

Nile Transboundary Environmental Action Project

Networking Environmental Education and Awareness Practitioners in Ethiopia



Formation of
National Environmental Education and Awareness Working Group

WORKSHOP PROCEEDINGS

Ethiopian Management Institute, Addis Ababa
28 - 29 October 2004

NILE BASIN INITIATIVE

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Initiative du Bassin du Nil

INTRODUCTION

Environmental education and awareness is not new. Environmental education (EE) was passed informal from generation to generation since time in memorial. Children were brought up by their parents to know what plants and animals could be eaten and how to collect them. That is environmental education – getting to know your environment. Environmental education and awareness become an issue in the international arena in 1972 after the UN conference on Human Development in Stolkhom, the formation of UNEP in 1972 and the subsequent establishment of the international EE programme in 1975. EE was then formalised. A series of international conferences like the intergovernmental conference on EE in Tbilisi in 1977 and Tbilisi +10 in Moscow have continued to shape the planning and implementation of EE activities.

The link between a strong environmental education component and the success of any environmental project can not be over debated. The Nile transboundary Environmental action project – one of the seven projects under the Nile basin shared vision has an environmental education and awareness component. The aim of the component is to stimulate positive behavioural change towards good environmental practices among the communities along the basin.

The Nile – the worlds longest river flowing 6,600 km and drains 3.1 m km² – is home to about 160m people. The overwhelming majority of people of the Nile basin live in rural areas and depend directly on land and water resources for shelter, income and energy. This has put enormous pressure on the natural resources and ecological systems on which the economic development is based. This has resulted in a variety of environmental problems – soil erosion, degradation of agricultural lands, desertification, loss of forests and wetlands, overgrazing of pastures, declining water quality, overexploitation of fisheries, eutrophication of lakes, invasive water weeds, inadequate urban waste management, water borne diseases, declining biodiversity, and the threat to climate change.

Coupled by the threats and the fact that the linkages between environmental conditions and human welfare are extraordinarily complex and the appreciation and understanding how human behaviour can contribute to the solving environmental problems remains generally low in the basin, sets a big challenge for deepening public awareness and the understanding of the linkages.

In order to contribute significantly on this challenge, the EE&A component embarked on setting up partnership and networks with practitioners and other stakeholders within the basin. Based on the background that there are many players undertaking various EE&A activities, there is lack of a forum for exchange of ideas and collectively plan and monitor EE&A activities.

Understanding the importance and potential for such a forum, the EE&A component within the Nile Transboundary Environmental Action Project (NTEAP) supported and facilitated the formation of a National Environmental Education and Awareness Working group through a two-day workshop. In addition workshop participants developed National EE&A priority activities and learned on the status of EE&A within the country from paper presented.

This report summaries the proceedings of the workshop. The document is divided into five sections. Section one hinges on the objectives and expected outputs of the workshop. A summary of the papers presented comprises section two, while section three list priority EE&A activities. Section four presents the closing ceremony. Section five groups the annexes.

As the world enters a decade for Education and Sustainable Development (2005 – 2015), it is my hope that this document will act as a baseline for EE&A as we evaluate ourselves at the end of the decade.

Maushe Kidundo
Environmental Education and Awareness Specialist
November 2004

WORKSHOP PROGRAMME

DAY 1

Session 1 Official Opening

| Time | Activity | Facilitators |
|-------|--|----------------------------|
| 08h30 | Introduction of participants, welcome Remarks and program, | Yesuf Abdalla - NPC |
| 08h50 | Opening Remarks, | Ato Yesuf Abdalla |
| 09h10 | EE&A within NTEAP and Workshop Objectives | Maushe Kidundo - EE&A LS - |
| 09h50 | Discussions and/or clarifications | Ato Yonis Beskele |

10:00 TEA BREAK

Session 2 Country papers on Environmental Education and Awareness

| Time | Activity | Facilitators |
|-------|-----------------------------------|--|
| 10h30 | The status of EE&A in the country | Ato G/Amalak |
| 11h00 | EE in schools | Ato Wondwessen G/Hillot, MoE |
| 11h30 | EE curriculum in universities | Dr. Tishome Yizengaw – Vice Minister - MoE |
| 12h00 | Discussion on the three papers | Ato Tamene Tiruneh |

13:00 LUNCH

| Time | Activity | Facilitators |
|-------|---|--------------------------|
| 14h00 | Public awareness and campaigns | Ato Argaw Ashine - PANOS |
| 14h30 | Preliminary assessment of EE in schools; Ngos | Ato Million Belay |
| 15h00 | The role of the media in awareness creation | Ato Wondwossen Mekonnen |
| 15h30 | Discussion on the three papers | Ato Girma Hailu |

16:00 TEA BREAK

| Time | Activity | Facilitators |
|-------|--|-----------------|
| 16h30 | Discuss group topics and form groups | Ato Girma Hailu |
| 17h00 | Individual (one to one) discussions - Networking | |

DAY TWO

Session 3 EE and A activities and opportunities: National and Transboundary

| Time | Activity | Facilitators |
|-------|--|--|
| 08h30 | Recap, | NPC |
| 08h50 | <i>Group 1</i> Enhancement of public awareness campaigns <i>Group 2:</i> EE&A in institutions of learning <i>Group 3:</i> Networking | EE&A lead specialist Maushe Kidundo |

11:00 TEA BREAK

| | | |
|---------------|----------------------|--------------------------|
| 11:30 – 13:00 | Group work continues | EE&A LS - Maushe Kidundo |
|---------------|----------------------|--------------------------|

13:00 LUNCH

| Time | Activity | Facilitators |
|-------|-------------------------------------|--------------------------|
| 14h00 | Group presentations and discussions | EE&A LS - Maushe Kidundo |

Session 4 Way Forward and Conclusion

| Time | Activity | Facilitators |
|-------|------------------------------------|--------------------|
| 15h30 | Workshop Evaluation | Maushe Kidundo |
| 15h40 | Workshop (Country) Recommendations | NPC |
| 16h00 | Closing remarks | Ato Mussa Mohammed |

16:30 TEA and DEPARTURE

ACRONYMS

| | |
|----------|--|
| ABN | African Bio-safety Network |
| CBOs | Community Based Organizations |
| CHE | Center for Human Environment |
| CoSAERAR | Commission for Sustainable Ag. & Env. Rehab. for Amhara Region |
| EE&A | Environmental Education and Awareness |
| ECCO | Ethiopia Canada Cooperation Office |
| EFJA | Ethiopian Free Journalists Association |
| ENA | Ethiopian NEWS Agency |
| ENCCD | Ethiopian NGOs, CBOs for Combating Desertification |
| ENTRO | Eastern Nile Technical Regional Office |
| EPA | Environmental Protection Authority |
| ERHA | Ethiopian Rainwater Harvesting Association |
| ETV | Ethiopian Television |
| EWNHS | Ethiopian Wildlife & Natural History Society |
| GEF | Global Environment Facility |
| ICT | Information Communication Training |
| ICDR | Institute of Curriculum Development & Research |
| ISD | Institute for Sustainable Development |
| M&E | Monitoring and Evaluation |
| MoARD | Ministry of Agriculture and Rural Development |
| MoE | Ministry of Education |
| MoFED | Ministry of Finance and Economic Development |
| MoWR | Ministry of Water Resources |
| NBI | Nile Basin Initiative |
| NCC | National Coordination Committee |
| NCS | National Steering Committee |
| NGOs | Non-Governmental Organizations |
| NPC | National Project Coordinator |
| NTEAP | Nile Transboundary Environment Action Project |
| NWG | National Working Group |
| ORDA | Organization for Relief & Development for Amhara |
| OSHA | Oromo Self Help Association |
| PA | Public Awareness |
| PMU | Project Management Unit |
| PSC | Project Steering Committee |
| RWG | Regional Working Group |
| SC | Steering Committee |
| SLUF | Sustainable Land Use Forum |
| SVP | Shared Vision Program |
| TAC | Technical Advisor Committee |
| TB | Transboundary |
| TBRD | Transboundary Rivers Department |
| TEA | Transboundary Environmental Analysis |
| ToR | Terms of Reference |
| ToT | Training of Trainees |
| UNDP | United Nations Development Program |
| WQM | Water Quality Monitoring |
| WG | Working Group |
| WQMWG | Water Quality Monitoring Working Group |
| WWDSE | Water Works Design and Supervision Enterprise |

SECTION ONE: OBJECTIVES OF THE EE&A WORKSHOP

Workshop objectives

The main objective of the workshop was to learn through sharing of experiences from the existing EE&A project component, identify gaps and plan for NTEAP EE&A collaborative activities.

Specifically the workshop is planned to come up with:

- ◆ An established network of EE&A practitioners within the country by forming WG with agreed TOR and office bearers;
- ◆ Learn from good case studies and if possible plan to scale them up as a way of implementation and delivering EE&A;
- ◆ Establish Transboundary EE&A opportunities and priorities for the country and specifically for the Nile Basin and ;
- ◆ Identified potential partners in the implementation of NTEAP EE&A project within the Basin.

To lead participants on ways of a achieving the objectives, the workshop facilitator (Maushe Kidundo) gave a presentation on environmental education and awareness within the Nile transboundary Action project. The presentation gave highlights on;

Environmental Education and Awareness component within NTEAP

To enhance awareness on the nature of environment and its inter-relatedness in the basin and how its effects on communities, through (i) enhanced public awareness & understanding of Nile Transboundary Environmental issues (ii) networking of secondary schools for project-based learning and (iii) piloting enhanced networking among Universities and research institutions.

Enhanced PA - activities

- Support the development and delivery of TB EE&A campaigns
- Regional training for EE&A practitioners
- Regional briefs for media editors & Environment Journalists on TB issues
- Exchange of environment Journalists & other media professionals between the riparian countries

Enhanced PA - approach

- Formation of working groups in each country
- Launch through a variety of delivery mechanisms
 - Media (TV, Radio, Newspaper, Websites, etc)
 - Institutions (religious, learning, social)
 - Organised groups (scouts, youth, women)
- Link with other SVP, components, projects

Secondary schools - activities

- Establish an electronic network of schools for TB EE.
- Build teachers capacities
 - Training, exchange tours, etc
- Support TB environmental projects within schools
- Organise Nile TB EE award scheme

Secondary schools - approach

- Issue a single contract to an experienced project based learning NGO.
 - Teachers training
- Schools selection by National EE&A working group
- Environmental school projects support through proposals
- Award scheme at National then regional level taking place annually.

Universities - activities.

- Exchange of EE professors, researchers and students between the Nile riparian countries
- Support the development of a university-level course on one or more Nile TB environmental issues

Universities - approach.

- Identify host universities within the basin
- Facilitate a regional meeting
 - Develop exchange formulae (undergraduate Vs Masters, Projects Vs Lectures, etc)
 - Develop a selection criteria
 - Commitment on lecturers' time and support
 - Develop work plan for the development of university course on Nile TB issues

EE&A Linkages

- SVP
 - Applied training - Egypt
 - Confidence building and stakeholders involvement – Uganda
- NTEAP
 - Knowledge management, Micro grants, Water Quality & M&E
- Country level
 - Relevant Government Ministries
 - Working group (all EE&A practitioners)

Why EE&A Working Group?

- Establish a Network of EE&A practitioners
- Forum for learning and exchange of information
- Assist in coming up with National EE&A priorities
- Lobby for positive EE&A change
- Take periodic stock of EE&A activities
- Catalyse dissemination and implementation of activities

The Working Group and NTEAP

- Assist in development of National priority activities and single out TB
- Identification of key implementation partners at national
- Assist in advocacy and networking
- A network (channel) for dissemination
- Share experiences and avoid re-inventing the wheel

SECTION TWO: THE STATUS OF ENVIRONMENTAL EDUCATION IN ETHIOPIA

This section presents a summary of all the country papers presented during the workshop. The topics of the papers were selected to give an overview of the countries status on environmental education and awareness. The papers looked mainly into the (i) legislation, policy, implementation and coordination strategy (ii) environmental education in institutions of learning and (iii) existing cases studies on EE&A campaigns, award schemes, and the role of media in promoting positive attitude change on environmental issues.

The detailed presentations are grouped under Annex V. Below find a synopsis of the status of environmental education in Ethiopia.

Synopsis of papers presented

(i) Environmental Education in Ethiopia, *(Ato Gebreselassie Gebre Amlak, Acting head, Education Department of EPA)*

Ato Gebreselassie's presentation mainly focuses on

- ✚ The major environmental problems in the country
- ✚ The historic background of EE&A in Ethiopia
- ✚ The existing legislation and policy issues in relation to environmental protection, he gave emphasis on the articles specifying EE&A in the
 - ✚ Environmental policy of Ethiopia
 - ✚ Constitution of the Federal Republic of Ethiopia
 - ✚ Proclamation on the Establishment of Environmental protection Organs
 - ✚ Conservation Strategy for Ethiopia
- ✚ Main actors involved in EE&A in the country
- ✚ Major achievements, constraints in EE&A and
- ✚ Possible recommendations to improve EE&A in the country

(ii) The status of EE in schools, *(Ato Wondmagegnehu Gebre Hiwot, Ministry of Education)*

The paper highlights

- ✚ Definition of the word Environment, components of Environment and environmental problems in the country
- ✚ The need for Education in general and Environmental Education in particular
- ✚ The components and Goal of EE
- ✚ The guiding principles, and importance of EE
- ✚ Brief historical background of EE in Ethiopia
- ✚ The essential elements used to smoothly disseminate EE
- ✚ The EE pilot project, and focus of subjects of the project
- ✚ implementation and coordination mechanism of EE in the Ethiopian school system
- ✚ Main constraints in EE and recommendations

(iii) EE in higher education in Ethiopia, *(H.E Dr. Teshome Yizengaw, Vice Minister Ministry of Education)*

Ato Belete from the Ministry of Education did the presentation in behalf of Dr. Teshome, who was unable to attend the workshop, highlighting:

- ✚ The policies and strategies related to EE&A in the country
- ✚ The status of higher education & research in Ethiopia
- ✚ current status of higher education in Ethiopia and major problems in Higher Education
- ✚ Programs offered in Ethiopian higher Education institutions in the area of EE&A
- ✚ Future direction in Environmental Sciences education and research in Ethiopia

(iv) EE and Public Awareness rising and PANOS' Experience, *(Ato Argaw Ashine, PANOS Ethiopia)*

Ato Argaw in his presentation highlighted;

- ✚ The duty, responsibility of PANOS and its institutional arrangement
- ✚ The Environment project and the objective, main components, area of focus and achievement of the project
- ✚ Partnership with different Government and NGOs
- ✚ Lessons learnt, challenges and limitations

(v) A preliminary assessment of the Ethiopian experience of NGOs working with schools in EE, (*Ato Million Belay*)

Ato Million in his presentation highlighted;

- ✚ The results of the assessment based on the findings on
- ✚ The priorities of NGOs in the area of EE&A
- ✚ The target beneficiaries of EE intervention
- ✚ The methodology used to address the targets
- ✚ The way programs developed, used and evaluated
- ✚ The process used for regularizing the production and execution of EE materials and activities
- ✚ The bases of outcomes of EE activities or materials
- ✚ The type of approach used
- ✚ The type of messages transferred based on gender, age, rural & urban locations
- ✚ The feedback mechanism used to revise, modify or improve the EE programs or materials
- ✚ Obstacles to EE
- ✚ Strength, limitations and opportunities and recommendations

(vi) The role of the media in EE&A, (*Ato Wondwessen Mekonen*)

Ato Wondwesson in his presentation tries to point out

- ✚ The background and history of Media development
- ✚ Overview of media development
- ✚ The major activities done so far to make it more effective, in electronic media, Audio visual, and print media
- ✚ What it to be done in the media regarding EE&A to make it more effective
- ✚ Opportunities for collaboration

General Discussions on papers presented

Q. Is there a plan to develop a material on the success & failure of EE&A activities which will help as a teaching for the universities?

Response. The decision of putting any activity in the project, such as best practices and case studies which can help to develop teaching materials etc, is upto each country . NBI has established a database at the PMU level, which can be accessed by any country. If any country can provide reportable case studies there is a possibility of consolidating it as a teaching material.

Q. Elementary schools are not included in the project, which are the basis of environmental management for the future and serves as a link between students and their families and other communities.

Response. If any country believes that they are proper for EE&A the inclusion of EE&A can be addressed in primary schools by each country during the planning process., This can be negotiated with development partners. However, to network primary schools is a very difficult task, but there are other activities that can be included in the project to support environmental activities in primary schools, the same issue was raised in Uganda.

Q. How EE&A are linked with gender and HIV/AIDS in the project?

Response. Gender and HIV/AIDS are not included in the project. Though, there might be a possibility of integrating such issues in the future.

Q. It is obvious that politicians & decision can exert strong influence on the implementation of such projects. What is the mechanism developed to address the political wing in EE&A?

Response. To incorporate activities related to politicians, decision makers and media people is a great challenge, therefore, a very sharp and focused effort is required to address the issue, which needs further discussion during work plan preparation

Q. What is the linkage of universities with secondary & primary schools? And how the efforts of higher learning institutions can be linked to the ground? There is a gap between what we are going to do in schools, universities and the public art large. Is there any possibility to narrow the gap?

Response. At present there is a linkage between higher learning institutions and secondary & primary schools, but this needs further evaluation.

Q. Does Ethiopia has a legal framework regarding EE&A?

Response. The government has issued a new education policy and there is a good opportunity to work together among different stakeholders regarding EE&A. the Environmental Policy of Ethiopia, the three proclamations which were issued by the government are also trying to incorporate issues related to EE&A.

Q. There are more than 60 NGOs working in EE&A in the country, what is the information flow mechanism?

Response. There is no any networking regarding EE&A to date, but EPA has been trying to develop guidelines. There is no information regarding NGOs, i.e. where, how and what they are specifically doing in the area of EE&A. To have a strong networking with different stakeholders there is a need to establish a forum.

Further, EPA is on the process of preparing guidelines and checklist to evaluate EE&A activities in the country, to make sure that efforts of all concerned parties are coordinated and brings tangible change. During the preparation of the Conservation Strategy of Ethiopia, there was a good linkage between EPA and Addis Ababa University. However, the modalities have to be worked out to strengthen the linkage between the EPA and the Addis Ababa University are trying to forge. However, based on the new proclamation on the Establishment of Environmental Organs, the linkage with Regional States and government institutions is a mandatory. EPA is a regulatory institution, which does not have a role in the implementation of activities at grass root level. The main responsibility lies on Regional States, NGOs, CBOs, and Federal Government institutions

Q. What is the role of the private media in relation to EE&A? and how is it possible to use the existing media for EE&A, taking the problem of high payment required into account?

Response. The role of the private media in EE&A is very wide. However, at present private media's are mainly focus on economic & political issues other than EE&A, this calls for different forums of discussion on the subject. Private media is at its infant stage in the Ethiopian context (12 years). To this effect, there are a lot of things to be done in this connection.

There are no trained Environmental Journalists in Ethiopia, and there is no any institution responsible to train Environmental Journalists. .

Q. What are the salient features of integrating EE&A in primary schools?

Response. EE&A in primary school is given as a standalone subject because children are part and parcel of the environment and it is a good way to address EE&A issues to children, while EE&A from grade 5-12 is embedded in certain identified subjects. EE&A are addressed in formal education, informal education. Teaching goes to the formal education, while awareness, skill development, attitudinal change goes to the informal education

Q. The current ICT (Plasma) is not an opportunity for EE&A in schools rather it is a bottleneck, according to an assessment made by teachers, as it impedes the direct and two way access and relationship between teachers and students, though limited.

Response. ICT (Plasma) in schools is a new technology, which most of the recipients are not yet familiar with, and it is not the right time for evaluation. But the Ministry is working to its level best to make it an interactive system.

General Comments

- ✚ Environmental management should be the core objective of NBI
- ✚ Base line survey should be included as an approach to EE&A
- ✚ Environmental problems are site specific, therefore, EE&A activities should be designed to accommodate specific site problems and implemented based on the local situation
- ✚ Political ecological problem should be included as one problem regarding EE&A
- ✚ EE should be seen as experience sharing tool beyond its teaching role
- ✚ Environmental education and awareness are different approaches leading to the same end. Education refers to the formal education while awareness refers to the informal education, and awareness should go beyond seminars and workshops
- ✚ EE is not an end, and rather it is a means to enhance knowledge at all level. The challenge rather is on how to deliver EE&A taking the limited institutional capacity, approach/tools and the resources into consideration.
- ✚ UNDP has established school nets, which will help to facilitate our immediate engagement in EE&A activities in schools

SECTION THREE: SETTING NATIONAL EE&A PRIORITIES

I. Tasks

The facilitator informed the participants on the importance of coming up with EE&A national priorities. Through a presentation he guides the participants on how to effectively come up with activities which can be implemented. The group discussions will focus on three thematic areas:

Group 1. Enhance public Awareness

The group to look at

- Campaigns
- Information (EE & A materials)
- Training of trainers

Group 2. EE & A within institutions of learning

The group to look at

- Secondary schools
 - Curriculum
 - Environmental activities and awards
- Tertiary institutions
 - Exchange concept
 - Course development

Group 3. Networking

The group to look at

- Working group
 - Role – TORs draft (add or delete)
 - Composition
 - Frequency of meeting
 - Sustainability
- Media
 - List of activities

II. Formation of groups

The groups were formed in a participatory process. First participants volunteered where they could contribute effectively. To balance the numbers in each group a few people were move to more appropriate thematic areas.

III. Presentations and Discussions

A minimum of four hours was given for discussions and preparation of group presentation. For easy of compiling and getting relevant information, guidelines were issued on the presentation format as follows;

| Problem | Target group (audience) | Activity | Implementation strategy | Key implementers (partners), | M & E How and who | exist strategy (sustainability) |
|----------------|--------------------------------|-----------------|--------------------------------|-------------------------------------|------------------------------|--|
|----------------|--------------------------------|-----------------|--------------------------------|-------------------------------------|------------------------------|--|

Group Presentation

Group I: Enhance Public Awareness (Campaigns, Information (EE&A materials), Training (community training, ToTs)

| Problem | Target Group | Activity | Implementation Strategy | Partners | M&E | Sustainability |
|--|--|--|---|--|---|--|
| Policy Problems Mainstreaming Enforcement Mechanism | Policy Makers Actors (EE&A practitioners) | Assess the existing policies Advocacy and Lobbying Synthesize the policy makers Develop materials | Experience sharing Discussion Forum Incorporate in any development programs | EPA, Parliament arians, Councils, CBOs, NGOs, Communiti es | EPA, NTEA P Office through meetin g, reports, etc | Operating on the existing system |
| Conceptuality and Practicability Problems | Individuals, Households, Educational Institutions | Knowledge-focused individual and household discussion forum Action-oriented ToT Campaign World environmental days Develop Materials | Strong net-working of environmental actors | Training Institutions , NGOs, Relevant GOs, Media | | |
| Institutional Problems Instability Integrity Low implementation Capacity | policy makers, Actors | Study the appropriate institutional set up Conducive working environment Capacity-gap assessment Trainings - Material support | Establish strong net-working | GO, NGOs, CBOs, Donors | | |
| Problem in identifying proper target groups | GOs, NGOs, CBOs, Individuals | Need prioritization Proper target identification | Creation of working forum Critical thinking (customize) | All involved in EE &A | | |
| Less Attention to Indigenous Knowledge | -Educational Institutions -Actors + policy makers + media | Survey Incorporate in curriculum Advocacy and lobby | Conducive environment to institutions materials, media, | High level institutions , Actors, Traditional institutions , Individuals | | |

Group II: EE&A within institutions of learning (primary and secondary schools)

| Issue | Target group | Activity | Implementation strategy | Partners | M & E | Sustainability* |
|--|--|--|--|--|---|---|
| Low capacity of teachers on EE | Teachers training Teacher training colleges | Scaling up the activity of organizations such as EWNHS in teachers training colleges Selecting schools and identifying teachers. Training teachers -Need assessment | workshops panel discussion field study on line forums | MoE, Schools, teachers training colleges, conservation organizations, government bodies working on environment | Field assessment, report, survey, and feedback. | Institutionalizing the initiative. |
| Lack of supporting materials | Schools | Need assessment Production of resource materials | Publications will be in place. | MoE, Schools, teachers training colleges, conservation organizations, government bodies working on environment | Field assessment, report, survey, and feedback. | Institutionalizing the initiative. Institutionalizing in regions |
| Establishing and strengthening environmental clubs | Schools | Assessing the presence of schools Evaluating the existing clubs Establishing schools environ. clubs Discussing with the school partners | Financial, technical and material support and awards | Schools, GOs, NGOs, etc. | Clubs are established and strengthened. | Institutionalizing. |

NB. There should be continuous flow of resources, including budget, to insure sustainability.

EE and A in higher institutions

| Issue | Target group | Activity | Implementation strategy | Partners | M & E | Sustainability* |
|--------------|---------------------|-----------------|--------------------------------|-----------------|------------------|------------------------|
|--------------|---------------------|-----------------|--------------------------------|-----------------|------------------|------------------------|

| | | | | | | |
|-------------------|---------------------------|---|--|-------------------------------------|-------------------------------|--|
| Needs assessment | Higher institutions | Identifying environmental courses given at the tertiary level Identifying quality of delivery and content. Identifying level of awareness of students | Survey Content analysis Group discussion | MoE and higher institutions | Result of the assessment | |
| Starting clubs | Higher institutions | Assessment of presence of clubs | Financial, technical and material support | Higher institutions, NGOs and GOs | Establishment of clubs | |
| Capacity building | Researchers and students. | Identifying appropriate individuals | Exchange visit Training/ Scholarship Encouraging research | NBI, MoE, Universities and colleges | Number of trained individuals | |

GROUP 3 Networking

As over all national level strategy:

- ✚ EPA will be the coordinator and linkage of EEA with the national development policies and strategies
- ✚ Build the capacity of EPA to undertake this responsibility effectively
- ✚ EPA, Ministry of Education (MoE), Ministry of water resources (MoWR) and Ministry of Agriculture and Rural Development (MoARD) should establish a special contact and working mechanism to network and strengthen EEA in all training/learning institution.
- ✚ EPA should establish a defined and strong linkage/partnership with other pertinent organizations and programs operating within the NBI for EEA and other related programs such as UNCCD, UNCBBD, UNFCCC.

Networking

Four levels set up of organization for Networking

1. National Coordination Committee (NCC) - to be established by the NTEAP
2. National Steering Committee (NSC)
3. Regional Steering Committee (RSC)
4. Working Group (WG)

- Regional Administration will establish and delegate the regional EPA to coordinate the RSC at regional level
- Members of the RSC will be
- Heads of relevant regional institutions/Departments
- Representatives of Regional working groups
- Representative of Civil societies at region
- Representative of private sectors at region

- EPA will establish and coordinate the NSC at federal level
- Members of the NSC will be
- Heads of relevant federal institutions
- Representatives of Federal working committee
- Representatives of Regional steering committees
- Representative of Civil societies at federal
- Representative of private sectors at federal

The Environmental Education and Awareness Working Groups

The working group will be established at Federal and Regional level.

a. National working group (NWG)

The NWGs will be housed in EPA offices.

Composition

1. Senior technical experts from relevant federal institutions represented in the NSC
2. Representatives of the regional working group (RWG)
3. Representative of Civil societies at federal
4. Representative of private sectors at federal

Actual Members of NWG

| | |
|--------------------------------------|---|
| EPA | 1 |
| MoE | 1 |
| MoWR | 1 |
| MoARD | 1 |
| Ministry of Information | 1 |
| NGO | 2 |
| Private Sector (chamber of commerce) | 1 |
| NPC | 1 |
| TAC | 1 |
| PSC | 1 |

b. Regional Working Group (RWG)

The RWGs will be housed in Environmental Protection offices of respective regions

General Composition

Senior technical experts from relevant regional institutions represented in the RSC

Representative of Civil societies at regions

Representative of private sectors at regions

Actual Members of RWG

| | |
|---|---|
| Environmental Protection Authority, | 1 |
| Bureau of Education | 1 |
| Bureau of Agriculture & Rural Development | 1 |
| Bureau of Water Resources | 1 |
| Bureau of Information | 1 |
| Bureau of Trade & Urban Development | 1 |
| Civil Societies (NGOs, CBOs, etc) | 1 |
| Private sector | 1 |

Frequency of meeting

For both National and Regional committees a meeting of three times a year, excluding an emergency call is recommended.

Roles of Working Groups

The aim of the National Environmental Education and Awareness Working Group (NEE&A WG) is to plan and coordinate the EE&A activities and to enhance exchange of knowledge and lessons learned from National and the Nile basin experiences. Specifically the NEE&A WG will;

1. Report to National Steering Committee
2. Catalyze the national and transboundary environmental education and awareness activities within the Nile basin as lessons for the country
3. On an annual basis propose and facilitate implement national action plans with emphasis on transboundary activities for the basin.
4. Update the country status on environmental education and awareness issues
5. Hold annual EE and awareness workshop to review progress and plan for activities for the coming year and exchange of information, ideas and document lessons learnt. It reports regularly to their respective steering committee
6. Ensure that accurate and correct information dissemination to the intended target group and collect feedback to check their proper implementation.
7. Actively participate on World Environmental days to campaign on various issues
8. Lobby and actively work with all concerned bodies for curriculum change to incorporate EE into all formal and non-formal education
9. Carry out periodic assessment on the status of EE & awareness to update the records within the country

Media Activities

The following activities are suggested for media.

- Promotion of importance of EEA, mass gathering
- Use of poster, flyers News papers
- Drama, role play
- Radio, TV
- Use best practice
- Practical shows/Field visit
- Awarding the best practitioners, researchers etc.

Group Three Recommendations

- Putting NCC, NSC, and working group in the same office will not bring efficiency
- The office of the Working Group is recommended to be the office of NPC
- The NCC recommended by the group three is rejected during the discussion

SECTION FOUR: CLOSING CEREMONY

I. Closing Remarks Group

Ato Mussa Mohammed in his closing remark pointed out that the water resources project is under process to be launched, the confidence building will start soon at ENTRO.

He further pointed out that, for the EE&A of NTEAP to be successful high stakeholders' involvement is very important.

Despite all the resource limitations encountered by the National NTEAP during the period, according to him, the NPC was not hamper to organize the workshop, and he extended his heartfelt thanks to the NPC, the vibrant resource persons involved in the workshop preparation and deliberation and the all the participants, for their active participation demonstrated during the workshop.

II. Workshop evaluation

1. Positives of the workshop

- The workshop was the first of its kind, which has brought a lot of experience sharing among the EE&A practitioners (GOs, NGOs, CBOs.....)
- The workshop was well organized and the discussion was very informative, interactive, educative and participatory
- Messages were clearly communicated
- The workshop injected the responsibility and relevancy of various stakeholders regarding EE&A
- Enable the participants to know what NBI is all about and the status of EE&A in the country and the need to strengthen EE&A
- Getting individuals with good practical experiences(good networking)
- trying to bring members of the workshop on the same level of understanding regarding EE&A,
- Free discussion forum, not stressful working environment
- Relatively good coverage on composition of government and NGOs, stairs of issues and sectors
- sharing of knowledge on EE&A
- Time utilization was good
- The confusion I had with EE&A are minimized
- The lead specialist/facilitator has a special skill in making the workshop very attractive
- The initiative taken by NBI/NTEAP has given an urge to focus on the Nile basin regions where doubtfully linked countries are there and the initiative is taken to bring about these countries together so that they use their resources equitably
- The papers presented, the resource persons, the venue and the days of stay and other facilities were satisfactory
- The workshop was so good to assess and identify critical institution and forming National Working group
- A good start in bringing common concerns on political, economical, socio-cultural and ecological issues
- Helps to find the best way to use the precious Nile water & its interrelated resources in a sustainable manner through involving local communities in all 9 riparian countries minimizing the danger that can emerge due to resources conflict(Nile) against the coming generation

2. Limitations of the workshop

- The workshop had not brought relevant Federal & Regional (region EPA, bureau of agriculture & rural development, and water resources), low representation of relevant stakeholders particularly regions in the Nile basin. This requires having another mini workshop where relevant federal & regional actors represented
- Paper to presented, if they are assessment (questionnaire) based, should be statistically accepted
- The papers should reach to the participants before the workshop,
- The project is still far from action
- Compared to the problem and the causes of it, still the initiative is small
- too much program changes
- The meeting place is very far from the center(transportation problem)

- More time was taken by introducing of individuals during the second day
- Absence of incentives

SECTION FIVE: ANNEX I – PAPERS PRESENTED

Status of Environmental Education and Awareness in Ethiopia

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Background

The major environmental problems threatening Ethiopia are:

1. Land degradation, which is the problem of greatest importance
 - Land degradation could be attributed to:
 - Deforestation due to the need to meet the demand for additional land, fuel wood and construction by the ever exploding population pressure which lead to the clearing of the natural forests
 - Overgrazing: high number of livestock over and above the carrying capacity especially in the Lowlands, Central and Northern Highlands
 - Over cultivation: repeated use of farmland will result into low soil fertility. Thus decline in agricultural production

The situation will be worst if proper conservation measures are not taken especially in the steep slopes. Where soil erosion-leading to removal of fertile top soils

Desertification - the land degradation combined with the prevalence of recurrent drought has been responsible for the spread of desertification.

The second major Environmental problem is urban solid waste

Causes:

- The extreme urban poverty and hence lack of urban infrastructure and facilities to
- Removal, recycling, and as appropriate disposing of urban organic wastes, are the challenges prevailing in major or most urban areas.

The third, but growing and becoming very serious problem is water, soil and air pollution, which emanates form:

- Chemical agriculture
- Industrialization and
- Mining as well as
- Air pollution from industries and
- Transportation vehicles

Though the number of industrial plants, which are old and provided with substandard safety measures, motorcars and factories are small; those existing are polluting the environment at an alarming rate.

Solid and liquid wastes that are generated form households, hotels, and other service giving enterprises etc. are polluting rives and streams found around and near cities/towns

Apart from the above mentioned problems

- Misuse and/or abuse of natural resources
- Absence of environmental considerations during planning and implementation of development projects
- Low level of environmental awareness of the public at large has resulted in poor management of the environment

Thus, a concerted effort has to be made to

- Reverse the multi-faced environmental problems
- Popularize and promote the concepts of:
- Environment
- Environmental problems

- Environmental protection and management to the public

This calls for

- A holistic and integrated environmental education and awareness program

Environmental education is therefore, essential to:

- Enhance public awareness by initiating the acquisition of knowledge and skills on mitigation measures
- Develop behavioral and attitudinal changes of individuals and the public at large
- Ensure the protection and rehabilitation of the environment

Historic Background of EE and A in Ethiopia

- The initiation of environmental education was triggered following the 1984 drought and
- Since then the need for changing people's attitude through the introduction of environmental education became imperative
- A tripartite agreement (1985) was reached among
- MOE and the then MOA, and the Swedish International Development Agency / SIDA/ to undertake an EE pilot project under the auspices of the MOE, Intended to expand EE within the youth group
- The first pilot project was undertaken in Dessie and Debre Berhan, and later extended to Awassa and Harar teachers' training institution.
- The project sustained for ten years and some 68,533 students, teachers and farmers had benefited from it
- Once it was evaluated and proved to be effective, the EE pilot project phased out and incorporated into a program under the MoE,
- The project left strong positive impact,
- As a result, EE clubs were established subsequently in hundreds of schools throughout the nation.

Legislation and policy

- Recognizing the severity of environmental degradation, and its adverse consequences on the overall social, economic and cultural development of the country, the government has given due attention to the environment. The government's commitment is clearly demonstrated in the:
- Constitution
- Development policies
- Establishment of environmental institutions, both at Federal and Regional level
- Environmental policies adopted
- Environmental proclamations enacted
- Sectoral and cross sectoral environment related policies issued,
- The various international environmental agreements ratified, among these:
- Convention to combat desertification/CCD
- Convention on biological diversity
- Convention on climate change etc.
- The EPA, at Federal level plays regulatory and coordination role, with the responsible of: -
- Formulating environmental laws, policy/strategy, regulations and set standards
- Promoting EE and Awareness activities
- Playing a coordinating role
- Conduct studies and follow up of the implementation thereof

Environmental provisions in the constitution, proclamations and policy.

- Constitutional Provisions: As stipulated in different articles:
- Article No. 44
- Environmental right
- All persons have the right to a clean and healthy environment

- All persons who have been displaced or whose livelihoods have been adversely affected as a result of state programs have the right to commensurate monetary or alternative means of compensation, including relocation with adequate state assistance.

Article No. 51

Powers and functions of Federal Government: Shall enact laws for the utilization and conservation of land and other natural resource, historical sites and objects,

Article No. 52

Powers and functions of states: Administer land and other natural resources in accordance with federal laws.

Article No. 92

Environmental objective

Government shall endeavor to ensure that all Ethiopians live in a clean and healthy environment-

The design and implementation of program and projects of developments shall not damage or destroy the environment.

People have the right to full consultation and to the expression of views in the planning and implementation of environmental policies and projects that affect them directly.

Governmental and citizens shall have the duty to protect the environment

Environmental Proclamations-

A proclamation provided for the establishment of environmental protection organs (pro. No 295/1995)

Article No. 6

Powers and duties of the authority

Sub article 17

Promote and provided non-formal education programs, and cooperates with the competent agencies/institutions with a view to integrating environmental curricula

Environmental impact assessment proclamation (No. 299/2002)

Article No. 15

Public Participation

The authority or the relevant regional environmental agency shall make any environmental impact study report Accessible to the public and solicit comments on it

The authority or the relevant regional environment agency shall ensure that the comments made by the public and in particular by the communities likely to be affected by the implementation of a project are incorporated into the environmental impacts study report as well as in its evaluation.

Policies/Strategies

- Conservation strategy of Ethiopia (CSE)
- The umbrella framework strategy
- The environmental policy of Ethiopia was derived from this strategy.
- The CSE is an umbrella strategic frame work which is intended to bring about not only sustainable management of resources but also sustainable development which integrates environmental concerns into economic development activities

In the document, it is stated that EE and Awareness policies are:

- To provide in-service training in such specialized subjects as environmental economics, environmental law, environmental monitoring, geographical information system (GIS), pollution monitoring and control, and hazardous waste management.
- To encourage the local development of environmental awareness associations and programs specific to particular agro-ecological zones and support them with scientific inputs.
- To develop environmental awareness programs for urban environments for dissemination by the mass media and foster the development of urban environmental awareness associations, and

- To initiate, encourage and support the involvement of local community and religious leaders in programs to promote environmental awareness
- To promote the teaching of environmental education on a multi disciplinary basis and to integrate it into the ongoing 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.
- To target the public, particularly those involved in public and private sector activities that have significant environmental impacts, for environmental education and awareness program
- To formulate environmental awareness programs in such a way as to make them address specific environmental problems of particular localities in view of the extreme variability of environmental conditions and problems in Ethiopia
- To recognize the important role of the mass media play and to effectively use them in creating and promoting environmental awareness in view of the physical problems of access and communication in Ethiopia
- To strengthen existing higher level training and education institutions so that they can offer programs and courses in sustainable resource and environmental management for economists, planners, lawyers, engineers, sociologists and medical practitioners as well as for natural resource and environmental scientist;

Informal EE and A

In the past there were no as such formally organized campaigns to run the informal EE and A. in terms of projects, programs or specific actions.

However, as a responsible organization the EPA has been working on the promotion and enhancement of EE and A raising activities through:

- Conducting workshops, seminars and trainings
- Production and distribution of print materials, such as brochures, posters, leaflets, magazines etc.
- Previously also in collaboration with mass media
- NGOs that are engaged in the environmental activities are also doing similar activities to enhance the level of public awareness but it is far from adequate.

Formal Education

Curriculum /pre-school - university/

After 1995, the Ministry of Education has already started implementing the integration of EE in the curricula of the formal education.

Thus

- The incorporation of EE at the elementary school level (grades 1-4) is already undertaken
- Integration of EE in different subjects as a chapter or sub chapter (grades 5-12)
- Attempts are being made to commence postgraduate programs at the A.A.U.
- In the field of environmental science
- Dry land biodiversity conservation

Active EE and A- institutions/ NGOs, CBOs, Private/

Besides, the effort made by Government institutions, number of local and foreign:

- NGOs and locally
- CBOs
- Religious institutions
- Private organizations and
- Individuals etc. are actively involved in the Environmental Education and Awareness endeavors of the country.

Examples of Local NGOs include:

- Lem Ethiopia
- The Ethiopian wildlife and natural history society
- The biological society of Ethiopia
- Forum for environment

- ENDA, Ethiopia
- Social Studies of Ethiopia and others are among the local NGOs working in the EE and A activity at national, regional and grass root level.
- Moreover, there are CBOs, religious institutions playing a very important role in the promotion of EE and A. endeavors
- Apart from the local NGOs, CBOs religious institutions etc.
- Number of foreign/ international NGOs are engaged in the environmental management and conservation task at all levels taking environmental education as their main activity

Mode of delivery

Through the production and distribution of publications and using different means of mass media

Main achievements,

- Enhancement of environmental awareness among the general public, youth, decision makers, through the production and dissemination of awareness promotion printed materials
- Establishment of hundreds of school environmental clubs throughout the country
- Establishment of environmental institutions both at federal and regional levels with primary mandate of environmental education promotion
- The emerging of various actors in the environmental protection and management with main focus on EE and A. promotion and
- Initiation and fostering of EE and A through mass media

Main constraints and recommendation

Constraints:

- Lack of coordination among various stakeholders
- Shortage of trained human resource
- Low level of administrative support poor organizational set up
- Absence of mechanisms for collaboration and integration among stakeholders.
- Capacity and resource limitation in transforming legal and policy instruments into practice.
- Poor or loose networking among actors.

Suggested recommendations:

- Forum for collaboration and coordination among actors be created
- EE be taken as a key factor for proper attitudinal and behavioral changes and actions
- The role of mass media, mainly the radio, in dissemination of EE and awareness should get more attention and be strengthened/ fostered
- Linkage between environmental institutions and institutions of higher learning be created and strengthened
- Incorporation of environmental issues in the school curriculum be strengthened
- Local and foreign NGOs engaged in EE activities be mobilized for the task of improving conservation awareness
- Actions of all stakeholders be focused in priority areas where there is an urgent need for EE
- Activities of all relevant stakeholders working in the promotion of EE be integrated in a coordinated manner
- Action plans envisaged in the environmental policy, with regard to EE be implemented
- Well-established and sustainable environmental networking must be created.

The Status of Environmental Education in Ethiopia

1. Introduction

The word environment may mean everything we observe around us. In this regard, it may mean the surroundings. In its ecological sense, it includes the biotic and abiotic factors and the interaction between them. Thus, in a given ecosystem, we find the living and the nonliving co-existing.



In the process of interaction, organisms tend to change and affect their surroundings in many ways. In this respect, the organisms themselves are affected by the change. Thus, the activities of the organisms, to a large extent, determine their own environment. Such interactions between the organisms and the environment are, of course, essential to satisfy the bare necessities of the organisms. Other interactions and interrelations among various factors are, however, so smooth and often so slow that we are not particularly cognizant of the complexity of those interactions and interrelations until something goes wrong. Therefore, we can conclude that no organism lives without an environment.

Humans also depend on the environment to which they are also a part. They rely on it even more than other organisms as they are more than mere biological organisms. Humans are the only species that require more things for their comfort and safety than any other organisms. As a result, humans have developed a new kind of environment called the social and cultural environment.

Environmental education studies the components of given surroundings. Thus, it attempts to see the interdependence, interrelationship and interconnection present among the components.

In environmental education, the word environment consists of two basic facets: the biophysical, which reflects the biological and physical environment and the socio-cultural, which is the same as the social environment.

The socio-cultural environment comprises every thing around us, which is developed by human beings through their talents, tools, skills and social institutions. Thus, buildings, roads, cities, villages, factories, irrigation canals, etc. and artifacts in general are part of the environment. Furthermore, the socio-cultural environment includes society and societal activities originating from culture. All aspects of culture are parts of human made environment.

The integrated structure of human society has grown out of learned behaviors in the form of tradition, values, norms, customs, etc. These behaviors are transmitted from generation to generation through socialization. The acquired behavioral patterns, in the long run, get established and take the shape of social institutions, such as family, marriage, religion, education, economy and polity. Thus, all these are the considerations of environmental education.

1.1. Environmental Problems

The common environmental problem is the imbalance caused by human beings between or among the components of the environment. In other words, the interaction among the components of the environment may promote or limit harmony. When the harmony is limited, the dynamic balance is upset. This in turn triggers environmental problem. Though many of these problems are believed to be induced by humans, it is true that some others may arise out of naturally occurring mishaps, which include cyclones, tidal waves, floods, wild fire, earthquakes, drought and epidemics.

Generally, environmental threats appear to be associated with one or more of certain categories of effects, namely pollution, depletion, land degradation, disease and their consequences for human social, psychological, economic and cultural welfare. The severity of all problems is exacerbated by continuing rapid population increase, which may induce an accelerated deterioration to the environment.

1.2. Dealing with Environmental Problems

Problems are not only ecological but also sociological, technological and economic. Thus, to maintain an optimally balanced relationship among the elements/components of the environment, problems demand solutions which require not only intense study and understanding of cause/s and effect/s but also the will and the authority to weigh evidence, make decisions so that appropriate mitigation measures are taken immediately.

As humans are part of the environment, they should act in harmony with it. Thus, they have to acknowledge their responsibilities for protecting and improving the environment to which they are an integral part. To this end, humans must be educated to recognize the signs and symptoms, which indicate a breakdown in the equilibrium of an ecosystem. Hence, the analysis of environmental problems could be done using conscious measures that include four stages. Stage one is concerned with preliminary investigation and fact-finding. Stage two includes interpretation and planning. Stage three

wholly deals with implementation while stage four is concerned with feedback and evaluation. However, there could be various approaches and terminologies that are adopted by different entities and aimed at undertaking the same task.

2. Background

2.1. What is Environmental Education?

Environmental education is a learning process that provides and increases knowledge and awareness about the surroundings. It develops skills that help decision making with regard to protecting the components of the natural and cultural landscapes in a given areas. Thus, Environmental Education is concerned with giving more emphasis to the environment and its components. In this regard, it is considered as a new approach or reorientation to education with more emphasis on the development of environment literate citizens who will be conscious enough to protect their environments from all sorts of unwise human interventions, which may cause deterioration to the environment.

Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges; develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi (Georgia, USSR) Declaration, 1977).

Environmental education enhances critical thinking, problem solving, and effective decision-making skills, and teaches individuals to weigh various sides of an environmental issue.

Generally, the components of environmental education include:

1. Awareness and sensitivity to the environment
2. Knowledge and understanding of the environment and environmental challenges
3. Attitudes of concern for the environment and motivation to improve or maintain environmental quality
4. Skills to identify and help resolve environmental challenges
5. Participation in activities that lead to the resolution of environmental challenges (UNESCO, 1978)

Environmental education has goals and objectives that operate all over member countries that vowed to incorporate the programme into their formal and non-formal education. These goal and objectives include the following:

2.2. Goal

The general goal of environmental education was first defined at the Belgrade Workshop in 1975. It explicitly stated that the embracing goal of environmental education should be:

- To develop a world population that is aware of, and concerned about the environment and its associated problems, and which has the knowledge, skills, attitudes, motivation and commitment to work individually and collectively towards the solution of current problems and prevention of the emergence of new ones.

Although this is the major goal of environmental education accepted internationally and to which national programmes of EE are directed, the Tbilisi, USSR, 1977 Conference has also defined the overall goals of EE in a more or less similar manner. These are:

- i) To foster clear awareness of, and concern about economic, social political and ecological interdependence in urban and rural areas
- ii) To provide every person with opportunities to acquire the knowledge, values, attitude, commitment and skills needed to protect and improve the environment; and
- iii) To create new pattern of behavior of individuals, groups and society as a whole towards the environment.

2.3. General Objectives and Guiding Principles of Environment

The objectives of good teaching in EE are essentially the objectives of teaching in other subject-matter areas. The Tbilisi conference has also agreed on what should constitute the objectives of EE consistent with its goals. Accordingly, five categories or levels of EE objectives have been identified and agreed upon. These are:

- a. Awareness level
- b. Knowledge level
- c. Attitude level
- d. Skill level
- e. Participation or Environmental action level

2.4. Why Is Environmental Education Important?

Environmental education increases public awareness and knowledge about issues or problems of given natural and cultural landscapes. In doing so, it provides the public with the necessary skills to make informed decisions and take responsible action. Environmental education does not advocate a particular viewpoint or course of action. Rather, environmental education teaches individuals how to weigh various sides of an issue through critical thinking and enhances their own problem-solving and decision-making skills. Environmental education improves our everyday lives by:

- Protecting Human Health

- Advancing Quality Education
- Creating Jobs in the Environmental Field
- Promoting Environmental Protection Along with Economic Development
- Encouraging Stewardship of Natural Resources

2.5. Promoting Environmental Protection along with Economic Development

Our future depends on the ability to use the earth's resources sustainably. The United Nations World Commission on Environment (UNWCE) defines sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainable development poses two fundamental education challenges. One is to promote informed decisions that are conducive to sustainability. The other is to teach the benefits of integrating conservation with the need for economic development.

Therefore, environmental education-contributes to sustainable development efforts by demonstrating environmentally sound design and best practices and ways to promote informed decision-making and teach the benefits of linking conservation and economic development.

2.6. Historical Background of Environmental Education

In 1975 UNESCO (United Nations Educational, Scientific and Cultural Organization), with the cooperation of UNEP (the United Nations Environment Programme), launched the current International Environmental Education Programme (IEEP) in response to a recommendation of the UN Conference on the Human Environment, Stockholm, 1972. Specifically, recommendation 96(Stockholm Conference) called on "the organizations of the UN system, especially UNESCO... to take the necessary steps to establish an international Programme in environmental education, **interdisciplinary in approach**, in-school and out-of-school, encompassing all levels of education and directed towards the general public".

The declaration and recommendations of the Tbilisi, USSR, 1977 Conference have since constituted the framework, principles and guidelines for EE Programme and the continuation of its activities. Thus, UNESCO works with the countries concerned to implement national programmes whose aim is to involve young people more closely in the process of national development—which includes environmental education for environmentally sound and harmonious development. Out-of-school training in science, technology and other environmentally linked studies is one of the important activities developed by the organization among youth through training courses, clubs, forums, summer camps, extension programmes and teaching materials dealing with applications to agricultural industry, community daily life, etc.

Furthermore, evaluation as a fundamental and continuing aspect of effective environmental education was among the conclusions of the Intergovernmental Conference of Environmental Education, held in Tbilisi. Specifically, the Conference called for "the reinforcement of research and experimentation on the lines of emphasis, content, methods and instruments necessary for environmental education".

In the years to follow, after the Tbilisi Conference, the International EE Programme conducted a second world wide survey with a view to determining present needs and priorities of member states in relation to environmental education, so as to guide the IEEP in its own planning of future activities.

UNESCO-UNEP ENVIRONMENTAL EDUCATION NEWSLETTER, Connect Vol. XI, No.4.December 1986 emphasized, " The environment itself is the greatest instrument for environmental education, that is, the use of local environments, or "micro-environments", as the living school for education about the environment in its most concrete sense, is the most effective way of realizing the teaching/ learning objectives of environmental education. It is education in the environment, on the environment through the environment and – coupled with problem-solving – for the environment".

The International Environmental Education Programme (IEEP) - 1990-1991 indicated UNESCO'S effort in providing priority to the implementation of the EE programme in basic, primary, secondary, technical, vocational and higher education. The same consideration is believed to apply to nonformal education, that is, education outside the formal school system.

In the same year, i.e. 1990-1991 UNEP'S Governing Council did similarly emphasize environmental education and training, as before, in the UNEP programme for the following two years. It also emphasized some focus areas that need attention within the realm of International EE Programme which included: climatic change and atmospheric pollution, management of shared freshwater resources, deterioration of coastal areas and oceans, land degradation (halting

desertification and deforestation), biological impoverishment (including problems and potentials of biotechnology), hazardous wastes and toxic chemicals, and degradation of human health conditions and the quality of life.

Thus, from the above brief explanation we can conclude that environmental education has gone a long way since its introduction to help manage the dreadful loss of the environment so as to curtail problems within the shortest time possible and restore the degraded environment as to benefit the whole components of the environment particularly the human society.

2.7. The Essential Methods Used to Smoothly Disseminate Environmental Education

Environmental education may be effective when only appropriate methods are used to employ proper techniques that would help use the natural resources wisely and properly. To this end, Environmental education encourages inquiry and investigation and enables the learner to develop critical thinking, problem-solving, and effective decision-making skills. Moreover, environmental education enables individuals to weigh various sides of an environmental issue. To this end, environmental education uses, where possible, the problems of the pupil's community, at least as the starting point for discussions of large-scale problems. In this regard, it shows the relationship between technical knowledge, and the influence of accepted values or sets of values. Moreover, it stresses the need for active participation, a desire and concern to play a real part in the work of planning, developing and managing the environment, and the importance of one's own behavior, environmental ethic and lifestyle, particularly, but not exclusively, as a consumer of natural resources.

3. The Environmental Education Pilot Project in Ethiopia

The environmental education pilot project in Ethiopia was initiated in the middle of 1985 by the Ministry of Education. It was initially conceived by way of assisting the Ministry of Agriculture's conservation-based development programme. By using MOEs delivery network, the project sought to develop awareness and understanding of the existing environmental problems among teachers, pupils and adults in the formal and non-formal educational system.

When the project was envisaged as part of an integrated plan of action, emerging from the conservation based development strategy adopted for the highland areas of Ethiopia; it was thought that practical activities would be better combined with theoretical knowledge. Accordingly, Dessie and Debrebriahan Teacher Training Institutes, in Debube Wollo and Semen Shoa Administrative regions respectively, were selected by MOE as focal points of the project to disseminate environmental education to other areas. Now, it is believed that the project is being implemented in all Teacher Training Institutes in the country.

The Ministry's Environmental Education Project then had major goals and objectives. These major goals and objectives are the reflections of internationally accepted goal and general objectives of the environmental education mentioned earlier.

During the Environmental Education pilot project in Ethiopia, agriculture, biology, geography and home economics were the four subject areas found to be particularly relevant for the infusion of environmental education. These courses were analyzed to locate areas where environmental content and associated skills could be incorporated.

A good way of infusing environmental content, skills and attitudes is to first examine the content, skills and attitudes recommended for existing disciplines. This listing of content, skills and attitudes is then compared with the objectives for environmental education. When the two are interrelated, infusion of environmental content would also be extremely easy to accomplish. However, the multi-disciplinary nature of EE demands that most of the existing disciplines be used in order to achieve its objectives.

The natural sciences are so closely related to the physical and biophysical environment that it is easy to believe that the teaching of science is also the teaching of environmental education. Like other subject areas, however, science needs to be given an added dimension. That is, it should be based on the immediate reality of the students so as to enable them to apply general principles of scientific character to analyze and explain different events, which take place in their daily life. The sciences should transmit a detailed insight into the causes of environmental strain and their impact on human life

Instruction in the social sciences should analyze the conflicting interests behind exploitation and protection of the environment and outline alternative scenarios. The students must understand to take part in the responsibility for environmental management. In health education, consideration should be given to the relationship between pollution and health in accordance with the actual conditions of a region. The students must understand the relationship between health and environment and that the environment has to be maintained or improved for the good of everyone's health.

4. Legislation or Policy

The environmental education programme, in Ethiopia, has been adopted from UN Environmental Education programme. Thus, no legislation or policy has been found enacted by the government that enforced the Ministry of Education to include the programme in the then on going curriculum reform. However, as the programme was found valuable by MOE, it was incorporated into the formal education curricula by compromising it with the environmental needs of the country at large.

5. Implementation / Coordination Mechanisms

Environmental education programme in Ethiopia was later on absorbed into the existing curriculum of both primary and secondary education. Since then it has been incorporated into the formal education curricula integrated through the social and natural science subjects, for grades 1-4: environmental science, home economics, agriculture, etc. Furthermore, in grades 5-8, environmental education is offered in different subjects under different topics, through both integrated and linear approach. For example, in social studies, it is offered under the lesson topics geography of Africa and the world with possible details of the natural environment.

In the secondary school system, like the upper grades of primary schools, linear approach is implemented. Though it is also possible to incorporate EE into other subjects, by their appropriate nature, Biology and Geography have been selected as carrier subjects to offer environmental education.

For systematic dissemination of education, syllabi for different grade levels have to be prepared. Thus, the syllabi for grades 1-4, incorporate all elements of the environment in an integrated whole. Based on these syllabi, textbooks and teachers' guides are prepared for each grade level. Continuity and depth are maintained while developing the textbooks. Teachers of this level are equipped with the syllabi, textbooks, teachers' guides and minimum learning competencies.

For grades 5-8, textbooks are prepared on the basic sciences, and biology and social studies. The textbooks help students to focus on varied natural environments with their components and their conservation mechanisms, which help them, use natural resources wisely and protect the environment so that it persists. Teachers of this level are provided with syllabi, textbooks, teachers' guides and minimum learning competencies.

For grades 9-12, textbooks are developed based on the syllabi for Biology and Geography with regard to various natural environments and their components.

Though teaching materials are commonly prepared on the basis of centrally designed syllabi, Ethiopian schools do not have networks concerning information exchange and dissemination. However, there are various functional clubs in Ethiopian school systems, which, in a way, share the same information with regard to protecting the environment. One of the clubs, which deals with the environment, is known as Nature Club, Environmental Protection Club or Environmental Club. The objective of establishing such a club is to help students look after their environment properly. In every school, especially in the secondary schools, club members are periodically engaged in planting saplings in their school premises or in other areas identified by local administration. Club members are busy watering these young trees every late afternoon as per the timetable set for them.

Tree growing is usually done during the wet seasons. In this regard, they have connection with Environmental Protection Authority and civil societies. For example, they have connection with an NGO called "Lem Ethiopia" which is concerned with restoring lost forests and replacing dying components of well identified forest covers. There are renowned schools, in this regard, which may be exemplified by selected schools, such as Kokebe Tsibah in Addis, Batu Terrara in Bale zone, and Woliso secondary schools in southwestern Shoa in Oromiya regional state.

An attempt has been made to explore as to whether Ethiopian schools have compensation or award schemes with regard to environmental education. It is learned that no such attempt has been instituted let alone in EE but also in other disciplines. However, certificates of participation might be provided at the close of the school year to students who have actively involved in extracurricular activities in environment club etc

As indicated earlier, environment clubs in schools have horizontal connection with governmental or non-governmental organizations to make their club activities lively and work oriented. In this regard, environmental protection Authority, regional agriculture head offices or *woreda* head offices, civil societies like Lem Ethiopia, as indicated earlier, are main collaborators. They help school children by providing them with seedlings and some technical assistance.

Environmental education and awareness programme is smoothly carried out in all schools as it is incorporated in the different curricula based on integrated and linear approach. Every school, especially in the first cycle of the primary education, practices environmental science very well. Pupils are made busy by studying the components of their environment. They actively participate in conserving plants and soils in their localities. They are usually engaged in watering plants and cleaning their school premises. They also practice how to get rid of agents of soil erosion within their school environments.

As most children in the rural schools come from the surrounding farmlands, learning environmental science is very comfortable for them. They are also able to raise the awareness of their parents with regard to the important aspects of the environmental science related to clearly observable elements of the environment.

6. Main Constraints on EE & Awareness with Schools

In the Ethiopian school system, Environmental Education is given; it could be said, in all grade levels. But school communities, especially teachers, are not aware of it as expected. Even some times, they are puzzled whether environmental education is given integrated and based on linear approach in the lower and upper primary schools respectively or its component parts are offered incorporated into other subjects in the secondary schools.

Even authorities in education have some sort of illusion that while environmental education is offered in schools either integrated or based on linear approach, incorporated into other subjects; still it appears that they feel it is not included in our school system.

Most amazing is that authorities outside the school systems appear to be more concerned than any educator about the environment and they feel that they are the pioneers of introducing or suggesting the inclusion of environmental education in the Ethiopian school system when it has already been deep rooted in our school system. In fact, environmental education spearheaded by environmental science has been introduced to the Ethiopian school system since 1981 when general polytechnic education was implemented as educational approach in the Ethiopian school system.

7. Recommendation

To start with, it is essential to recognize that environmental science is one form of environmental education offered in the first cycle of the Ethiopian primary schools. Thus, instead of trying to bring EE& awareness from without, it is better to enrich it from within the curriculum, especially paying attention to the curricula of environmental science.

There are many opportunities to further strengthen the ideals of environmental education in schools at present where environmental science is offered in grades 1-4 as a specific subject, in grades 5-8 in both integrated and linear approach and in grades 9-12 incorporated into appropriate linear subjects. Moreover, in the secondary schools where ICT is operational, strengthening and concretizing lessons offered in environmental education would be meaningful as visualization is the basis of the programme.

To strengthen the already existing programme and to make the learning experience of environmental education effective in both formal and non-formal education, its methodology should be updated in such a way that it enhances critical thinking, problem-solving approach and determination in decision making with problems related to the environment.

Further more, other stake holders, such as Environmental Protection Authority, civil societies, NGOs and recent initiative takers like NBI(NTEAP) should make it a point that they work more or less to a common goal that protects the environment with due attention to what is going on the Ethiopian school system with regard to Environmental Education.

In addition, school children are well acquainted with the basics of environmental education in schools. In this regard, it is believed that they could participate in raising awareness of their parents and the community at large. Thus, the focus today should be geared towards non formal and informal education so that people out of school should know more about their surroundings so as to use it sustainably.

Environment Education and Public Awareness Rising: PANOS' Experience

Argaw Ashine

About Panos

- ❖ Panos Ethiopia is a country office of Panos Eastern Africa in Kampala, Uganda. Panos EA is a regional office working under the Panos Institute based in London.
- ❖ Panos EA works in Eritrea, Ethiopia, Kenya, Sudan, Uganda, Somalia and Tanzania.
- ❖ Panos Supports journalists in their reporting of development issues with a focus on Pastoralism, Environment, Gender, HIV/AIDS, Media and other development concerns.
- ❖ Panos as a committed institution promotes awareness raising programs on the above issues to the general public, professionals, and particularly to media professionals and policy makers.
- ❖ Panos is also engaged in the process of strengthening local civil society by supporting and encouraging different amateur and student groups in their development endeavors.
- ❖ Panos has initiated different campaigns locally and internationally. The White Ribbon Campaign, Nov 25, an international day marked by the UN, is initiated by Panos for its commemoration in Ethiopia. Panos is also strongly involved in the 'Big Noise' Campaign of Oxfam, to change the situation of the Coffee crisis and help Coffee farmers in Ethiopia.



The Environment Project

- ❖ Information dissemination on the environment and development is a crucial instrument to enlighten and educate people at all levels and to influence the policy making process towards environmental conservations.
- ❖ The provision of information on environment conservation and its relation to sustainable development is thus crucial both to the rural and urban population, and also to policy makers at the macro level.
- ❖ The population at large needs the necessary information to live an environment-friendly life and policy makers to formulate environment-sensitive policies, which would protect and sustain the environment. This, we believe is among the essential conditions for sustainable development.
- ❖ The media has a pivotal role to play in the process of disseminating effective information and analysis on environmental issues, and raising the awareness of the public and policy makers on environment & sustainable development.

Objectives of the project

- ❖ Provide accurate information and analysis on environmental issues to the community development practitioners & policy makers.
- ❖ Binging environmental problems to policy-makers' attention and seek possible solutions.
- ❖ Contribute towards, an environment sensitive public behavior thereby reducing the environmental degradation and ensuring a culture of environment conservation.

How we are doing?

Panos launched its environment education program in the year 2000. The program consists of the following activities:

- A- Radio program
- B- Environment forum for journalists
- C- Commissioning features on environmental issues.

a) Radio Program

- ❖ This weekly radio program enables different environmental institutions to reach the general public for example AAEPA annually offer 2 weeks to promote & campaign World Environment Day.
- ❖ Clean and Green Addis Ababa Association frequently campaigning through our radio program.
- ❖ The content of the radio program depends on the following guideline objectives.

- ❖ Provide detailed & accurate information
- ❖ Pinpoint major environmental problem & show ways to alleviate and diffuse them.
- ❖ Reflect main factors for environment degradation.
- ❖ Magnify activities being carried out to conserve the environment.
- ❖ Broadcast program with examples that show the role of community.
- ❖ Publicize environment policy & programs.
- ❖ Promote global environmental agreements in which Ethiopia is a signatory and thereby encourage participation in materializing those agreements through practice.
- ❖ Enhance knowledge of conservations of environment by presenting and sharing experience of others.

b) Environment forum for journalists

- ❖ It is one of critical interventions area to improve the public awareness through media. The forum organizing for journalists enables them to develop a reporting skill and introduce environmental issues in their writings. It's a good opportunity to reach both government & private media journalists through this activity.
- ❖ Monthly we organize a forum, identify the most relevant topics and invite experts to speak on the topics. Every month 30 to 35 journalists attend the forum, develop their own stories and publish /broadcast on their respective media. Topics such as the 'Rio-process', climate change, Agenda 21 have been covered.
- ❖ The attendants (journalists) are very interested and interacted. After completion of a yearlong forum we evaluate the impact & need. The result indicates a very high demand of to know about environment particularly the global situation. Some editors attended the forum intend to initiate their media more coverage on environment.

C) Commissioning features on environmental issues

- ❖ It's followed with a capacity building briefing forum and a plan to encourage journalists to think they are "responsible". Locally Panos Ethiopia commissioned different articles wrote by environment forum participant and professionals. Those articles published on newspapers, Panos rent a page.
- ❖ Internationally from Ethiopia some articles commissioned by Panos London including article wrote by EPA directorate or Tewelde G/Egzabher. Internationally commissioned articles compiled & published via Panos website, hard copy also distributed.

Monitoring and Evaluation

- ❖ Our environment radio program annually evaluate by an independent professional, we also collecting a feed back from our audience. Radio Ethiopia (FM 97.1) conducting audience research and evaluate the program performance.
- ❖ We are strongly monitoring the performances of environment forum participant journalists.

Partnership

- ❖ Panos locally and internationally working with media (private & government) established a strong partnership. One arm of Panos based in London Inter World Radio currently working with more than 100 radio stations across a developing countries.
- ❖ We have a good partnership with different GO'S and NGO'S.

Lessons Learnt

- ❖ It's clear that more media intervention should be considered.
- ❖ For best use of the media, intensive capacity building and awareness creations activities needed. Electronic media particularly radio is the shortcut to reach the majority of populations.
- ❖ The existed misunderstanding of environment among the media professionals hampered the efforts made by other stockholders.

Challenges and Gaps

- ❖ Most of our media professionals lack basic knowledge on the issue of environment, its contribution to and direct relations with development pursuit.
- ❖ Surprisingly most people including journalists think that the environment issue is not more than tree plantation and cleaning the compound. This indicates the need for the incorporation of environment courses as an important component in media-training curricula.

- ❖ The absence of private broadcast has limited the information dissemination
- ❖ Weak engagement of NGO's & GO's and other stakeholders in environment education programs.
- ❖ Only Forum for Social Sciences (FSS) and Forum For Environment (FFE) are engaged in environment sensitization programs through a radio program and a public hearing respectively

Limitations of government and private media

- ❖ Most private newspapers give more attention for political & commercial topics.
- ❖ The government media is devoted on event reporting.
- ❖ In recent years environment issue on the media is dominated by other serious problems such as HIV/AIDS.
- ❖ That is true HIV is a major global problem but environment issue also needs more coverage and attention than it is having apparently.

Recommendations

- ❖ Strengthening media intervention and capacity building programs.
- ❖ Lobbying Academic Institutions to be engaged in environmental researches and facilitate trainings.
- ❖ Organizing student clubs to reach the school community with environment concerns.
- ❖ Community Conversation Enhancement-CCE to educate the wider public on environment conservation.
- ❖ CCE is the newly emerging way of communication, which is now bearing a great success in different development education programs, especially in HIV/AIDS education. It's the best way to deal with any community and sustain the environment thereof.

Environmental Sciences in higher education in Ethiopia

Dr. Teshome Yizengaw

Introduction

The overwhelming majority of people in Ethiopia lives in rural areas and depends on land and water resources for food, shelter, income and energy. Ethiopia is one of the richest water resources potential areas in the world. Its water resources could be sufficient for domestic water supply, irrigation and hydropower generation. However, the use of this potential is still meager.

The diverse nature of climate, physiography and soil in Ethiopia have resulted in diverse and complex types of land features and systems and soil, water and other natural resources. Largely, however, these resources are either not effectively used or, if used, are used in wasteful and degrading manner. Misuse of these resources and lack of awareness on conservation and management for better use are the major factors contributing to the deterioration of these resources. In addition, low capital investment, fast growing population pressure, lack of alternative income sources, lack of awareness and trained human resource have worsened the situation. Multi-sectoral integration of efforts, however, can bring solutions to these complex problems and ultimately provide the way forward in the best use of these resources to bring the population out of poverty and improve its livelihood.



The people of Ethiopia are endowed with diverse and rich natural resources, and ironically are facing considerable challenges to the extent of threat to their very livelihood. The severe poverty situation in Ethiopia coupled with increasing population growth and mismanagement and use of resources put tremendous pressure on the natural resources and ecological systems on which the life of the people and economic development of the country depends.

A variety of environmental and other problems undermine the efforts being made to reduce poverty and stimulate sustainable economic growth. Soil erosion, degradation of land, desertification, loss of forests and wet lands, overgrazing of pastures, declining water quality, inadequate urban waste management, declining biodiversity and threat of climatic change are few of these problems.

The linkages between environmental conditions and human welfare are complex. Human development depends on the ability of the environment to provide goods and services and sustain these into the future. Sustainable development and environmental conservation appear as prominent goals in the national development plans and strategies of Ethiopia. Significant progress has been made towards the adoption of environmental laws and standards although enforcement often remains problematic. Implementation of these plans and programs is, however, usually hampered by a lack of financial resources, inadequate human resource, weak institutional capacities, and problems inherent to certain policies. Integrating environment and development within sectoral decision making and economic planning remain at a preliminary stage. The improvement of institutional capacities for environmental management remains a major goal and challenge.

To combat soil and water resources degradation through proper use and conservation of all natural resources, to promote awareness on environment and sound management of natural resources including water, and to successfully implement the strategies of the agriculture led industrialization policy of the country, producing competent and responsible professionals in environmental sciences, as well as soil and water management is crucial.

Policies and strategies related to environmental sciences awareness, development and education

Ethiopia has prepared or promulgated several strategies and policies that address issues of environment and resource use, conservation and management. The Ethiopian Sustainable Development and Poverty Reduction Program has addressed the issues of water resource development and management issues in terms of policies and strategies of implementation. The water resources management policy of Ethiopia has goals of enhancing and promoting efforts towards an efficient, equitable and optimum utilization of available water resources and contributing to the country's development on a sustainable basis. These goals are expected to be achieved by developing the national water resources to the benefits of the people, developing comprehensive and integrated plans for allocation and use, managing drought and floods, and conserving protecting and enhancing water resources and environment on a sustainable manner.

The Food Security Strategy focuses on rehabilitation of the environment of mainly the chronically food insecure and moisture deficit and pastoral areas. It recognizes environmental and natural resources sustainability as critical factors in the

pursuit of food security and economic development. It considers diversification of production as a key factor in risk management.

The Water Sector Strategy of Ethiopia incorporates assessment studies on the quantity and quality of water resources, assessment and evaluation of hydrological and metrological network and information sources, reviewing and updating master plans, harvesting rainwater and undertaking surveys on water transport potentials, their development and improvement as its focus areas of intervention. It also emphasizes undertaking soil and water conservation measures, encouraging community participation in watershed management and water conservation, enforcing legislations to prevent water pollution, creating river basin management institutions and agencies, and building human resource capacity as core issues to be addressed. Furthermore, identifying and developing common development projects in relation to trans-boundary rivers and promoting improvement of environmental sanitation, mainly through public awareness are central in the strategy document.

The Environmental Policy of Ethiopia states that its overall goal is to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole so as to meet the needs of the present generation without compromising the ability of future generations to meet their own demands. It emphasizes on integrating the development, management and conservation of resources such as forests with those of water, land, soil and energy resources, as well as ecosystems, genetic resources and crops and livestock production. It also emphasizes the social acceptability and economic viability of management and conservation works to be sustainable.

The priority areas of action in environment and development include:

- ❖ Strengthening and expanding efforts to address the critical problem of land degradation, including deforestation, overgrazing, soil erosion, etc.
- ❖ Strengthening institutional and regulatory capacity, and
- ❖ Strengthening measures to preserve, develop, manage and sustain use of biodiversity resources.

Status of higher education and research in Ethiopia

Economic development is largely a process by which knowledge and skills are transferred into goods and services for human development. Human development, expressed by longevity in life expectancy, education and skill at all levels and decent living standards, is directly or indirectly influenced by the delivery of higher education and research. Higher education is important for human development. It produces the human resource (managers, teachers, businessmen, professionals, researchers etc) that is required for socio-economic development of a country. In addition, the institutions also serve as major research establishments where knowledge and skills are generated, adapted, adopted and disseminated. Furthermore, it plays a significant role in providing community services through consultancy. It is therefore, critical for the achievement of economic progress, political stability and peace, as well as building democratic culture and cohesive societies. We need to develop higher education provision and research in order to bring about a sustainable increase in economic and social development.

Higher education benefits individuals and the economy as a whole. Data from many countries show a positive correlation between increasing higher education access and economic growth as expressed by increasing per capita income and/or human development index. The correlation between schooling and growth performance in many emerging economies of the world suggests that high levels of upper secondary and tertiary attainments are important for human capital to translate into steady growth. We all agree on our thing: that higher education and research must be at the forefront of development and poverty alleviation efforts of our country. It is eventual for survival in this competitive world.

Higher Education in Ethiopia is limited in its development and distribution. It is relatively young, a little over 50 years old. Currently there are eight universities and a college under the direct auspices of the Ministry of Education. In addition to these, there are over a dozen private and other governmental higher education institutions. Higher education in Ethiopia is not well developed, and faces problems associated with the quality and relevance of programs of studies and research, equity, resource constraints, and inefficient resource utilization. The universities' contribution to the development of the country, particularly by producing large numbers of the human resources required for development and undertaking relevant and quality research, is not significant.

The annual intake capacity of degree students has increased from around 3 thousand in 1994 to over 31 thousand in 2004. The system as a whole (private and public) has a total student population (degree and diploma) of about 172,522 (77% in public and 23% in private and non-governmental institutions) in the 2003/4 academic year, an increase of 16% compared to 2002/03. Out of these, about 101 thousand (88% in public and 12% in private institutions) students are enrolled in degree programs.

The gross enrolment ratio (GER) is still around 1.5%, which is extremely low compared to many countries with comparable population size and even by Sub-Saharan standard that is around 3%. Due to the low student population, the system is not able to meet the demand from the economy. In 2001/02, the student population per 100,000 inhabitants is estimated at about 125 to 150, showing critical shortage of highly trained human resource and poor competitiveness. This is below the nearly 200 student's average value for countries with comparable GDP. The total number of graduates in 2003/04 was 39441 (29% of which are female), a significant increase from the 11627 in 1999. Consequently the number of graduates who could change the livelihood of the nation and its people was insignificant.

To ensure a country's competitiveness and sustainable development, educating people has to be a priority—a major political priority. That is the case in Ethiopia, where the government's development and poverty alleviation policies and strategies give emphasis to education, including higher education and research. Without more and better education, it will increasingly become difficult to utilize available resources effectively for national development and to benefit from the global knowledge – based economy.

Without a significant increase in participation/access in higher education as well as all the other levels of education and training, Ethiopia will not be able to develop the broad base of labor capacity needed for sustained economic growth and a place in the global economy. In addition to striving to fulfill the Millennium Development Goals of universal primary education, a strategy of more than doubling the tertiary education participation is requested to boost academic development. With the increasing secondary school student's population and the ever growing demand from the economy, there is a need to further expand higher education access in Ethiopia. Both the public and the private institutions shall produce skilled and able teachers, administrators, managers, accountants, bankers, lawyers, engineers, health professionals, and public as well as private sector leaders, researchers and innovators with the required quality in large numbers. Coupled with other favorable factors many countries were able to have a take off in their economic growth when the higher education participation rate is significantly high.

Accommodating about seven percent of the age cohort, by 2009 it may be necessary to increase the total student population in the regular programs to reach over 360 thousand in the higher education institutions. With a possible attainment of 10% and 12% participation, there will be a need to cater for over 520 and 630 thousand students in the sector, respectively. This can only be met by expansion of the sector both by government and private providers. Therefore, we need to build capacity to accommodate at least 100 thousand students annual intake at a national level in the next five years. This requires strengthening of the existing institutions by building capacity to have a total student population of about 20-25 thousand in each university at undergraduate level and also the establishment of 8-10 new institutions in different parts of the country that will eventually grow to a university level.

Private provisions shall also be encouraged to develop in order to complement public institutions, to increase diversity of training programs and broadening social participation in higher education. The Private and non-governmental higher education institutions can respond efficiently and flexibly to changing demands and increase educational opportunities with little or no additional public funding. This emerging sector is introducing healthy competition, innovation and managerial efficiency. The resulting diversification may encourage the growth of systems that are more closely attuned to labor market demand and development needs.

Programs offered in Ethiopian higher education institutions

Increasing awareness of environmental problems has been instrumental for the convening of several international conventions and adoption of declarations and codes on the issue in many countries of the world. Although institutions did not pick up the issue until recently, currently there are several programs of education, training and research in higher education institutions. Graduates who could assist as leaders, researchers and professional trainers in the fields of environmental sciences, conservation and management of natural resources and the environment are becoming increasingly required in the development efforts of Ethiopia. Conscious of the ever changing and the fast pace of change in industrial, agricultural and other economic sectors in Ethiopia, there is a need for skilled and knowledgeable human resource that can understand and alleviate the environmental degradation and sustainable use of resources for development. In Ethiopia, the

need for professionals in the field of environmental sciences is high. A preliminary survey conducted in this respect shows that the human resource requirement may double in five years and may triple in a decade or so.

There is almost no high level training offered directly in the field of environmental sciences in higher education institutions in Ethiopia. At the undergraduate level, the programs and courses related to environmental sciences, resource management and conservation, as well as water use and management are those related to Agriculture, Soil and Water Conservation, Water engineering, Land Resource Management and Land Use Planning, Forestry, Natural resource economics and management, Biology, etc. Universities of Alemaya, Mekele, Dehub, Arbaminch, Jima, Bahir Dar and Addis Ababa have courses and programs related to environmental sciences. Dehub university gives Natural Resource Economics and Management and Forestry which are related to environmental sciences. Alemaya, Dehub and Mekele give training in the fields of Land Resource Management and Environmental protection courses at an undergraduate level. Soil and Water Conservation is given in Dehub and Mekele universities. Arbaminch and Bahirdar universities provide degree level training in Water Engineering and Irrigation fields. Another important field of study related to environmental sciences that is being given in Alemaya and Jima universities is Environmental Health. In general, however, emphasized environmental sciences training programs are not given in these institutions.

The Wondogenet College of forestry (Dehub University) is in the process of evaluating a curriculum developed to train students in the field of Natural Resources Management at undergraduate degree level. The program envisages covering areas in ecosystems studies, environmental sciences, energy resource management, natural resource policies, soil and water conservation, watershed management and planning, eco-tourism and natural resources economics. It also gives courses in water harvesting, water resources management, hydrology, irrigation, and rural water supply.

At a Masters level, the programs offered in Wondogenet College in the field of forestry have strong link with environmental sciences. Addis Ababa University is also starting masters program in Environmental Sciences. It focuses on courses such as biological resource management, environmental pollution and control, land degradation and desertification, environmental impact assessment, environmental economics, and waste disposal and management.

All the above courses and programs, however, do not seem to sufficiently address the national needs on water and other natural resource potential assessment, use, management and conservation probably these issues are planned to be addressed in the research programs and the project the students are required to undertake.

Although there are few institutions involved in relevant research, generally many of the higher education institutions in Ethiopia are not actively engaged in research activities. This is also true in environmental sciences. Even the few research undertakings have critical problems of transparency. Many research works are in many cases undertaken for scholarly prestige, catering for individual and donor interests and lack the required capacity in solving institutional and national or societal problems. Results are not systematically feeding back to the teaching and learning system, improving the curricula and are not disseminated to relevant stakeholders who might have direct or indirect relevance and be influenced by the results.

There are, however, community focused and problem solving research undertakings done by Mekele, Arbaminch, Wondogenet and Jima universities in the fields of soil and water, resource management and conservation, and environmental health. The Wondogenet approach of Development Oriented Inter-disciplinary Thematic Action Research (DOIT-AR) is a very good model to undertake research with close involvement of the community in environmental sciences and resource management and conservation. DOIT-AR undertakes research on selected thematic areas with emphasis on inter-disciplinarity and client orientation having local impact and demonstration effect.

Future directions in environmental sciences education and research in Ethiopia

It seems that the institutions and the planners of higher education expansion are not giving serious consideration for the inclusion of sufficient courses or programs of specialization in environmental sciences. Universities, particularly those that have related programs, need to strengthen education/training and research in the fields of environmental sciences.

Professionals trained in environmental sciences need to have multi-disciplinary appreciation of environmental issues for effective use of resources and sustainable development, ability to plan and execute research in environmental problems, as well as skill to increase public awareness.

Student research such as senior essays, community oriented practical works, Masters thesis works and practical attachment studies, as well as staff research such as projects, DOIT-AR, and studies need to focus on environmental sciences and resource management and conservation. Ethiopia has a huge water resources potential, but studies, research and education

and training on what resources we have, and how best these resources could be used efficiently and sustainably are not undertaken with purpose and vision.

The Nile Initiative has a lot of opportunities that could be tapped by universities in their training programs and research activities. Do we see the Initiative as a threat or as an opportunity? I believe it has come with several opportunities. We need to identify these potentials and be proactive to benefit from the opportunities. It has also come with challenges. The challenges relate to making ourselves more relevant and focus our training and research activities towards resource management and sustainable utilization for the betterment of the life of the Ethiopian community.

Possibly the universities of Bahirdar and Gonder that are on the water tower of Abay river, the main source of Nile, and also Arbaminch which has rich experience in water related studies, research and training should work as leaders in forging partnership with the Nile Initiatives. However, this does not mean that universities such as Debub, Addis Ababa and Mekele could not spearhead research and training in the field of environmental sciences and natural resource management and conservation.

These institutions need to strengthen networking amongst themselves and also with institutions in the countries of the Nile Basin. In addition, partnership to the benefit of our countries needs to be fostered with countries in the North as well as those in the South. Such efforts shall not depend on individual interest but has to be led institutionally. This will ensure maximum utilization of resources, expertise and experience from the Nile Initiatives and will ensure effective benefit to the communities whose livelihood we claim we strive to change and improve.

A Preliminary Assessment of the Ethiopian Experience of NGOs Working with Schools in Environmental Education

Million Belay, October 29 2004
Addis Ababa- Ethiopia



NTEAPs Awareness priorities

- **Awareness raising on environmental issues**
- **Capacity building on natural resources management**
- Conservation and utilization of natural resources
- Improvement of the Ethiopian environment
- Addressing land degradation, deforestation, urban environment etc.
- Protection of the Ethiopian wolf and its habitat
- Conservation, development and sustainable use of Ethiopian wildlife
- Implementing the CBD

Protecting the rights of all living things

Who are your targets/ audiences/ beneficiaries of EE intervention or message

- School environmental clubs
- Youth and communities
- The general public
- Government, NGOs
- Formal educational system
- Regional environmental bureaus
- House holds
- International audience

Your methodology of addressing targets?

- Awareness raising workshops/ meetings
- Creating youth groups and school environmental clubs
- Production of booklets, pamphlets, brochures, newsletters, posters and agenda
- Organizing experience exchange visits
- Raising and planting tree seedlings
- Training on alternative energy and organic fertilizer
- Facilitating off farm activity like bee hive keeping
- Using celebrations like the world environment day
- Personal visits to schools
- Occasional organization of press briefings.

How is the EE program developed, used and evaluated?

- No need assessment
- Program developed based on preconceived idea.
- Program based on current issues
- Previous publications are evaluated and new ones address issues which are not covered in the previous.

Is there a process for regularizing the production and execution of EE materials and activities?

- Yes to some organizations but not to all!
- Are the EE activities or materials the outcome of formative research?
- Education materials and programs are based on pre-conceived ideas and opinion of experts than out of need assessment of a particular audience.
- Do the activities reflect the informational or needs of the target audience
- The same kind of approach used at all places and levels.
- Are there different messages based on gender, age, rural and urban locations?
- There is an effort in addressing gender issues but the message is not age or location specific.
- Is there any feedback mechanism to revise, modify or improve the EE program or material?
- Not in many cases.
- Little research done on behavioral change of the target audience.

Obstacles to EE

- Little understanding, support, emphasis and will at the political level.
- Problem with funders: money comes in piece meal, is very little and in general little emphasis on EE.
- Budget constraint.
- Lack of guide books and trainings on EE for professionals.
- Little collaboration among parishioners and lack of forum for debating how EE should work in Ethiopia.
- Change in school systems and turn over of teachers

Strength of the NGO's

- Initiated EE in Ethiopia;
- Contributed in creating awareness about environmental issues;
- Used celebration's to create awareness and plant thousands of tree seedlings;
- Previous students/ youth are at various decision making level;
- Contributed to the protection of the environment.

Limitations

- Priorities are very broad;
- Targets are not specific;

- Methodology needs a lot of improvement;
- Little or not need assessment/ formative research when developing materials and design activities;
- Feed back mechanism not existing in many and insufficient in others;
- Messages and programs are not gender, age, rural and/ or urban specific.

Opportunities

- Political: each region has an environmental bureau with EE desk, government open to collaboration, stable political situation, etc.
- Opening in curriculum.
- Lots of small groups and communities working on issues related to environment.
- New initiatives, like NBI, coming on the seen.

The NBI's NTEAP and EE and A

- Objectives, according to the project implementation working document, are: -
 - Enhanced public awareness and understanding of Nile transboundary environmental issues
 - Networking of secondary schools for project-based learning
 - Piloting enhanced networking among universities and other research institutions
- Approaches of the NTEAP's EE and A
- Establishing an electronic network for schools for transboundary EE and A
- Exchange of school staff and experience
- Support community projects where students will apply the knowledge that they have acquired through EE/ support transboundary environmental projects with in school networks.
- Setting up an award scheme or competition for improving environmental conditions
- Teacher training workshops

Limitations

- Emphasis of objective is on awareness and understanding on Nile Transboundary Environmental Issues which does not necessarily lead to action.
- Objective or approach does not have reference to traditional ecological knowledge.
- The networking of schools approach should be tested. Is it a priority? Are there any other way of doing it? Whose interest is it? Do the countries have a capacity for it?
- As the countries under NTEAP have varying ecological and social needs, a need assessment should precede any kind of program and material development.
- General recommendations
- What can the NTEAP's EE initiative learn from the experiences of other initiatives: -
- Assessment of informational and education needs of target audience ;
- Choosing strategic organizations and change agents as partners;
- Identifying and working with the right partner;
- Learning from other initiatives both at the NBI countries and outside;

- Assess the capacities of the organizations that it is working with;
- Assessment of existing initiatives and identifying where it can make bigger impacts;
- General recommendations contd.
- Creating a critical mass of thinkers and implementers of EE;
- Preparing to create associations only after a certain level of growth;
- Improving the capacity of its partner organizations to be self sustaining;
- It has to think how to decentralize its functions to increase its growth which will happen when there are many organizations are engaged;

Media and Environmental Awareness Creation

Wondwossen Mekonnen

President – EFJA (Ethiopian Free press Journalists' Association)

Back ground and History of Media Development

- Ethiopia has been hit by series of recurrent and severe Famines and wars that have devastated the economy and stability of the country for many years.
- The population is estimated at around 65 million According to the C.I.A world Fact book 2002 report, there were an estimated 15.2 million radio receivers, 682.00 TV sets, 231900 main telephone Lines and 17,800 cellular phones in use at the end of 2000.
- There is only one TV station, with 24 repeaters, and 8 am, 1 Fm and 1SW radio stations. The government is the sole internet provider with an estimated 20,000 used.

Over view of media Development

- The history of the media sector in Ethiopia dates back nearly a century. Le semeur d'Ethiopia (1905-1911) and Aimerio (1902-1903) are widely considered as the original news papers in the country although some historical evidence suggests that the hand written sheet produced by Blatta GebreEgziabher around 1900 Probably preceded both le semeur d'Ethiopia and Aimerio and may there fore be considered the first Amharic “ News paper” in the country. le semeur d' Ethiopia and Aimerio(literally translated to mean Intelligence) were followed by Le courier d' Ethiopia (1913-1920) and yetwor wore (war News) which was issued from the Italian mission from 1916 to 1918. Berhanena selam (Light and peace) was founded in 1925 but folded in 1936 with the Italian invasion .Addis Zemen (New era) Begun circulating in 1941 followed by the English language daily Ethiopia Herald that started in 1945.
- Since then, there has been a gradual but progressive increase in the number of News paper and it was reported that in 1970 there were six dailies and eleven weeklies.
- There has also been a proliferation magazines, Journals and other irregular interval publications since 1950 but little information on these publication is available.
- The first provisional radio station was inaugurated in 1933 in contract signed with an Italian company .The Italians handed over the installation in 1935 but retrieved it soon there after following the Italian invasion of Ethiopia in 1936. Short wave broad Casting was resumed in 1953 and by 1970 Radio Ethiopia operated from three locations and broadcast in six Languages. The world Federation of Lutheran Churches broad caster ,Radio voice of the Gospel begun in 1963
- Ethiopian Radio which now has both National and external services, broadcast its program in eight local Languages and three foreign Languages (English, French and Arabic) The educational media agency owned by ministry of education broad castes educational Programs in 16 Local Languages and in the English Language for secondary and high school students. Television broad casting in Ethiopia began in the early 1960's. An educational TV broad casting project was initiated in 1965, and by 1971 there were five daily programs covering a range of topics for students up to grade eight. It gradually expanded into adult education and to cover the whole of the country but in 1981, it went off the air for a few years for lack of maintenance, spare parts and adequate personnel. Although there has been a rapid growth of TV since the 1980's Radio remains the principal medium of communication for the government.
- Since 1991 Ethiopian Television /ETV/broad casts its program in there local Languages and in English .Foreign Commercial satellite television is accessible through individual subscription.
- With the coming into power of the new government in May 1991 it appeared that promoting respect for Freedom of expression would be prioritized.
- In October 1992 a press Law was promulgated which continues to be in Force.
- The Press law focuses primarily on the print media, leaving the allocation and utilization of Radio waves to be determined by a law that was promulgated in June 1999.
- Since the promulgation of the press law the print media sector of the country comprises of publications that are owned by private organizations, religious organizations, political organizations and the government.
- According to the most recent data obtained form the ministry of information at the time of writing this report, from July 2001 to July 2002 (One Ethiopian fiscal fear) a total of 235 print media out lets were registered at the Federal ministry of information of which 205 were private News papers, 14 by religious organizations Political organizations and 9 by the government.

- The focus of these print media varies from political, economic and social issues to sports culture and Art, trade and Advertisement, Children's recreation and Religion. However more than half of them are focus on political economical and social issues. News papers are available in three local languages and two foreign Languages (English and Arabic) the majority is published in Amharic the official language.

2.0 What has been done?

- The Radio & Television service has presented different weekly programs while the print media mainly the governmental owned publishes rare Articles about environmental education and Awareness. Even then the communicated materials and messages are not governed by established and systematically programmed manner that they are sporadic. In a nutshell not much work has been done in previous times, a lot remain to do in this area. As Famine drought Erosion, Flood, population explosions, deforestation, water borne disease, chemical pollution is rampant and the population by and large is poverty stricken traditional and back ward society. The need for the media sector to play a critical and decisive role of promoting environmental education and Awareness is apparent.
- Not much success is registered in this regard, the urgency of filling this gap is high as the country is hardly hit by poverty and epidemic and the degree of resource degradation is escalating.

Electronic

- The electronic C.D and internet Medias is the fastest one to reach any targeted population. Recently the radio and TV has started to transmit different programs about environmental education to raise public Awareness, this by itself is one step forward compared with the previous times.

Audio visual

- The Radio, TV and Audio Visual instrument play vital role in disseminating information regarding environmental education and awareness

The print media

- Apart from the limited articles published on sporadic bases both the government and the private press media do not cover or publish stories or Articles related with environmental education and Awareness consistently and in sustained manner there is also lack of skilled personnel trained environment journalist who can deal with the issue.
- In rare occasions one can read articles in both the government and the private media but not to the extent needed to ameliorate the every expanding environmental degradation. The newly emerged private press in its 12 years of existence didn't present or have no paid concerted effort and interest at all to pay attention to this critical issue for the survival of not only the current but also the up coming generation. Present stories, articles or research papers which is related with environment education and awareness was never seen, private paper mainly focus only in Political hot.
- There are different publication of NGOs and Government ministries who directly covers the issues of environmental education. However this publication have no vast opportunity to reach to the public particularly the rural man, which has the critical & lead stake in making difference (be it determinate or constructive over the environment).

What needs to be done in the Media regarding environmental education and Awareness to make it more effective?

- The Rationale for supporting local media is that Local news programming may be more informed and receive a wider audience than international broadcasts in Environmental Education and Awareness as they are focused at pertinent local issues to make them aggressively and programmatically engage in the effort of EE& A the following is suggested
- Training of local journalist in both standard journalism skills and in issues of Environmental education and awareness gives more and wide service to the target population in the Nile Basin
- Seminar, conferences, exchange visits of environmental Journalists, skills, and in issues of environmental education and awareness gives more and wide service to the target population in the Nile Basin and beyond.
- Seminars Conferences, exchange visits of environmental journalists within the Nile basin countries has extreme importance in sharing experiences of different environments.
- Provision of appropriate equipment other support to enhance quality of the message conveyed through environmental education and awareness programmes and improve the extent of coverage of Radio /TV News paper out put.

- There is always special information needs to be addressed to the population at large about environment as it is closely related with displacement, food and water, health, shelter, security etc. the media could play a fundamental role in disseminating timely information for the needy. Thus setting up temporary radio production and transmission facilities for the population living in environmentally hot spots such as new settlement areas will have a significant immediate long term impact (recurrent drought famine ,Flood, erosion, etc)

Media as a powerful means of communication

- Reaches many people with vital information at a very short time & with low cost. It can reach people who are otherwise isolated when ever we teach environmental education
- Mapping the different media outlets Radio, TV, Print and media training organizations to identify possible local partners in promoting environmental education and awareness
- Poor economic conditions can make it difficult for people to access media and/or implement best & environmentally sound practices. Batteries for radios are generally expensive and during times of Financial stress such items are either not purchased or are used sparingly. In order to transform lessons learned through EE given poor communities might need support for survival until such time that results of best environment practices start to pay off. This may need the concerted efforts of government donors etc. it is very important to look to different possible means in all the Nile basin riparian countries to reach the vast majority through Radio Services to teach environmental education and awareness and ensure the applicability lesson learned.
- When considering issues of economy, society culture and media it is important to: Recognize that poverty may constrain people's ability to listen, watch or read media.
- Think about how practical support (battery distribution Clock work Radios, solar powered radios) can increase media engagement for Environmental education and awareness.
- There is a crucial need to develop considerable experience in broad cast or print Journalism to promote environmental education and Awareness.
- Fair charges for studio rent and Air time to raise environmental education and public Awareness.

Collaboration opportunities

- There is a crucial need of cooperation between environmental Journalists of the Nile basin country to promote more environmental education and to create public awareness

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Ssshhh, Some group work in progresss



Putting their views across

