover, there was no effective policy or a directive enabling the natural resource management efficiency.

The pressure on the natural resource is believed to be the major cause for the following environmental problems.

- Because of the need for the expansion of agricultural land, construction wood, and firewood, people clear around 200,00

-
- hectares of forestland per year. Deforestation has particularly severed the high land areas of Ethiopia: Gojam, Gonder, Northern Shoa within the Nile Basin areas.
 - The increasing number of livestock resulted in overgrazing there by adding another environmental problem.
 - Soil erosion is one of the chronic environmental problems of the country. According to the Conservation Strategy of Ethiopia: “while the soils in the Ethiopia highlands have high inherent fertility, ... the steep and dissected terrain with extensive areas of slopes of over 15 percent, coupled with the high intensity of rainfall have led to accelerated soil erosion reaching up to 400 tons/ha/annual”. [CSE-Vol. I 1997 P. 105]
 - Ethiopia is the third highly populous country in Africa, growing at the rate of 3% per year, and which one can say, represented (environmental degradation) by the highland area of the country. Where the source of Nile located.
 - Poverty, lack of sanitation, resource degradation and the like are environmental problems influencing the well being of Ethiopians in general and the people of the highland area in particular.

Land degradation, followed by soil erosion in the north and central Ethiopia, is believed to be the root cause of the cyclical drought and notably that of 1973/74, famine, which brought about the adoption of conservation strategy.

The Ministry of Agriculture as the responsible authority took the initiative to expand soil conservation and afforestation activities. With this, it strengthened its Soil and Water Conservation Department. However, it was then realized that without peoples’ participation and awareness, the initiation would not be sustainable. In order to help people acquire the necessary knowledge, skill and bring behavioral changes, it was felt

necessary to conduct environmental education and awareness activities. For this, the youth was taken as the immediate target. The delivery method of the educational system, and the network of the Ministry of Education were chosen for the dissemination of the environmental awareness.

The Ministry of Education and the Ministry of Agriculture, with the financial support from Swedish International Development Agency (Sida), launched Environmental Education Pilot Project in 1985. With its office located at the Head Quarter of the Ministry of Education. The project's objectives, among others were to:

- assist on-going natural resource conservation activities,
- promote... understanding on the relationship between human and nature,
- develop the feeling of love for nature among students; and
- support extra-curricula activities promoting environmental awareness. The project conducted its activities at 63 centers and four teacher training institute. (Gebeyhu W/Aregay-In Environmental Education Experiences and Suggestions-Regional workshop-Nyeri, Kenya, 4-10 October 1992,Regional Soil Conservation Unit/SIDA/ 1993,pp 62-69).

The project being one of its kind in addressing diversified problems related to development, has gained the attention of many individuals. That is why;(a) it was possible to train 12,200 teachers in pre and in service trainings on environmental education, (b) it was possible to cater orientation on the subject of environment to 45,00 primary and secondary school students, (c) it was possible for about 2,500 officers to take part on environmental education seminars. Moreover, in practical activities, 117,300 tree seedlings were planted; 36km of hillside terracing, and 100 check dams were constructed.

Environmental education magazine, fact sheets, posters and documentary film were produced. (Gebeyhu W/Aregay, 1993, pp 62-69).

The UNDP in its 5th country program called the National Programme on Improvement of Resource Population Sustainability Balance supported a project, (ETH/94/002/A/01/99). The program had a number of components (population, water, tourism, etc). Environmental Education was one of the components. The Ministry of Education, the Environmental Protection Authority and the Regional Bureaus of Education implemented the environmental education component. The planned out puts of the component were supposed to:

- train 33 experts from Regional Bureaus of Education, and, Curriculum Research and Development Institute, for one week,
- run a workshop for 46 staff from the head office of the Ministry of Education on environmental education for five days,
- train 134 teacher training institute and secondary school teachers on Environmental Education for 30 days,
- run a workshop for 220 primary school staff on environmental education for 20 days.

The planned (objectives) were not fully carried out, because of the process of reorganization of the state (Federal, regional), which had some impacts on the administration including Bureaus of Education. The fund was to be disbursed from the project Implementation and Support unit, to the respective Ministries and agencies. This could not work because of the process of devolution .In consultation with the respective bodies of the Government, the unit had to distribute the fund among the head quarter and regional offices. Despite these problems, the following out puts were recorded.

-
- A workshop for 60 staff of the Ministry of Education, Environmental Protection Authority, Ministry of Mines and Energy, Ministry of Information, and NGOs was conducted.
 - 354 primary and secondary school teachers attended a 5 days training; and
 - Regions organized workshops, and seminars on environmental education.

Though the amount of fund was small, UNDP's support contributed a lot in keeping the momentum started by Environmental Education Pilot Project.

The execution of the planned activities faced a number of problems. The major problems were: -

- Lack of follow-up, delay in releasing of the fund:
- Lack of clarity and weak contacts between the head office and regions; and
- Lack of motivation by those who were handling the activities.

Other organizations, mainly NGOs and professional societies carried out non-formal environmental education and awareness. Among these are the Ethiopian wildlife and Natural History Society, Lem-Ethiopia Development and Environment Society, the Biological Society of Ethiopia. These societies have links with school clubs; they produce and distribute awareness raising materials, distribute indigenous species of tree seedlings and conduct trainings. Organize seminars and workshops for teachers, students and community on environmental issues.

B. Legal and Institutional Framework

Ethiopia is one of the signatories of many international environmental conventions, protocols, agreements and treaties. These agreements are legal framework for the protection, and conservation of the environment. (See the annexed list).

The Government of the Federal Democratic Republic of Ethiopia, recognizing the gravity of environmental problems that the country is facing, and by taking into account the global situation, enacted a number of articles in the constitution of 1993. Of these, article 44 and 92 are the leading legal means for the protection of the country's environment.

The Environmental Policy (April, 1997) is another document binding all the actors in the environment. The overall policy goal is “to improve and enhance the health and quality of life of all Ethiopians and to promote through the sound management and use of natural, human made and cultural resources and environment as whole ... the ability of future generations to meet their own need”. For these, the policy sets nine specific objectives. One of these is related to public awareness raising and promotion of understanding of the linkages between environment and development (Federal Policy on the Environment 1997, pp. 23-24).

In the cross-sectoral objectives of the policy five guiding principles are clearly set. Among these, the following are pertinent to this assessment. They are:

- to promote the teaching of environmental education on a multi disciplinary basis and to multi disciplinary basis and to integrate it into the on going curricula of schools and colleges...
- to ensure that legally established coordination and management bodies ... handle... issues identified,
- to use to the maximum, Existing institutional structure,

-
- to recognize the important role the media play...” (Environmental Policy 1997, pp 55-56).

The Federal Policy prescribed nine strategic elements, which include, incorporating environmental education into the curricula at all levels of formal education, develop environmental training materials, encourage the local development of environmental awareness associations, initiate, encourage, and support the involvement of local community, develop and strengthen the capacity of the mass media (Federal Environment policy, P.56). Similar policies on the environment are being implemented at the regional levels too.

One of specific objectives the Education and Training policy of Ethiopia (1994) is “to provide education that can produce citizens who possess national and international outlook on the environment, protect natural resources and historical heritages of the country”. (New Education and Training Policy-1994, p-56)

Because of the need of an organization that could plays a regulatory role, and disseminate environmental information, education, communication and raise public awareness on the state of environment in the country and that follows up the implementation of international conventions, the Government of the Federal Democratic Republic of Ethiopia established the Environmental Protection Authority in 1995 (Proclamation 9/1995). The Authority is empowered with the following duties and responsibilities:

- Prepare environmental protection policy and laws and follow up their implementations,
- Develop, rules, regulations and directives for environmental impact assessment and supervise their implementations,
- Prepare standards that help in the protection of soil, water and air,

-
- Provide instructions required to enhance awareness of the need for environmental protection; and
 - Follow up the implementation of international treaties on environmental protection to which the country is a party.

The Authority to execute these duties has five departments and five services. Of these, the Environmental Education Department is one. The Department in turn has three sections. These are environmental education, the materials production, and the audio-visual. Some of the duties of the Department are to:

- conduct and promote studies on environmental education practices to enhance peoples knowledge, understanding and participation in the protection of the environment, and to this end organize environmental education seminars, workshop and symposium,
- working closely with the media produce and disseminate environmental awareness programs through the media in sustainable manner,
- promote effective communication and exchange of information between and among the Authority and, other governmental non-governmental organizations,
- conduct studies on the inclusion of environmental education concepts, approaches in the formal education system; and
- produce documentary films, newsletter, posters etc on the subject of environment.

The Department according to its organizational chart is supposed to have eighteen people (the head, experts and secretaries). Currently, there is only seven staff. This is one of the major constraints facing the department to execute its duties effectively. Otherwise it has been co-coordinating some events such as World Environment Day, Desertification Day, etc

4. ENVIRONMENTAL EDUCATION IN THE FORMAL EDUCATION SYSTEM

The Educational policy (April, 1994) recognizes that, education helps “ to improve, change, as well as develop and conserve ... environment for the purpose of an all-round development” (P.1). In addition it sets the following statement as one of its objectives "... provide education that can produce citizens who possess national and international outlook on the environment protect natural resources and historical heritages of the country”. (P.11). These ideas are being reflected in the curriculum of the schools.

The current structure of education of the country has four stages. Kindergarten, elementary, secondary and higher education.

- **Kindergarten** - (at the age of 4 and 5) this is a pre-primary education, which focuses on all round development of the child. Kindertartens are mostly owed and run by communities, and private individuals

A. Primary Education

Primary education, which is of eighty years, is divided in to two:

- a) Basic Primary education - named first cycle (4 years)
- b) General primary education (4 years)

These stages prepare students for further secondary education. The framework of the Curriculum for grade 1-4, is formulated at the Federal level, and further developed at the regional level to reflect the peculiarities of the region. All uses materials developed as texts by the respective regional Bureau of education.

i) Basic Primary Education

The structure of the country's educational system understands the 'Basic primary education, as the educational stage that comes after the Kindergarten, which starts at the age of seven; and lasts for four years. At this level children are familiarized with their surroundings.

Environmental study takes the place of environmental education. The module of delivery at this stage is that of observation and feeling.

ii) General Primary Education

This is the second stage of the primary education. It last for four years. Grades 5,6,7 and 8 are the cycle where students are prepared for further education and training.

During the second stage (general education) environment education topics are infused in grades 5,6,7 and 8 subjects. In grade 5 science subject, topics such as unnatural resource protection (conservation), forest protection, wildlife, reproduction of animals and plants are discussed.

In grade 6, topics such as our surrounding, problems of our environment, population, air pollution, water pollution, conservation of our surroundings are discussed.

The subject contains topics such as 'our surrounding', 'our village', 'our regional state', our 'country', and 'our world'. With this approach, environment concepts are presented to the children.

B. Secondary Education

The secondary level education, which lasts for four years, is divided into two. Two years of general education (grades 9 and 10), where the cycle for the general secondary education completes. At this stage, grade nine biology subject textbook (by Alemu Asfaw, 1999, pp 127-158), has environmental topics such as, recycling in nature, food chain and food webs, etc. Similarly, grade nine geography subject text book by Shimekt Lemma, 1999, PP 97-168) has topics such as climate, vegetation, population, environment, ecosystem, resources, soil, natural vegetation, water, air, wildlife and environment hazards. In grade 10, topics related to environment are infused in geography and biology subjects.

After this cycle, we have the preparatory (or the second cycle of secondary education) and vocational and technical streams (TVET). The preparatory and technical and vocational streams differ in their objectives and contents. In the preparatory stream, for example, in geography textbook of grade 11 (by Fessessu Neri-2001), topics such as soil, forestry, and wildlife are presented. Grade 12, geography textbook (by Fessessu Neri, 2002), we read topics such as climate of Ethiopia, natural vegetation of Ethiopia, Ethiopia wildlife, soils of Ethiopia. In addition students do practical activities such as waste material collection, gardening, cleaning the surroundings. These could be taken as evidences showing that there are attempts to infuse environmental education in the school curricula. Therefore, one can say that there are some environmental concepts infused here and there. The infusion or as some say the integration of environmental education in carrier subjects are steps in promoting environmental awareness and creation of environmentally literate society. These

beginnings need to be backed with strong commitment, coordination and follow-up of all the concerned.

C. Environmental Education at tertiary level

Conventionally, the tertiary level learning institutions are place of excellence, where by high-level academic activities, and research take place. They are said to be center for the generation of new ideas.

Unfortunately there are not many institutions in Ethiopia. Currently there are seven universities. These are:

- Addis Ababa University, which is one of the oldest, and has many colleges and faculties, of various disciplines except agriculture.
- Alemaya University, which is located in the eastern part of the country, has rich experience in the field of agriculture.
- Arbaminch University attained the status of a university last year. This University has rich and strong experience in the field of hydrology.
- Bahr Dar University, which is formed out of the two old institutions (Bahr Dar Polytechnic and Bahr Dar Pedagogy), is one of the strong institutions in the field of teachers' education. It is located at the source of Blue Nile.
- Jimma University, one of the emerging universities in the country which mainly focuses in the field of medical science, and anticipated to specialize in spices in the field of agriculture.
- Mekele University, a university setting an example in dry land management, has various faculties and departments.
- South University, formed out of the former Awassa College of Agriculture, Wondo Genet College of Forestry and Dilla Teachers' Education College is one of the new expanding universities in the country.

Though difficult to assess how far the Environment Policy of the country is fully taken up by all these institutions, there are some environment related courses or topics discussed along with other subjects/courses. This seems an indicator for the integration of environmental education as per the policy's guiding principles. The Federal Environment Policy (1997), states the following as one of the guiding principles of the policy:

" Promote the teaching of environmental education on a multi disciplinary bases and to integrate it into the on going curricula of schools and colleges, and not treat it as a separate or additional subject, though this should also be done at the tertiary level,"

This principle is being implemented in many universities and colleges. Though due to time constraint it was difficult to travel to all universities, colleges and higher-level educational institutes in the country, to assess what is going on. However, from the information and interviews conducted, one can say that there are environment topics infused in some subjects of the programmes.

Currently, Addis Ababa University Department of Geography renamed as "Department of Geography and Environmental Studies" has environment topics included in its courses. The Graduate School of Addis Ababa University, has a program known as 'Environment and sustainable Development. In Mekelle University there are courses on 'Natural Resources,' and in Jimma University 'Environmental Health sciences is being offered as a program. Faculties in BaharDar University have included environment related topics. The University with the support of Cornell University (USA), has established a research institute called 'Lake Tana Water shade Resource Management two years ago. This University located at the source of Blue Nile, has experienced staff in environmental education. It had environmental education center.

Faculty of Science of the Addis Ababa University had organized a short-term training for the regional staff of natural resources, with financial support from the Conservation Strategy of Ethiopia, three years back. Currently, there are courses on 'Environmental Science' in the faculty.

Alemaya University, has courses in soil, plant science etc, where as the university of the South has courses in forestry, agriculture etc.

These attempts of the universities are encouraging, but these need to be examined so that cost effective courses/programs be conducted on the bases of the needs.

In the non-formal environmental education area, however, because of the residual factors of the Environmental Education Pilot Project, activities of the youth in the schools, and supports of some local NGOs, there are some promising trends of change of attitudes, and behavior.

5. NON-FORMAL ENVIRONMENTAL EDUCATION

By definition the non-formal environmental education (NFEE), is environmental education process that goes outside the formal education system. In Ethiopia, the non-formal environment education is being handled by various governmental and non-governmental organizations. The non-formal education, according to the Education and Training Policy (1994), is concrete, focusing on enabling the learners develop problem solving attitudes and abilities. Community skill training centers of the Ministry of Education, now under the Bureaus of Education, countryside schools and tree shades in the rural areas are used as venues for the non-formal environmental education delivery.

The non-governmental organizations such as the Ethiopian Wildlife and Natural History Society, Lem- Ethiopia Environmental and Development Society, and many others such as Panos, Institute For Sustainable Development (ISD), Forum For Environment etc, focus on awareness creation and skill development in the conservation of natural resources, conduct seminars, workshops and short term trainings. They organize school children, the youth and community members to be active supporters of the causes of the environment. Produce materials for the dissemination of awareness raising, and support individuals and communities engaged in conservation activities.

A. Ethiopian Wildlife and Natural History Society
(EWNHS)

This Society is one of the oldest of the local NGOs (est. 1966), in the conservation and proper use of the natural resources.

The missions of the society are to: -

- disseminate information to create an awareness of the need for conservation of Ethiopia's natural resources and environment,
- support and conduct research concerning Ethiopia's flora and fauna.

The Society has been working in collaboration with community members, school clubs, churches, and farmers. Its members and activities are countrywide. Its influences and impacts are seen in many schools.

Currently, the Society works in seven regional states. Since 1994 it has:

-
- organized 21 regional environmental education workshops for 345 teachers;
 - established 288 school environment clubs, 14 community clubs, supported two farmers conservation initiatives (in Demebecha and Holleta).
 - initiated and supported 22 schools in Addis Ababa, and 11 nursery sites with tools, equipment and seedlings.
 - supported the production of 22 school magazines in Addis Ababa and 112 in regions.
 - every year takes initiatives in the celebrations of the World Environment Day (WED), with Government agencies, NGOs and community,
 - has established strong contacts with governmental non-governmental organizations and school clubs working on environment,
 - has been producing bi-annual, and quarterly scientific magazines and journals known as the “Agazen”, the “Walia”.

In addition the Society arranges field trips to environment clubs, tree planting, promotes and creates the value of indigenous trees. In collaboration with Birdlife International conducts research on the birds of Ethiopia.

The Society works also with the schools in the Nile basin Areas. The number of schools in each zone of the basin and region are indicated below.

- East Gojam (4)
- West Gojam (5)
- Bahar Dar zuria (2)
- South Gonder (5)

-
- North Gonder (2)
 - Oromia (Southwest) (2)

The furthermore it organizes young school dropouts to be active conservationists and advocates of the natural resources protection and environment. It helps the youth, identify local environment problems and to mobilize the community to attend gatherings, and the Society invites outsiders to speak on the identified topics, The EWNHS closely also works with the church for it believes that involving the church has great advantages in raising awareness.

B. Lem- Ethiopia Environment and Development Society

This is another local NGO established in 1992 with the following objectives.

- awareness creation on the relation between nature and human, on alternative energy and, on waste management,
- supporting grass roots developmental activities,
- supporting school environment clubs, and advocacy of environmental protection
- participation in conservation of natural resources,
- organizing and supporting school environmental clubs and
- dissemination of research out puts.

The major activities include:

- publication of newsletters,
- production of posters (usually prepared by students for competition),
- organizing workshops, seminars and trainings for teachers, students and community,
- distribution of indigenous tree species.

This Society closely works with the community and schools mainly with primary schools of grade 1-8. If focused on primary school. Currently, emphasis is not given to secondary schools grade 10-12, as it is used to be some years ago. The shift of stress is because of the stay of students in secondary school /preparatory. Students in the lower secondary, grade 9 and 10, may not stay in that school for long. They may leave the school for another when they complete that level (usually for preparatory or for vocational and technical stream). In either preparatory or vocational and technical streams their stay is only limited to two years. Therefore, Lem-Ethiopia organizes and follows-up those who stay for long and age wise younger groups of school population.

Lem-Ethiopia, has organized school clubs in the basin areas. Schools in the basin areas supported by Lem-Ethiopia, include, Alem Ketema, Mehal Meda and Mollale secondary school. It has also established relations with Jimma University to work together on the protection of the polluted wetland in Jimma.

Lem-Ethiopia, though small with eleven permanent staff, is an active and effective organization. According to the director, whenever there is a need of experts, the society contracts outsiders to meet its obligations.

Currently, due to financial reasons the society's publication is out of production, but attempts are being made to get sponsors to continue the publication of 'Mother Earth' newsletter.

C. Center for Human Environment (CHE)

This is another local NGO with a very few staff, but active in the refugees areas. The Center for Human Environment, with financial support from the UNHCR, and administrative support from

Administration for Refugee and Returnee Affairs (ARRA), organized workshops, seminars, and trainings and produced environmental education booklets, edited by UNESCO-PEER. For the refugee schools in Ethiopia. These materials (booklets) could be used in the environmental awareness and conservation of the natural resources. Materials are being used in Somali, Benshaigul Gumuz and Gambella Regions refugee and neighboring local schools. Training of the trainers were also organized and conducted by CHE and UNHCR. [The writer of this report was one of those who took part in the drafting of these materials and training of the trainers].

D. ZOA – Refugee Care

This Dutch NGO, which started operation in South East Asia during the flight of the 'boat people', is active in the refugee areas.

It started environment to rehabilitation program to reclaim the damages caused to the area because of the influx of the refugees from the neighboring countries. Its operation sites include the Western Regions of Ethiopia -Gambella and Bnsangulle- Gumuze areas from where the Nile tributaries flow. Though no statistical data is available, the areas within the basin are highly impacted by deforestation and loss of bio-diversity.

ZOA has been running environmental awareness raising programs in the refugee areas for the last six years. Whenever it conducts training, a seminar or discussions it invites local people to attend and participate schools in the area have environmental clubs, the children are cultivated to learn, know and love their surroundings. Get together on World Environment Days to undertake environmental activities.

Materials are produced and distributed between the refugee, and local schools.

E. **Institute For Sustainable Development (ISD)**

This is a local NGO working on sustainable development. It works with youth clubs, student clubs and peasants to develop, raise awareness and equip them with basic skills.

It focuses on the preparation of compost, and its use, cultural biodiversity, rehabilitation of degraded areas.

Its project is in Addis Ababa, Oromiya, Tigray, Wollo, Dire Dawa and Harar. It also supports Gambella Secondary School environment club, and Assosa Secondary School environment club.

5. Other Stakeholders

Our environment is the source of the well being of our society. Well-managed protected/conserved and utilized environment ensures sustainable growth, peace, and justice. Therefore, concern for the environment is the concern of all. This makes all living creatures stakeholders of the environment. For our immediate purpose however, we shall focus on three governmental institutions for they are related to this project, besides the Environmental Protection Authority. These are The Ministry of Water Development, The Ministry of Agriculture and Rural Development, and The Ministry of Education.

A. **Ministry of Water Development**

One the most important and owner of the Nile Basin Institute Project is the Ministry of Water Resources of Ethiopia. One of the general objectives of the Ministry is “conserving, protecting and enhancing water resources and the over all aquatic environment on sustainable

basis”. The Ministry’s policy emphasizes ‘the participation of “the community, protection and conservation “ (Water Resources Management Policy-1999, PP2-3).

The Ministry through its Public Relations Office produces a quarterly magazine known as 'Water and Development'. This magazine often discusses issues related to water conservation, management and environment. The Ministry's network is wide. There are regional bureaus of Water resources), so is the distribution of the magazine, which could be used as one of the means for public awareness creation.

B. The Ministry of Agriculture and Rural Development

The other stakeholder is the Ministry Agriculture and Rural Development. This Ministry is responsible for the development and protection of forestland. It is this Ministry, through the Regional Bureaus of Agricultural, which deploys thousands of agricultural technicians. The model role-played by these technicians in changing behavior and attitude of the rural community, mainly those of the farming population are immense.

Currently, the Ministry has organized more than fifteen middle level agricultural training institutes. Like many other Technical and Vocational Education and Training (TVET) institutions in the country, they are training thousands of young people to work in the rural areas. Contents of the training programs are mainly agriculture, agricultural product marketing etc. There are courses in water harvesting technology, soil and water conservation, plantation etc. each having three credit hours per week for a semester. These undoubtedly will contribute in the conservation of natural resources. But, as these people are going to work and live with the rural adults, courses such as adult education, environmental education should have been included.

The inclusion could take different forms. They could be infused, or they could be included as courses or by integrating with other subjects (e.g. forestry).

The other areas of technical and vocational Education and training (TVET) deal with business/commerce courses such as accounting, sales, banking etc, construction building, roads etc, technology wood work, metal work etc, medical, nursing, pharmacy, laboratory etc. These areas are catered in many public and private middle level institutes. Thousands of students attend these courses. The program of each is divided into main, supportive and common. In all these, one can hardly see a subject geared towards awareness creation and behavioral change. In places / institutions and colleges of these type information on environment are useful so that the youngsters get awareness on the state of the environment and then act to save the earth that supports life.

C. **Ministry of Education**

The Ministry of Education, more than any other ministries, is the key in advancing knowledge and skills. Development without education is unthinkable.

The Ministry of Education of the Federal Democratic Republic of Ethiopia is working on the development, and expansion of educational institutions.

One of the core tasks of the Ministry is to look to into the curriculum of the higher educational institutions. According to the Environment Policy, and the Education and Training Policy, school curriculum should infuse environment education concepts for sustainable development of the country. In spite of the progress made by the

Ministry, still there are barriers to integrate environmental education in to other disciplines of the secondary education, technical vocational education (TVET), and higher education institutions. The barriers need to be identified in the formal education system in general, and teachers training institutes in particular. In light of the country's demand of teachers, and the multiplying effect of teachers, the curriculum of teachers' education should be given priority in the infusing environment topics. To effectively overcome these barriers, commitment of all learning institutions' leadership, academics, staff and community is very important. The commitment of the Ministry of Education, above anyone else, is crucial.

7. The Media and Environmental Education

The role of the media in changing public opinion is a known fact. It can change the state it 'can make or break'. These powerful tools at times become dormant. Sometimes they become active when there is something to shout about. To have such media, the social, political and economic development of the society plays a role

In Ethiopia, the media have no professional tradition of looking at issues of the national concern critically. Journalism as a profession is not well developed. Because of this, and other reasons there is no specialization and hence one can hardly speak of the existence of network of environmental journalists.

For years the media were totally owned by the state. The major preoccupations of the media were to cover what appealed to the officials. After the overthrow of the Dergue's Government, private print media are growing in the country. Be it the state owned, or the private do not give much coverage to the problems of environment, and

environmental education. It is said that the state media agencies are expected to generate their own income and hence if there is no one to pay the cost, they do not run environmental programs freely. Similarly, private press can neither do give coverage to the issue without considering the cost nor do they get sponsors. However, when some times NGOs sponsor for a given event, they cover what do the sponsors prepare. Some four years back ‘Addis Zemen’, an Amharic daily newspaper had a weekly column on environment. For unknown reasons it discontinued. The weekly program on environment at noon aired by the National Radio also discontinued. Some times there are programs on FM Addis, and Radio Fana. Panos Ethiopia a development and communication NGO, has an agreement with Radio-FM Addis to air 30 minutes weekly program on issues of violence, gender, environment etc; and coverage on Tobya Private New Paper on the subjects related to its projects such as Pastoral Communications, Gender, Violence etc. The Ethiopian Television has no regular program on environment except that of National Geography films which sometimes come on air on Saturday afternoons.

During its operation the Conservation Strategy of Ethiopia made attempts to equip local media people with some principles communication skills and be aware of the state of the environment, by organizing training, seminars and workshops. Similarly, the Environmental Protection Authority, through one of its project, namely ‘Combating Desertification’, organized a workshop for the media people.

Currently, neither the state owned nor the private media pay attention to the issue. The newsletters and magazines of the government agencies and NGOs are better channels of communication to the public.

G. **Opportunities and Constraints for Transboundary Environmental Education and Outreach Program**

Like all development activities, this project has to look for the possible opportunities, and constraints. The following section discusses the possible opportunities and constraints.

A. **Possible opportunities**

The Environmental Pilot Project (1985-1995) of the Ministry Education has left seeds for the growing environmental education in Ethiopia. The achievements made by this and other projects, notably, in the infusion of some of the environment concepts in the formal education system, the legal framework set by the government, the growing number of environment oriented NGOs, the youth clubs, the flourishing awareness in the society, the skill and commitment of individuals and community are fertile grounds for the Transboundary's Environmental Education component of the project to take off.

The experience of some NGOs such as the Ethiopian Wildlife and Natural History Society, Lem –Ethiopia and others in mobilizing the youth, organizing school clubs, involving social institutions and individuals could be taken as another assets for the Transboundary Environmental Education project.

The Environmental Protection Bureau of Amhara Region, which is well positioned, better staffed and located at the bank of Lake Tana, could be a potential coordination office for the Region working closely with Bahar Dar University.

In the other regional states, different approaches could be used to exploit the existing opportunities. In Gambella, the regional Office of Environmental Protection, Bureau of Water Resources, Bureau of

Education, Bureau of Agriculture, ZOA-refugee Care, Gambella Secondary school, Ethiopian Orthodox church development commission could join together to raise public awareness on the issues of natural resources management as indicated in NTEAP, in relation to Baro and the Akobo river basin areas.

The experience of the NGOs in teaching materials production is one of the areas that should be considered for the speedy, smooth and effective operations of the project. The materials developed by UNHCER, ARRA, CHE and others are worth mentioning here.

These materials with some changes could be translated and used.

For immediate, and sustainable environmental education activities, the use of non-formal education approach followed by EWNHS, LEM-Ethiopia, ZOA-refugee care, CHE, etc should be considered. The involvement of the grass root people, the youth, churches and people living in the basin and the surrounding areas should also be taken as the primary targets. The financial, and material support should be directed towards these targets.

B. Possible Constraints

One must keep in mind that whenever a new initiative starts there are always some constraints. The existence of constraints, some times, could be taken as a 'bless in disguise'. Reflecting ones experience, learning from documents, and books helps to ease any forthcoming constraints. Therefore, the following points and opinions, gathered during the interview, could help in the smooth operation of the project:

- The success of this project, among other things, depends upon the speedy execution of tasks as per the set schedules. From experience we know that funds do not come on time delays hamper other activities. If

mechanisms are not clearly set, if the system of operations are not defined in advance, misunderstandings will be created, and the effect of the project could be negative.

- Commitments of all offices including international organizations, Federal and Regional Government Agencies, bureaus, individuals within the project and other stakeholders, is crucial for the success of the project. Without commitment lip service will not do any help. Therefore, assuring the commitment of all those who will be involved should be seen in advance.
- The need for clearly defined duties and responsibilities of each actor in the project is important. If the role of each is not clearly set, there will be problems of coordination, execution, evaluation and accountability.
- Ensuring grass root participation; participation of the beneficiaries is one of the kernels for the success of any rural development project. Prior to the commencement of any activities on the ground, the local people should be made participants and eventual beneficiaries. If the people on the ground are not made full participants, one or the other stakeholder cannot ensure the implementation in particular and its success in general.
- Coordination needs to be done by those who are not loaded with some other office duties. Overstretched personnel would not be of use, rather than becoming a problem. Therefore, care should be taken when assignments are given to people.

9. **RECENT PROJECTS AND PROGRAMS**

Wherever the writer of this report has been to, all those whom he talked to were sympathetic to the cause of Ethiopia's alarming environmental degradation. At the same time, concern and emotional

expressions were high. There is an expectation that the Nile Basin Initiative Transboundary Environmental Project would come up with some inputs and solutions to the issue of the promotion of environmental education so that the public gets involved more in the conservation of the natural resources. There is nothing wrong with the expectation. Expectation together with commitment could be key driving forces for new actions. But, this project alone would not change the whole complex of environmental education and awareness development in the country. However, if there are other projects with similar objectives they could complement each other to enhance environmental awareness, and skills. Unfortunately, the consultant could not get more information except one.

This is a project being executed by the Environmental Protection Authority, financed by UNDP- (ETH/03/003/A/01/99-), entitled 'Environment and Sustainable Dry land Management Programme in Ethiopia'. Some of the planned activities of this project (output 2.5, and 4) have similarities with that of NTEAP.

These activities are:

"2.5. Enhance current involvement of youth and women in environment management through school environmental clubs and women's organizations". (P.38).

"Output 4.

- 4.1. Environment issues presented in simple and understandable language and disseminated to the public.
- 4.2. Conduct awareness raising seminars for parliamentarians and other stakeholders.
- 4.3. Produce and disseminate educational environmental films and written material.
- 4.4. Establish regular media coverage of environmental issues.

-
- 4.5. Strengthen the capacity of the EPA, regions and woredas in environmental education and awareness areas.
 - 4.6. Support community level projects.
 - 4.7. Support education bureaus to incorporate environmental education in their curriculum.”(P.39)

Therefore, cooperation between the two projects could help in the implementation of both projects. As both have anticipated activities in Amhara, Oromia, Tigray and Gambella Regions.

10. Lessons Learned

Because of the magnitude of environmental degradation in Ethiopia, various project proposals were developed. Some got acceptance and some did not take off. The Conservation Strategy of Ethiopia represents the former, the Ethiopian Forestry Action Program the later. The Environmental Education Pilot Project (1985-1995) is different from both. It worked well during its existences in organizing workshops, short-term training for teachers, production of awareness raising materials, development of demonstration site in the schools and around schools etc, but did not continue with the previous zeal, and momentum, after the phase out of the project.

Conservation activities that were backed with the Food For work program is another area where lessons could be drawn from. Many criticize the program, as one of the means of cultivating dependence. This issue was raised in a number of meetings, seminars and discussions. On the other hand, there are some people who see the program as one of the means of motivating peasants to run conservation works. Whatever the case, the approach needs to be examined.

The activities of environment NGOs, international organizations, educational institutions, and individuals working in the promotion of

environmental education and conservation could be taken as fertile ground for further development and promotion of environmental education have a lot to inform us. Each has its own strength (UNHCR). These experiences need to be tapped during the implementations of this project.

The existence of legal and institutional means is encouraging. Moreover the integration of environmental education/environment topics in the curriculum, teaching materials development show that there are some activities.

To ensure sustainability, involving the local people, making the teaching and learning process reflect and address the immediate local environment problems as well as that of the future, are important.

Various governmental and non-governmental international agencies and individuals made attempts to address the problems at different times. Teaching materials produced by some of these institutions e.g. UNHCR and CHE could indicate something in the area.

Coordination is another point that should be looked at. The UNDP 5th country programme's environmental education component faced problems of coordination.

Lessons one could draw from the above are:

1. Project recommendations are not taken seriously, and hence lack of continuity, and always people start the same thing as if they did not exist.
2. The media, which are the key to awareness raising, do not take the case seriously. Therefore, it is necessary either to allocate budget for media, or get Government commitment to the media coverage freely.

3.Coordination is a critical area. Depending on state formal structure is not reliable. Therefore, care must be taken in delegation of responsibility for coordination.

CONCLUSIONS AND RECOMMENDATIONS

Ethiopia's economy is based on its natural resources. Of these resources the forest is depleting; the soil is being eroded; the biodiversity resources are being wiped out and the water is becoming scarce. On the other hand, the back ward and traditional hand to mouth agricultural technology is unable to feed the increasing number of mouths ever year. As a result of these and other interacting factors, the country became a reference point of drought, famine and agonizing death of the millions.

The Government of Ethiopia has taken a number of measures to address the problems. The new Economic Policy, Population Policy, Education Policy, Environment Policy and others are some of the legal means to realize and tackle the issues. For these, the government has taken steps to decentralize authority, and establish institutions at the Federal and regional levels. Along these lines means are being created for the public participation. Education, as one of the means of enabling the participation of the public for the protection, and conservation of the natural resource is a dear need. Environmental education in the formal (elementary, secondary schools, and tertiary level) educational system is being infused, and environment courses are given to equip students with the necessary skills. In the non-formal environment education area, NGOs, and various societies are actively working to raise public awareness. They are organizing students' environment clubs, raising public awareness by producing awareness raising materials, organizing meetings, gathering, seminars, workshops and trainings. Although there are needs to bring together these NGOs, with the exception of joining hands on some events such as the World Environment Day, Desertification Day etc. there is no formal environmental education network. The one that acts as an umbrella for NGO's (i.e. – Christian Relief and Development Association), does not focus on environmental education,

rather it is an umbrella for the organizations. Therefore, there is a need for the establishment of an environment education network.

The other core point is the need for coordination. In the implementation of the Nile Transboundary project, coordination at the regional (Amhara, Benshangul-Gumuz, Gambella, Oromia and Tigray) and Federal levels, are very important. The responsibility of coordination should be delegated after the evaluation of the capacity of each stakeholder in the project.

Care should also be taken in involving many ineffective and weak organizations. One should remember the experience of the Environmental Education Pilot project (1985-1995), in which according to some comments, there were problems of collaboration as stated by Bekalo S: “The collaboration between the government departments, did not prove successful”. If meaningful results are to be achieved strong commitment of the Government to promote Environmental Education and awareness, cooperation between and among the regions and bureaus, the community, NGOs, the Federal Ministries, and Agencies are critical. This countrywide cooperation could be extended to the riparian countries to benefit millions of poor and destitute people.

Annex I

Possible Indicators

The number of activities, and its impacts could gauge the success of the project; therefore, the following points could be regarded as possible indicators.

Progress indicators

- Number of environmental clubs involved,
- Number of community members involved,
- Number of tree seedlings planted, survived,
- Length of conservation terraces constructed, in meters/kilometers
- Number of hours/days held at awareness raising meetings,
- Number of booklets, books, newsletters, posters produced, distributed,
- Number and type of tools distributed to the community, school clubs,
- The number of weekly radio airtime allocated for the project.

Impact indicators

- Number of individuals undertaking environmental promotion/advocacy activities.

-
- Number of groups/associations engaged in environmental promotion advocacy activities.

The following could also be added

1. Number of Environmental Education and awareness networks
2. Number of teachers trained.
3. Number and type of Environmental Education learning materials
4. Number and type of Environmental Education modules in schools
5. Number of schools with environmental clubs
6. Number of students graduating on Environmental Education, certificates/diploma. /degree per year
7. Number of universities offering Environmental Education courses.

Annex II

Some of the Multilateral Environmental Treaties and Agreements to which Ethiopia is a party

- 1) Convention to Combat Desertification,
- 2) Convention on Biological Diversity,
- 3) United Nations Framework Convention on climate change,
- 4) The Montreal Protocol on Ozone Depleting substance,
- 5) Convention on International Trade in Endangered Species of Wild Fauna and Flora,
- 6) The Basel Convention,
- 7) The Stockholm Convention on persistent Organic Pollution,
- 8) The Rottestadam Convention on Prior Informed consent,
- 9) The Cartagena Protocol on Bio-Safety.

Interview Sample Group

No.	Sample Group	No. and Names of interviewed
1	Government Officers (Schools)	1. Girma Yadessa
		2. Taddele Bekele
		3. Gebreselassie Gebreamlak
		4. Solomon Getachew
		5. Alemayehu Zewdie
		6. Wondemagegnehu Gebrehiwot
		7. Alemu Tilahun
		8. Melaku Mengistu
		9. Biadglin Tadele
		10. Mulugeta Tesfaye
2.	NGOs	1. Alemayehu Abebe
		2. Moges Worku
		3. Gufla Fetui
		4. Dr. Teferra Wogdersegn
		5. Solomon Hailemariam
3.	Communication Offers (Media)	1. Zewdu Tessema
		2. Argaw Ashine

People Interviewed and people who gave their opinion in writing

1. Alemayehu Abebe
ZOA – Refugee care
Environmental Education Coordinator
Tel. 251 1 52 05 55
Addis Ababa
2. Moges Worku
Lem Ethiopia Development & Environment Society –
Director
Tel. 251 9 40 83 05
Addis Ababa
3. Girma Yadessa
Ministry of Education
Higher Education Department
Team Leader
Tel. 251 1 55 31 33
Addis Ababa
4. Taddele Bekele
Addis Ababa Bureau of Education
Supervision Department
Tel. 251 1 28 88 34
Addis Ababa
5. Gebre Selasie Gebre Amlak
Environmental Protection Authority
Environmental Education Department
Tel. 251 1 46 50 07
Addis Ababa

-
6. Solomon Getachew
Ministry of Water Resources
Head, public Relation
Tel. 251 1 61 11 11
Addis Ababa
 7. Alemayeu Zewdie
D/ Director – Tikur Anbessa Secondary School
Addis Ababa
 8. Wondmagenghu Gebre Hiwot
Institute of Curriculum Research and Development
Senior Geography Expert
Addis Ababa
 9. Gulfla Fetwi
Ethiopia Wild life and Natural History Society
Education Office
Tel. 251 1 62 85 25
Addis Ababa
 10. Zewditu Tessema
Ethiopia Wild life and Natural History Society
Education Office
Tel. 251 1 62 85 25
Addis Ababa
 11. Dr. Teffera Wogdersegn
Center for Human Environment Director
Tel. 251 1 150102
Addis Ababa

-
12. Alemu Tilahun
Amhara Regional State
Environmental Protection and Land use Administration
Bahar Dar
 13. Melaku Mengistu
Amhara Regional state TVET
V/Commissioner
Bahar Dar
 14. Biadgign Tadele
V/Director
Tana Haik General Secondary School
Bahar Dar
 15. Mulugeta Tesfaye
Lecturer, Bahar Dar university
Bahar Dar
 16. Argaw Ashine
Panos Ethiopia
Tel. 251-1-666359
Addis Ababa
 17. Solomon H.Mariam
Institute of Sustainable Development (ISD)
Tel. 251-1-653916
Addis Ababa

ANNEX V

**Questionnaire for the assessment of the
status of Environmental Education Awareness**

I. Directives:

- 1) The purpose of the questionnaire is to get information on what is going as to what is going on in the area of environmental education and awareness if you don't like to answer one or some you may leave them.
- 2) Your cooperation in this area is important.
- 3) The information you give will not in any way impact upon your job.
- 4) At the end, please WRITE YOUR NAME, POSITION, ORGANIZATION – Address, telephone.

II. Questions

- 1) Are environmental education topics included in the school curricula?

- 2) If so, at what level?

Primary Secondary

- 3) How do the non-formal environmental educations is under taken in the area? Please describe the means?

- 4) Are there environmental clubs/associations or societies in your area?

Yes No.

-
- 5) Please write the names of these clubs/associations/societies and address and their focus area?

- 6) Are there environmental NGOs in your area?

Yes No.

- 7) Please write their names, address and their focus areas. If the space is not enough you can use backs side)

- 8) Is there any organization/Grant, NGOs etc./ that is working on the environment of the Nile in your area? If there please write the name of the organization, its mission etc. in short.

-
- 9) In order to mitigate environmental problems as related to water (If there), what would your recommend?

- 10) How many secondary schools do you think are actively engaged in the environmental education and awareness are currently active? Please write the names of the secondary schools, and location/address/ in order of their strength.

- 11) Are the colleges/university in your region involved in the promotion of environmental education, and awareness? Have they included environment subjects, courses in their curriculum? Do they have co-curricula activities?

- 12) Please give us the names of the colleges/faculties engaged in environmental education and awareness?

13) Please give any suggestion you think will help to enhance the public awareness on the environment.

14) Name _____

 Position _____

 Organization _____

Address. Tele. _____

 Fax. _____

 P.O.Box. _____

Thank you,

References:

Ministry of Education

Transitional Government of Ethiopia, New Education &
Training Policy (1997)

Federal Democratic Republic of Ethiopia

Ministry of Water Resources

Ethiopian Water Resources Management Policy (1999)

The Conservation Strategy of Ethiopia

The Resource Base, ITS Utilization and Planning for Sustainability (1997)

Ethiopian Wildlife and Natural History Society & Bird life International
Important Bird areas of Ethiopia (1966)

Postal, Sandra

Pillar of Sand -A world Watch Book (1999)

Nile Basin Initiative Shared vision program

Nile Transpondary Environmental action – draft GEF project (May-2001)

Ministry of Education

National Environmental Education Workshop – Nazareth, Ethiopia
(18-22, September 1995)

Nile River Basin

Transbopundary Environmental Analysis (May- 2001)

Ministry of Water Resources
UNDP Ethiopia Country Office
Program Performance Evaluation Report – on Improvement of the
Resource Population
Sustainability Balance – Program 2 (August- 1996)

Axen, Christer, Mulugeta Tesfay, Mulu Wolde
A Guiding document on Environmental Education in Ethiopia (1995)
(unpublished)

Ministry of Education
Beletu Mengistu, Mulugeta Tesfaye, Worku Gebre,
Yelfegneworku, Zemedet Asfew, Bjornodin Lena Odin
Report on Environmental Education in Programmed in Wollo (1988)

Swedish International Development Authority Regional Soil Conservation
Unit – Environmental Educations Experiences and Suggestions Report No.
10 (Nairobi – 1992)

Stokking, K, ... etal IUCN-CEC
Evaluating Environmental Education (1999)

UNDP

Program Support Document

For the National Programmed in Improvement of the Resource – Population Sustainability Balance (1994)

UNDP

Environment and Sustainable Dry land Management Program in Ethiopia-
ETH/03/003/A/01/99

Bekalo, S.A and Bangay, C

Towards Effective Environmental Education in Ethiopia Problems and Prospects in Responding to the Environment Poverty Challenge – (no date)

UNESCO – PEER-CHE-ARRA-UNHCR

Environment Education

Pupil Booklets, Standard 1 to 8 Addis Ababa (April – 1999)
