

Nile Transboundary Environmental Action Project

Networking Environmental Education and Awareness Practitioners in Tanzania



Formation of National Environmental Education and Awareness Working Group

WORKSHOP PROCEEDINGS

Hotel Traveltime, Dar-es-Salaam, Tanzania
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NILE BASIN INITIATIVE

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Initiative du Bassin du Nil

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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 Stokholm, 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,	NPC - Abdalla Shah
08h50	Opening Remarks,	PSC- Mr. Mugurusi
09h10	EE&A within NTEAP and Workshop Objectives	EE&A LS - Maushe Kidundo
09h50	Discussions and/or clarifications	

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	Tarimo and Ngalowera
11h00	EE in schools	Ministry of Education -
11h30	EE curriculum in universities	Cosmas H. Sokoni
12h00	Discussion on the three papers	Facilitator

13:00 LUNCH

Time	Activity	Facilitators
14h00	Public awareness and campaigns	Ngalasoni
14h30	EE in schools (projects, awards schemes, clubs)	WWF - Mary Shuma
15h00	The role of the media in awareness creation	John Chikomo
15h30	Discussion on the three papers	Facilitator

16:00 TEA BREAK

Time	Activity	Facilitators
16h30	Discuss group topics and form groups	Facilitator
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

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	
15h40	Workshop (Country) Recommendations	NPC
16h00	Closing remarks	Ministry of Education

16:30 TEA and DEPARTURE

OPENING CEREMONY

Introduction

Participants from both government and NGO
Ministries - Education, MNRT, Works,
Regional Secretariats of Kigoma, Mwanza,
Kagera, Mara and Shinyanga
NGOs from Dar and in the regions

Background

Nile Basin Initiative (NBI):

The desire and vision for cooperation between Nile riparian states has been long recognized. As a step towards realization of this vision the NBI was formed as transitional institutional mechanism to provide an agreed basin-wide framework to fight poverty and promote economic development in the region. It also provides a process to facilitate substantial investment in the Nile Basin to realize regional socio-economic development.

Its Objectives are:-

- (a) To develop the water resources of the Nile Basin in a sustainable and equitable way to ensure prosperity, security, and peace for all its peoples.
- (b) To ensure efficient water management and the optimal use of the resources.
- (c) To ensure cooperation and joint action between the riparian countries, seeking win-win gains.
- (d) To target poverty eradication and promote economic integration.
- (e) To ensure that the program results in a move from planning to action.



Shared vision Programme

The NBI Initiative is guided by a Shared Vision which is “*to achieve the sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources.*” To translate its Shared Vision into action, the NBI has launched a Strategic Action Program, which includes two complementary components:

1. Shared Vision Program (SVP).
2. Subsidiary Action Programs (SAPs).

The SVP consists of seven projects (Table 1). These projects are

- (a) Trans-boundary Environmental Action Project
- (b) Power trade,
- (c) Efficient use of water for agriculture,
- (d) Water resources planning and management,
- (e) Confidence building and stakeholder involvement,
- (f) Applied training, and
- (g) Benefit sharing and integration.

The Nile Trans-boundary Environment Management Project

- Environment Education and Awareness (Our main interest in this workshop)
- Institutional building and strengthening
- Monitoring and evaluation
- Water quality management
- Microgrants

CHAPTER 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 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

CHAPTER TWO: THE STATUS OF ENVIRONMENTAL EDUCATION IN TANZANIA

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 1 in Chapter V. Below find a synopsis of the status of environmental education in Tanzania.

(i) Environmental Education in Tanzania: NEMC Experience

(ii) Formal EE&A

(iii) EE&A within Tertiary Institution of Learning

(iv) The Media and EE.

(v) Informal EE in Tanzania

CHAPTER 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 Presentations

Group 1.Environmental Campaigns

Target group (s)

A public awareness campaign needs to target the society at large. However, the needs of the following groups have to be given special attention and emphasis in an environmental public awareness campaign.

- Local communities
 - Fisher folk, farmers, miners, livestock keepers, industrialists, timber exploiters, charcoal burners, hoteliers and transporters
- Local authorities
- Administrators
- Pupils
- Policy makers
- Law enforcers



FISHER FOLKS

Fisher folks are an important interest group in the use on Nile river and associated water bodies. Their actions can either impact the ecology of the river system and the ecological degradation of the river system can significantly affect the livelihood of the fisher folks. They thus have to be given prominent place among the target stakeholders in the public awareness campaign.

Problem

Several environmental problems that can be attributed or affect fisher folks can be identified in the Nile basin area, a few of these are mentioned here.

Use of poisonous plants, undersize nets, sanitation, destruction of breeding grounds, chemicals in small scale mining. Disposal of raw sewage from homes and institutions, disposal of industrial effluent.

Activities

Activities suggested for the environmental campaign to fisher folks include:

Awareness seminars, radio programs, theatres, environmental education posters, booklets and newsletters.

Purchase of boats and communication equipments.

Strategies: The strategy for public awareness enhancement should include use of medium of communication such as electronic and paper media instruments, posters and

Implementers: Civil Society Organisations, local authorities, professionals, law enforcers, development partners, Fisheries Dept, communities and Fisher Folks

FARMERS

Farmers are another of the important interest group in the use of Nile River and associated water bodies. Farmer's actions can lead into becoming a non point source of chemical pollution, erosion and siltation of the Nile river system. In turn their livelihoods and the lives of other that depend upon their production, can be threatened or irreparably damaged. They thus deserve a special attention among the target stakeholders in the public awareness campaign.

Problem: Environmental problems that are caused or can affect effort of farmers and productivity include; deforestation, erosion, pollution, floods. These problems are further complicated by lack of awareness of poverty - environment linkages among the farmers. Also the lack of awareness does make farmers less concerned with the environmental degradation and its impact on their livelihood.

Activities: To support alleviating environmental problems that are caused by or impact farmer's actions and productivity a range of activities need to be implemented. However from the public awareness point of view, the activities may include; supporting awareness creation on issues such as agro forestry, tree planting and organic farming.

Implementation strategy: This will have to include supporting local government authorities and local NGOs that are dealing with rural development and are concerned with environmental management and conservation. The message could be presented as part of the agriculture extension packages. The development of suitable message will have to incorporate all stakeholders of agriculture within the basin area.

Implementers: Multiple stake partners will have to participate in the implementation of the campaign targeting farmers. The partners will include Ministry of Agriculture, Natural Resources, local authorities, CSOs, and communities

MINERS

Miners are among the important interest group in the use of Nile River and associated water bodies; because miners - both large scale and artisanal - actions causes a variety of environmental impacts. Sometimes these impacts are irreversible, but with appropriate mining management techniques the impacts can always be minimised and mitigated accordingly. Therefore, miners need to be viewed and accordingly be targeted in the public awareness campaign.

Problems: As insinuated above mining operations can result in multiple impacts to the environment. The impact may include soil erosion, deforestation and; water and air pollution.

Activity: The interventions on this group will include development of dialogue with large scale miners and develop training and seminar programme for small scale miners. There could also be radio programmes publication of educational pamphlets.

Implementation strategy: The messages for miners should target at sensitization and creation of awareness among miners on effects and impacts of pollution and soils erosion and deforestation. It should also aim at sensitization on rehabilitation of mined areas

Implementers: The project should form partnership with Civil Society Organisations, miners, local authorities and central government.

LIVESTOCK KEEPERS

Problem: The social and environmental problems that affect livestock keepers within the Nile basin are many. These problems reduce the productivity of the livestock keepers and also threaten the sustainability of their livelihood. The problems include:

Soil Erosion

Deforestation and decimation of vegetation

Illiteracy among pastoralist communities (Reduced school attendance)

Sanitation

Activities: In order to help livestock keepers in improving their animal husbandry such that the productivity is improved and environment integrity maintained, it is important that the environmental awareness considers the need of the livestock keepers. The campaign activities could include:

Public awareness on good animal husbandry

Stock harvesting

Implement land use/Land Act policy

Enforcement of the law on education of pupils

Implementation Strategy: The strategy for this interest group should include provision of seminars and knowledge on the following areas:

Public awareness on animal husbandry-Seminars, workshops

Implementation of land Act-cub open grazing

Enforcement of education Act to ensure children of school age are in school

Implementers: Implementation of activities and strategy for that target group should include; the Project, CSOs, Min. of Water and livestock, education, local Authorities

POLICY MAKERS

Problem: Policy makers are challenged by various problems and issues that cause or are caused by environmental degradation. However, the issue of disrespect of law and regulation among the public is one of the major challenges to policy makers.

Activities: To address the challenge of disrespect of laws and regulation among the public the following activities may have to be done.

Organise activities on environmental education to policy

Organise a seminar programme on environmental laws to policy maker

Joint workshop for policy makers and local communities

Implementation Strategy: Since the project deals with conservation of Nile basin environmental resources then it is appropriate that the activities of the project target the policy makers of the regions within the Nile basin. The activities should include:

- Involving legislators/regional Authorities from the lake zone in a workshop
- District workshop for legislators and administrators

Key Implementers: This kind of initiatives requires participation of multiple stakeholders. In this case key implementers of this initiative will have to include:

- Division of environment
- The project
- Civil Society Organisation e.g. JET and LEAT
- Presidents Office - Regional Administration and Local Government - PORALG
- District leaders - Local Authorities
- National Environment Management Council (NEMC)

LOCAL AUTHORITIES

Problem: The challenges that are faced by local authorities in implementation of the environmental awareness campaign among the public are multifaceted. The se include:

- Shortage of technical staff in local authorities and limited capacities
- Conflicting roles (Law/policy on water vis-a -vis enforcement)
- Few law enforcers
- Scarcity of working tools

Activities: To overcome those problems various activities will have to be conducted, which may include

- Training and capacity building of staff
- Purchase equipment
- Recruit staff
- Provide incentives

Implementation strategy: The strategy for implementation of the above identified activities will have to involve.

- Recruitment of personnel
- In service training (Short courses), workshops, seminars
- Purchase of new equipment

- Improved security

Key implementers: The implementation of the strategy and activities on public awareness by local government will have to involve multiple stakeholders. These will include:

- Local government
- Relevant institutions
- Project - NTEAP

INDUSTRIALIST/HOTELIERS

Problem: The environmental problems associated with industrialists and hoteliers are of many folds but can be summarized into two areas, i.e. pollution and wrong site selection. From public awareness campaign the industrialist are a special group that need to be targeted so as they can be made aware of the potential impacts and effects of their actions.

Activities: The activities to create awareness of the industrialists and hotelier will include Awareness creation through organised training programmes and undertaking of environmental audits to be linked to environmental standards that can be established.

Implementation Strategy: The strategy for supporting the activities to support the awareness campaign of Workshops, Television, Radio programmes, publications, wall murals.

Implementers: Multiple stakeholders will have to take part in designing and delivering the public awareness message for interest group. The partners may include the following institutions;

- Min. of Health, Nat. Resources, Industry
- PORALG
- Investment centre
- Cleaner Production Centre of Tanzania
- Vice President Office
- Local Authorities

Monitoring and Evaluation

All strategies and actions stipulated in this analysis will need to be monitored and evaluated so that to create track record and judge the suitability of various suggested interventions.

Monitoring: In this context, monitoring will involve designing and using the outputs and indicators within the public awareness operational plan to gauge the success and weaknesses of the initiatives.

Evaluation: In the analysis evaluation will mean periodic assessment of the progress of public awareness strategy. These are to be undertaken both internally and externally.

Exit strategy: Monitoring and evaluation should be able to assist the project in developing and maintaining and exit strategy that will also lead to development of actions that will ensure sustainability of project interventions. The exit strategy may have to include Institutionalising the project activities at local authority district level so that districts develop budget for the activities.

Involve the Vice president office from the beginning of the project and develop plans for the VPO to take over project activities.

Efforts should be made to ensure that private sector is involved in the project implementations and in the spirit of public private partnership take some responsibilities.

Group II Presentations: EE&A in Institutions of learning

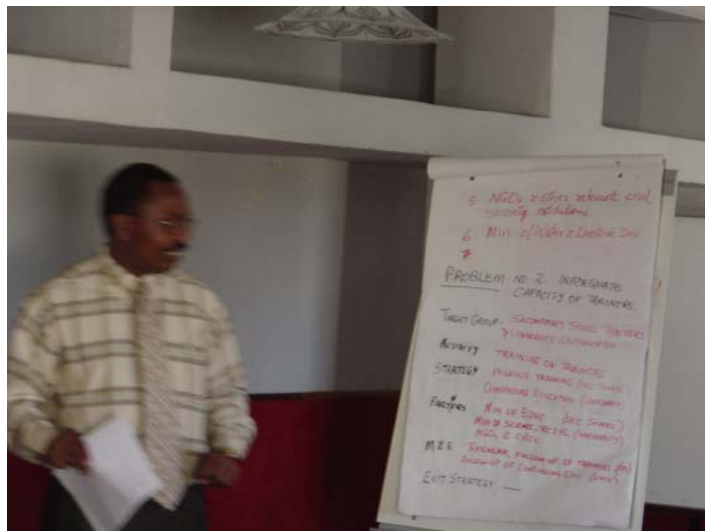
Working definition

EE is a process of acquiring knowledge, skills and attitudes to become aware and act positively towards the environment to achieve sustainable livelihoods.

Problems number 1

I. Environmental education is a recent phenomenon

- ❖ EE is a recent introduction in secondary schools syllabi and inadequate EE in the secondary schools curricula
- ❖ Inadequate capacity of trainers
- ❖ Inadequate teaching and learning materials
- ❖ Inappropriate and weak teaching and learning methodologies
- ❖ Inadequate and ineffective environmental clubs in secondary schools
- ❖ Lack of recognition and incentive in environmental activities



II. Components of EE exist in various disciplines in institutions of higher learning but:

- ❖ Are weak in coordination and linkages.
- ❖ Inadequate capacity of trainers
- ❖ Inadequate teaching and learning materials.
- ❖ Inappropriate and weak teaching and learning methodologies
- ❖ Inadequate and ineffective environmental clubs.
- ❖ Lack of recognition and incentives in environmental activities.
- ❖ Lack of recognition and incentives in environmental activities.
- ❖ Inadequate information on EE
- ❖ Poor networking and linkages

Target groups

For problems: Inadequate EE in secondary schools and tertiary education curriculum.

- ❖ Curriculum developers

Specific activities

- ❖ Needs assessment
- ❖ Training on EE methodologies for curriculum developers on incorporation of EE in curriculum
- ❖ Facilitate of review of curriculum

Implementation Strategy

- ❖ Surveys
- ❖ Training workshops for curriculum developers
- ❖ Curriculum review workshops.

Implementers (partners)

- ❖ Ministry of education
- ❖ Ministry of natural resources and tourism
- ❖ VPO - DOF and NEMC
- ❖ Ministry of Science, Technology and Higher Learning.
- ❖ NGOs and other relevant civil society institutions

- ❖ Ministry of water and livestock development

Problem number 2: *Inadequate capacity of trainers*

Target groups: Secondary schools teachers and University lecturers

Activities: Training of trainers

Strategy: -In-service training (secondary schools)
-Continuing education (University)

Partners: -Ministry of Education (secondary schools)
-Ministry of Science, Technology and Higher Learning (University)
-NGOs CBOs

M&E: -Regular follow up of trainees (secondary schools)
-Follow up continuing education (University)

Exist strategy:

Problem number 3: *Inadequate teaching and learning materials*

Target group: -Secondary schoolteachers
-University lectures
-Natural working group
-Curriculum developers
-NGOs, CBOs

Activity: - Survey of existing teaching and learning materials (for secondary schools and University)
-Review and adapt / adopt existing teaching and learning materials
-Develop new learning and teaching materials.
-Disseminate and distribute tools and law materials

Strategy: -In-service training (secondary schools)
-Continuing education (University)

Partners: -Ministry of education (secondary schools)
-Ministry of science, technology and higher learning (University)
-NGOs & CBOs

M&E: -Provide terms of reference
-*How?* - Follow-up workshop outputs
-*Who?* - NWB& NBI

Problem number 4: *Inappropriate and weak teaching and learning methodologies*

Target: -secondary school teachers University lecturers

Activities: -Training (secondary schools)
-Study visits (University)

Strategy: -Workshop
-Demonstration (teaching and learning methodologies)
-Guest speakers

Partners: -Ministry of education (TTC's)

- Lectures
- Development partners

M&E: -*How*, -Quarterly follow up of teaching and learning in classrooms (secondary and University)
 -*Who* - NWG, NBI
 -Relevant institutions

Problems number 5: *Inadequate and ineffective environmental clubs*

Target groups:- Secondary schools Students and teachers
 -University students and lecturers

Activities: -Orientation to concept of EE clubs
 -Formation of environmental clubs
 -Facilitation of clubs functioning
 -Training of clubs advisors (both secondary and University)

Strategy: -Meeting
 -Workshops

Partners: -Relevant institutions umbrella conservation club NGOs

M&E: -How - Monthly follow - up of implementation of workplan quarterly reports
 -Who - Club advisors NWG

Exit strategy: -Set up mechanism

Problems number 6: *Lack of recognition and incentives for environmental activities*

Target -Secondary school and Universities Activities
 -Facilitate environmental awards scheme

Strategy: -Environmental award schemes in place

Partners: - Ministry of Education
 -NGOs, CBOs & NBI

M&E: -Continuous monitoring of award scheme processes
 -Verification & activities entered
 -Who - NWG, Project Coordination Unit

Exit strategy: -Set up mechanism.

Problem number 7 (Tertiary): *Inadequate information on EE &A and poor networking and linkages*

Target: -Higher Learning Institutions academic staff and students

Activities: -Facilitate exchange visits
 -Facilitate connectivity
 -Conduct joint applied research projects on EE & A

Strategy: -Exchange visits
 -Electronic networking
 -Research

Partners: -NBI - regional universities & other high learning institutions

M&E:
-Track readership in website
-Develop exchange visits reports.
-Semi annual progress reports on ongoing & completed research projects
-Who - NWG, NBI Coordinating Unit

Exit strategy: -Set mechanism for continuing research activities.

Group III Presentation (NETWORKING)

A. Media Activities

General activities

- ❖ Use of locally available materials
- ❖ Religious Leaders
- ❖ Farmers shifting cultivation is not a bad practise

Media channels

- ❖ Electronic media
- ❖ Print media
- ❖ Traditional media

ELECTRONIC

TV, Radio, Internet and intranet, Video and radio tapes

PRINT

Newspapers, newsletters, Leaflets, Posters, Brochures, Stickers, Etc

TRADITIONAL

Songs, Dramas, Artwork, Poems, Meetings

LIST OF SPECIFIC ACTIVITIES

- (i) Prepare and implement awareness raising programme for media institutions (editors and owners)
- (ii) Prepare (media) radio & TV spots
- (iii) Prepare video & radio tapes for various target audience for Nile basin participating districts
- (iv) Prepare TV & Radio programmes on Nile Basin to be aired once a week (interviews, discussion, feature etc)
- (v) Organise media visit /tour to the Nile Basin
- (vi) Commission and launch Nile Basin website in Tanzania
- (vii) Commission journalist to write special supplement /articles /features on Nile Basin
- (viii) Preparation and production of Nile basin promotion materials (newsletter, leaflets, poster, brochures, calendars etc)

Commission various groups to compose songs, drama etc on the management of Lake Victoria / Nile basin.

B. The National EE&A Working Group

I. The Terms of Reference for the group

1. Catalyse Environmental education and awareness activities within the Nile basin as lessons for the country
2. On an annual basis develops and implement national action plans with emphasis on transboundary activities for the basin.
3. Lobby Governments and civil societies to support new and innovative issues on environmental education
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
6. Disseminate lessons through participation in different forums and effective use of print and electronic media.
7. Ensure that accurate and correct information reaches the intended target group active information relay pathways
8. Highlight national and transboundary EE and awareness issues that could facilitate behavioural change
9. Actively participate on World Environmental days to campaign on various issues
10. Lobby for curriculum change to incorporate EE into all levels of formal education
11. Carry out periodic assessment on the status of EE & awareness within the country
12. Coordinate research and development activities related to EE

II. Working group Composition

Secretariat

- ❖ NPC -NTEAP (secretary)
- ❖ PMU - NTEAP (EE&A lead specialist)
- ❖ Representative from environmental NGOs working in Nile Basin

Members

Government	3(Ministries of Environment, Education and Local government)
NGO	2(Working in Communication and Schools)
Private	1
Media	1
University / higher learning	1
Regional representative	1
International NGOs	1

III. Frequency of Meetings

Three times per year.

- (i) Planning meeting
- (ii) Review implementation
- (iii) Reporting

III. Sustainability

- (i) Use of existing institutions to implement various activities. Participating district to internalise EE / A activities in their district plans.
- (ii) Establishment / initiation of the Nile Basin / lake Victoria day/ week (raise awareness on Nile Basin / lake Victoria)

- (iii) Lobby the Government to strengthen Information Education and Communication (IEC) in each Ministry (allocation of budget for IEC)
- (iv) Facilitate and strengthen NGOs dealing with EE activities in the lake Victoria / Nile basin

CHAPTER FOUR CLOSING CEREMONY

I. Closing Remarks

The workshop was not closed formally. However, encouraging words were given by the National Project coordinator on active activity implementation. He requested the members for cooperation and collaboration to realize this goal.

II. Workshop Evaluation

Participants were requested to evaluate the workshop through three simple questions - what liked most about the workshop, what needed to be improved and expectations of formed working group.

1. What did you like in the workshop?

- To have learned the broad views on the NBI.
- Creativeness of participants and good grasp of issues.
- Meeting a wide range of people working in the field on EE & A issues.
- The workshop gave each participant an opportunity to participate.
- The enrichment of information from presentation and contributions.
- Getting to know colleagues in the area of EE.
- Getting to know more about the NBI.
- Getting to know how our works fits/add value to NBI.
- Exchange of information on NBI.
- Learning EE initiatives by different groups.
- The whole issue of awareness creation as applied in schools.
- The intention of adding environmental information in learning institutions curricula.
- The workshop was well planned and the workshop participants were really representative of the target group.
- There was good interaction between participants and facilitators.
- There were free discussions, which reflect the real situation of Tanzania.
- Enlightenment of various activities done by NBI and represented NGOs on the EE&A.
- Exchange of information from participants of the workshop.
- Networking.
- Presentation of very informative papers.
- The interaction mechanism, information sharing techniques used.
- Opportunity for networking with varied organisation represented.
- Opportunity to experience from other Nile basin countries.
- Stakeholders' involvement from different sectors.
- Well organised to suit / enhance discussions.
- To listen and learn from sectoral presentation.
- At least everything was done on time.
- Charming workshop facilitator (Mausche).
- Simplicity of planning and in running the workshop.
- The workshop has been participatory, I liked it a lot.
- Background papers were rich with relevant information.
- Workshop conducted in a participatory manner
- The composition of the participants was good because of the fact that they come from diverse institutions from the government , NGOs (both national and international)

2. What could be improved?

- Early indication of who is to present so that they can prepare a good paper.
- Power point presentation for all papers, -supply a better secretarial service.
- Information on who is to present and themes be sent in good time.
- Relevant participants e.g. representation from Ministry of Education were missing.
- Workshop venue was poor.
- Communicating workshop information to be done timely.
- Formalize presentations from different resource persons (not adhoc).
- Workshop logistics e.g. hand bags with NTEAP logo and slings (phrases).
- The venue (room/conference room) was small as compared to the number of participants.
- Next time let's have a bigger room depending on number of participants.
- Presenters and participants to be informed earlier at least one week before the workshop.
- Technical papers could be of better quality.
- More workshop days to digest broadly the environmental education issues.
- People should be open to share process/ solutions.
- Workshop materials should be given on time before the workshop.
- Accommodation for participants should have been arranged by the organisers.
- To have very few focused presentations.
- Time for group work could be increased.
- Send letters of invitation much earlier especially to paper presenters.
- Workshop should be conducted in the NBI area

3. What are your expectations from EE & A working group of NTEAP?

- Quick and successful implementation of potential proposals from the NWG participants.
- Looking forward to receiving workshop proceeding and continue networking.
- Active participation and carrying forward proposed activities
- Increase knowledge base and awareness on environment issues.
- Solutions to some environmental problems in Nile basin areas.
- Increased networking among EE practitioners.
- I expect more ties among group members on NTEAP issues hence creating more awareness among members and knowledge build up.
- To have relevant institutions being represented. Good enough this was done.
- To exchange and share experiences with other EE practitioners. This was done and we learnt a lot from this workshop.
- Compilation of the report (workshop resolution) to be done timely.
- Dissemination of the report to the participants.
- Forwarding the report (workshop resolution) to regional level.
- Project activities will take off immediately.
- It will facilitate implementation of some projects.
- To sincerely help in enhancing environmental education and awareness.
- To implement the proposed activities.
- Make follow up to the output of this workshop.
- Create impact/changes.
- To gain knowledge.
- Will improve the environment of the Nile Basin.
- My expectation for the EE & A working group of NTEAP is that they will work in accordance with the given ToRs , and the results will be seen.
- Innovative way to revive and give continuity to environmental issues in the Nile Basin.

- More awareness by the community about environmental issues

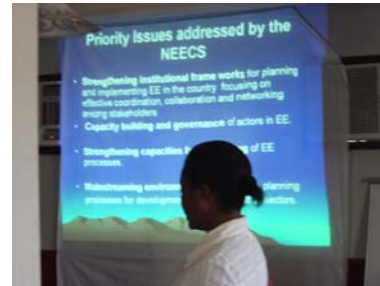
III. Workshop Recommendations

The main recommendations from the workshop were the number of members and their composition, frequency of meetings and terms of reference of the working group. Details are covered in chapter three.

I. Annex I: Papers Presented

Status of Environmental Education and Awareness in Tanzania

Mr.B.D. Tarimo & Ms. M. Ngalowera
NEMC



1.0 Introduction

Environmental issues and problems cut across all disciplines and sectors of human life. The broad sectors are: culture socio-economic, politics, education, and many others. Poverty is the main problem which impacting negatively the quality of life of Tanzanians and thus its eradication, is of paramount importance. Without education to make informed decisions in use of environmental and natural resources the fight to eradicate poverty would be useless.

The Contest of Education in Tanzania

Education in its broadest sense is recognised as a pre-requisite for individual and national development, it is an important tool for either maintaining or transforming the status quo. Therefore Environmental Education (EE) is a life-long process that leads to an informed and involved citizen having the creative problem-solving skills, scientific, economic and social literacy in order to attain sustainable development. Thus it enables one to develop commitment to engage in responsible individual and cooperative actions that will ensure an environmentally sound and economically prosperous future.

In the context of Tanzania, EE could be viewed as: “A life-long process whereby individuals and the whole Tanzanian society acquire knowledge and develop ethics and become environmentally aware/conscious, responsive and relevant skills in identifying, managing, monitoring, evaluating and solving environmental issues and problems”.

Environmental Education is one of the tools for ensuring conservation and safeguards our planet today and tomorrow (future). Our generation is obliged to take concerted actions to ensure this planet remains habitable. We have the responsibility to do whatever we can to pass the conservation knowledge and skills to future leaders in order to ensure that they continue to maintain the environment through EE.

2.0 Overview of EE in Tanzania

Environmental Education in its broad sense was carried out for many years through sector-oriented agriculture, forestry, or community development outreach or extension programmes. The current EE initiatives began in early 1990s through the programme launched by NEMC, Ministry of Education and Culture (MoEC), Ministry of Natural Resources and Tourism (MNRT) and the World Wide Fund for Nature (WWF)- Tanzania thereafter EE programme expands to include other players.

In schools, EE begin with awareness programme for officials of the Ministry of Education and Culture, School inspectors, Teacher educators, heads of schools and some primary and secondary school teachers. Thereafter the Tanzania Institute of Education (TIE) incorporates elements of EE in the primary and secondary school curriculum. At tertiary levels there were attempts made by AGENDA and other institutions to incorporate EE elements in the adult Education Institute,

financial, social welfare and other institutions. Likewise NGOs are allowed to initiate and promote environmental clubs and extra-curricular activities in schools (Wildlife Clubs, Malihai Clubs, Roots and shoots, eco-schools etc) and specific resource conservation clubs. Over 100 Civil Society Organisation (CSOs) popularly known as Non-Governmental Organisation (NGOs) both local and international have awareness, sensitisation, lobbying and advocacy programmes. In the meantime the private sector has also been in the forefront to support or carry out EE related initiatives. Typical example is IPP programmes in Kilimanjaro region.

Efforts to embark on environmentally related subjects at university levels are commendable. Examples include environmental health, engineering and environmental management taught at University of Dar es Salaam (UDSM). Also environmental disciplines as well as short and long-term courses at Sokoine University of Agriculture (SUA) and the Open University of Tanzania (OUT). Several training for environmental issues are conducted country wide for facilitating training and networking among and between education practitioners. The Ministry of Education initiated establishment of Teachers Resource Centre (TRC) in all regions.

Communication environment through media cannot be under estimated. There have been initiatives either by media themselves or from other sources aired by radios and televisions or written in newspapers. Many people have regarded the radio as the cheapest and potential means of getting information.

3.0 Government Initiative to Promote Environmental Education

The government of Tanzania enacted NEMC Act 1983 as the first step in environment conservation. The objective of NEMC is to create and enlighten Tanzania society by undertaking awareness and sensitisation programmes, acquisition and dissemination of information and training. Creation of environment desk in various ministries is one of the steps. Formulation of sectoral policies to cater for sector interests and to address poverty reduction in the country. There has been formulation of national and local environmental conservation strategies that addresses Environmental Awareness issues. The government have provided Awareness workshop for Potential Leaders such as Members of Parliament Local Government Religious Leader.

3.1 Establishment of the National Environmental Education Committee-NEEC

The government through NEMC organised a NEEC meeting whereby more than 15 institutions were involved. The roles and functions of this committee are:

- To coordinate EE activities in the Country
- To advice EE practitioners on direction of EE processes and proper implementation of EE activities in the country.
- To identify EE training needs and facilitate the implementation of identified needs with emphasis to facilitate the designed toiler made courses and identify the institution to host such training.
- To shortlist environmental education trainees country wide for national and regional Environmental Education courses.
- To solicit funds for EE activities including training
- To develop National EE and Communication Strategy for Tanzania
- To advice and facilitate the incorporation of EE in formal education system
- To work with Ministry of Education to prepare EE teaching guidelines
- To work with other EE practitioners to facilitate Environmental awareness among Tanzania public.
- To facilitate the development of education awareness materials.
- To lies with international organizations including IUCN, SADC and UNEP in EE matters.
- To lies with the existing EE associative for the formation of strong natural EE association.

3.2 Preparation of National EE and Communication Strategy

The idea of preparing this important document was initiated by the National EE Committee. This was followed by three major consultative workshops whereby line ministries, training institutions environmental education practitioners and individuals were invited to provide inputs.

3.2.1 Rationale for NEECS

Formulation of NEECS is a response to a number of factors; first the dynamism, diversity and complexity of environmental issues and problems are prime element to reek on with coming up with this document (NEECS). Second, the government pronouncements, international obligations, decree and agreements and the necessity for bringing key players and target audiences closer. Third, the multitude of players over and above the existing gaps, overlaps and duplication coupled with the indeterminate means for sharing or utilizing meagre resources, the necessity to create or enhance partnerships and networks, and other factors for wide-ranging conservation of the environment.

3.2.2 NEECS Vision, Mission and Goal

Vision - Be a country with high level of environmental consciousness at all levels of the Tanzanian Society in terms of knowledge and practice in order to conserve the environment and achieve sustainable development.

Mission - Harmonized implementation of environmental education processes commensurate with operational environmental related policies and legal frameworks focusing on sustainable resource utilization.

The Goal - The general goal for the NEECS is to facilitate effective implementation of EE related policies and processes. This will be a basis for improved environmental management and therefore contributing greatly to poverty reduction and the overall economic growth.

3.2.3 Priority Issues addressed by the NEECS

- Strengthening institutional frameworks for planning and implementing EE in the country. This will focus to effective coordination, collaboration and networking, which is critical in terms of having the roles, responsibilities, functions and resources available for various interventions.
- Capacity building and governance of actors in EE especially the local government and the CSOs to effectively participate in EE processes is crucial.
- Strengthening capacities for monitoring of EE processes is currently not effected properly within the framework for "Assessing Environmental Education Performance".
- Mainstreaming environmental education in planning processes for development initiatives in other sectors is of prime importance.
- Information development EE; is a process which demands a high degree of accurate information flow at local, national and international environmental issues on the immediate needs to the public. Mainstreaming gender in the NEECS; gender issues and in particular women's roles in the overall social-economic development is characterised by a traditional gender imbalance.
- Strengthening Environmental Management Practices; a critical issue threatening sustainable development for which environment plays a leading role is unsustainable agriculture production; depletion of natural resources and economic development.

3.3 Preparation of the Pilot Regional Participatory Course on Environmental Education

3.3.1 Introduction

This is a pilot project, involving the development and implementation of participatory professional development course. It is an initiative to enhance the capacity of educators from diverse backgrounds and fields in order to promote and include environmental education processes in formal and informal education programmes. The two-month Rhodes University/SADC International Certificate in Environmental Education course. The similar initiatives will apply to Zanzibar, Swaziland, Namibia, Zambia, Angola and Zimbabwe, to contribute to the development on this course relevant to the Tanzanian and East Africa context. Since 1995, the Rhodes university/SADC two months EE course has received the highest number of applications from Tanzania.

3.3.2 Collaborating Institution

The Institute of continuing education (ICE) - This is the outreach facility of the Sokoine University of Agriculture. A key operational strength of the ICE is its close liaison with University Faculties, Institutes, Departments and units and its widespread network with governmental and non-government organisations. These features have greatly enhanced the institutes' outreach capability, which has been involved in professional development through various training opportunities.

3.3.3 Training Programme

Main objective

The main objective of the training programme is to provide an opportunity to educators and development workers to exchange knowledge and experience on Environmental Education processes. The training will enable the participants to use the insights gained through this exchange to enhance and develop environmental education in the participants' work context "**We are all learners and educators**".

Specific objectives;

It is expected that at the end of the programme participants will be able to: -

- Understand environmental issues and risks from a wider range of perspectives.
- Have more knowledge of current trends and international initiatives in EE as well as Education for Sustainable Development (ESD).
- Explore ways of integrating EE process into formal school curricula and teacher training.
- Use different methods and processes in EE and ESD.

3.3.4 Guiding Principles

During this training programme facilitators will strive to recognise the diverse contexts in which environmental educators work. Facilitators will create meaningful opportunities for EE practitioners from the Eastern Africa region to share experiences and to use the different perspectives that emerge to reflect on work they do. These processes are based on the recognition that people create their understanding of the world around them, from their life experiences and every day interaction with others.

Participants

The training programme is open to environmental and development professionals from the Eastern Africa region; Tanzania, Kenya, Uganda, Rwanda, Burundi and the Democratic Republic of Congo, the Horn of Africa (Ethiopia, Sudan and Eritrea) and Southern Africa countries as well as. Environmental Educators in schools and field study centres, with a high multiplier potential will specifically be considered.

Applicants should have:

- An appropriate tertiary qualification
- Relevant experience in education
- High multiplier potential; and
- Competence in English

Equitable gender representation as well as representation from different countries, and different institution/departments within the education system will also be considered during the selection process. During the pilot phase the training programme will admit 20 participants to allow for intensive and interactive facilitation and exchange of experiences. Later on this number will vary depending on availability of funds or self-sponsoring candidates.

4.0 Challenges Facing the Implementation of Environmental Education Poverty and repaid population growth - EE should aim at promoting alleviation measures with positive environmental effects.

- Absence of tangible alternatives - EE should also focus on the availability of alternative sources.
- Difficulties in disseminating appropriate messages to target groups. For example messages discouraging charcoal burning.

- The large pupil teacher ratio. The rapid increase of the country's population density influencing the large number of students in school, meanwhile the number of teachers remains stagnant.

5.0 Conclusion

In general environmental awareness is on the increase. This can be seen in the sectoral policy reviews going on in the country since the 1990's. The number of environmental issues is going on in various sectors (energy, water, education etc) as well as training opportunity for environmental practitioners, managers, and extension services. The curriculum reviews have been done to incorporate EE in the national school curriculum. EE teaching and learning materials have been produced and links with regional and international organisations.

Environmental Education at Tertiary Level in Tanzania: a case of University of Dar es Salaam

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1.0 Introduction

Human interaction with the natural environment is necessary in the development process. However, environmental destruction eventually threatens the sustainability of development activities. Thus, there has been a growing need for a better understanding human - environment interactions and the risks from the misuse of the environment. The growing interest on environmental education (EE) has been encouraged by the global emphasis on teaching about careful use of and conservation of natural resources; the need to impart basic and advanced environmental knowledge and skills and the need to solve development problems associated with human interaction with the natural environment.

Although some great effort has been undertaken to promote environmental education in Tanzania, there have been remarkable variations between levels of education institutions. This paper reflects on the status of EE at tertiary level institutions. Tertiary education institutions in Tanzania have increased tremendously recently in their numbers and student enrolment. By the year 2000, Tanzania had 31 tertiary education institutions and a total enrolment of 20, 912 students (Mkude and Cooksey, 2003). The University of Dar es Salaam is the oldest and the largest of all. While the case of the University of Dar es Salaam informs us on EE at tertiary level education institutions, it is not by any means representative of the all the institutions. For a better understanding of EE at this level more research is necessary. Literature on EE at this level is very scanty. This paper relied on the University Prospectus of 2003/2004. Information on curriculum presented in the prospectus is very brief and resources for access to curriculum material for each programme were not available.

2.0 Environmental Education

Education is critical for promoting sustainable development and improving the capacity of people to address environment and development issues. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development.

Environmental education (EE) is a learning process of enhancing a population's awareness and concern about the relationship between society and the environment and its associated problems. "EE is a process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the relationship of man to his culture and biophysical surroundings" (WWF, 2001:2). Thus, EE involves generating and imparting knowledge, skills, motivation and commitment to care for the natural environment while solving current problems and minimizing future ones.

EE has various contributions including the following:

1. EE fosters a greater knowledge and understanding of ecological systems, principles and environmental issues, and human and natural environment interactions.
2. EE increases awareness of and sensitivity to environmental issues.
3. EE imparts skills required for engaging effectively in sound resource management
4. EE enhances our capacity to weigh various options of environmental management. This is essential for making responsible decisions.
5. EE motivates and supports people to participate both individually and collectively in actions that improve the quality of the environment.
6. EE fosters attitudes and values of concern and responsibility for the environment, and motivation to care for the environment.

EE is an important component in the education curriculum of Tanzania at the primary, secondary and tertiary levels. However the incorporation of EE in the curriculum varies across the education levels and the major disciplines such as between social sciences and natural sciences. EE is a

complex process. Often it may be provided as a whole rather than education institutions participate by providing some parts of EE. The above definition of EE suggests the need to go beyond understanding the environmental systems. Rather it involves enhancing attitudes and values, motivation towards responsibility and greater care for the environment. We may know environmental systems very well, but we may lack attitudes, values and motivation for caring for the environment. Promoting environmental education in all levels of education is therefore very important.

3.0 Environmental Education at the University of Dar es Salaam

The fast growing tertiary education sector in Tanzania makes it a potential area for promoting environmental education in Tanzania. Graduates from these institutions are the future managers of environmental resources. Enhancing their attitudes and motivation towards care of the environment is vital for sustainable development. Unlike in lower level education institutions where imparting knowledge on the environmental system is an essential component, at the tertiary level, the students and educators are more knowledgeable of the environmental system.

Sawio (2002) suggests that EE is offered at the University of Dar es Salaam. However, taking into consideration the definition of EE given above, Sawio's view is taken with caution as the education offered does not necessarily involve pursuing students' attitudes, values and motivation towards care for the environment. EE is not offered as an independent subject at the University of Dar es Salaam (UDSM), rather themes of environmental significance are integrated in various programmes. However, there are variations among the teaching units in the extent to which environmental themes are incorporated in the curriculum. Programmes with a greater integration of environmental themes include: B.A. in Environmental Studies and MA in Geography and Environmental Management (GEM) offered by the Department of Geography, FASS; M.Sc. in Environmental Sciences offered by the Faculty of Science; Diploma in Environmental Health Sciences of MUCHS; and Various B.Sc. and M.Sc. programmes taught at the University College of Lands and Architectural Studies (UCLAS).

Below is a brief list of some of the environmental related courses from various faculties.

3.1 Faculty of Arts and Social Science (FASS)

In the Faculty of Arts and Social Sciences, the Geography Department has more environmental themes in its curriculum. The Department offers a programme for undergraduate level titled: Geography and Environmental Studies. In this programme various courses geared towards understanding the relationship between mankind and the natural environment are offered. These include: Environment and food Security; Resources (Earth, Biotic, ground and atmospheric water, etc.); Techniques: Remote sensing and GIS; Water Resources Development; Conservation and Management of Natural Resources; Population, Resources and Development; Environmental Assessment and Management; Rural Settlement Planning; Urban Systems; Regional, Urban and Rural Development Planning; and African Environment.

At graduate level, the Department offers a programme titled M.A. in Geography and Environmental Management. Courses offered include: Explanation, Methods of Geographical and Environmental Management; Assessment of Environmental Natural Resources in Developing Countries; Theoretical Development in Spatial Development and Environmental Resource Management; Management and Conservation of Environmental Resources; Population, Resources and Environment; Water Resource Development and Management; Environmental Disaster Management; and Gender and Resource Management.

Whereas these courses enhance the knowledge and skills of students on environmental issues, it is not evident that the curriculum involves motivating students towards care of the environment. Certainly the teaching identifies the need for greater care of the environment for sustainable development. However, there are no mechanisms for evaluation and monitoring the effectiveness of EE. In the Department there is a great potential for using community-based organization to promote environmental education. Students studying Geography have their organization that is a potential forum for EE to the student community and general public. However, the organization requires

support in capacity building in order to participate effectively in environmental education programme. The Geographical Association of Tanzania is another potential organization. It also needs support in capacity building for offering EE to the University Community.

In the FASS there are other departments that offer environmental related courses. The Department of Economics offers a course on natural resources and environmental economics. The History Department has a course on Topics in Tanzania Environmental History, offered at postgraduate level. At the same level, a course on Rural Environmental and Resource Use is taught in the department of Sociology. The Demographic Training Unit has various courses that relate population and environment at postgraduate level. The Institute of Development Studies offers two courses at the undergraduate level that is Population, Urbanisation and Environment, and Environment and Development. A course titled Energy and Environment is offered at graduate level.

3.2 Faculty of Science

The undergraduate programmes in the Faculty of Science offer a wide range of courses that impart knowledge and skills to students on the nature and functioning of the natural environment. The Botany and Zoology departments have courses on Plant Ecology; Environmental and Nutritional Physiology; Environmental Science; and Environmental Microbiology. The Department of Geology has courses on Geology and Mineral Resources of Tanzania; Introduction to Hydrology; and Environmental Science. The following courses are studied in the departments of Marine Biology and Zoology: Marine Ecology; Animal Ecology; Environment and Nutritional Physiology; and Marine Resources & Fisheries Ecology; Wildlife and Range Ecology; Animal Ecology and Plant Ecology. A course on Environmental Physics is offered by the Department of Physics.

At the postgraduate level, the M.Sc. in Environmental Sciences programme has a wider range of courses including: Marine Ecology; Water resources; Atmospheric and Fish Quality Management; Environmental Pollution and Public Health; Environmental Laws and Legislation; Maritime Resources and their Rational Utilisation; and Environmental Impact Assessment. The Department of Geology teaches two courses on Geo-technique and Environmental Ecology; and Geology and Mineral Resources of Sub-Saharan Africa. Other programmes include M.Sc. in Wildlife and Terrestrial Ecology and M.Sc. in Applied Zoology.

3.3 Faculty of Law

The Faculty of Law also has its share in imparting environmental knowledge through its course on Environmental Law.

3.4 Faculty of Aquatic Sciences and Technology

In the Faculty of Aquatic Sciences and technology, the Department of Aquatic Environment and Conservation offers a wide range of courses including: Introduction to Aquatic Environmental Sciences; Earth Materials; Mangrove and Seagrass Ecosystem; Estuarine Ecology; Wetland Ecology; Environmental Science; Community-based Conservation and Extension; Fisheries Management and Conservation; Aquatic Resources and Management; Aquatic Pollution; Watershed Management; and Conservation Biology.

The Fisheries Department teaches the following courses: Water Quality and Pollution Control; Ecology and Utilisation of Natural Resources; Environmental Science; Fisheries Management and Conservation; Aquatic Resources and Management; and Ecology of Coral Reefs.

3.5 Prospective College of Engineering

Undergraduate Programmes in the Prospective College of Engineering Technology (pCET) offer a number of programmes that involve imparting knowledge and skills on environment. Courses offered include the following: Elements of Environmental Engineering; Environmental Management and Cleaner Technology; Biological Treatment of Industrial Wastes; Renewable Energy Resources; Introduction to Water Quality and Micro-Biology; Management of Solid and Hazardous Wastes; Environmental Engineering; and Environmental Engineering in Mining.

Courses offered in the postgraduate programme include: Principles of Environmental Education; Integrated Land and Water management; Water Resources Management; Environmental and Water Resource Systems Analysis; Water quality Management; Water, Sanitation and Diseases; Soil and Groundwater Pollution from Agro-Activities; Solid Waste Management; Environmental Management; and Air Pollution Management.

3.6 University College of Lands and Architectural Studies

The University College of Lands and Architectural Studies (UCLAS) has environmental related courses in its undergraduate and postgraduate programmes. The following undergraduate programmes offer various course on environment: Bsc in Environmental Engineering; B.Sc. in Land Management and valuation; and B.Sc. in Urban and Regional Planning. At postgraduate level various programmes are related to environmental issues. In the Faculty of Architecture and Planning the following programmes are worth noting: Postgraduate Diploma in Urban Planning and Management (PGD. UPM); M.Sc. in Urban Planning and Management (M.Sc. UPM); M.Sc. in Urban and Regional Planning and Management (M.Sc. URPM); and Ph.D. in Urban Planning and Management (PhD. UPM). The Faculty of lands and Environmental Engineering has the following programmes: Postgraduate Diploma in Environmental Technology and Management (PGD. ETM); M.Sc. in Land Management; Postgraduate Diploma in Land Management (PDG-LM); and M.Sc. in Environmental Technology and Management (M.Sc. ETM).

3.7 Muhimbili College of Health Sciences

Institute of Allied Health Sciences of the Muhimbili College of Health Sciences (MUCHS) offers a Diploma in Environmental Health Sciences.

3.8 Faculty of Education

Students in the Faculty of Education select courses in the Faculty of Arts and Social Sciences and the Faculty of Science where they the opportunity to take environmental related courses.

4.0 Conclusion

The above section lists a wide range courses and programmes related to environment that are offered at the UDSM both at undergraduate and postgraduate levels. The list is not meant to be exhaustive. The university's curricula are rich in knowledge on the human - environment interactions. Environmental issues / themes relate to specific disciplines. However there are crosscutting themes. Knowledge and skills are already in place. Whether acquisition of knowledge and skills on environment implies development of values and motivation towards greater care on environment for sustainable development is not certain. It is not uncommon to encounter environmental mismanagement even among the learned communities.

Certainly there is a strong basis for EE at the University of Dar es Salaam that would enhance public awareness, motivation and initiatives for putting into practice better care of the environment. The existing community based organization called JEMA is a great potential for enhancing environmental education at the UDSM. There is a great potential for linking Nile Basin issues in the programmes that exist at the UDSM both within and out of the curricula. However this may require support in capacity building especially for community based organizations. Programmes that specialize on environmental issues such those in the Department of Geography can be targeted for linking with the Nile Basin Issues.

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The role of Media in enhancing Environmental Education

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1. INTRODUCTION

The word environment can be defined as any part or the combination of any component of:-

- (a) Nature, that includes air, land and water, plant and animal life other than human beings;
- (b) The interaction between the components of nature, and between those components and human beings
- (c) Physical, aesthetic and cultural conditions and factors that effect lives of human beings and other communities;
- (d) Buildings, structures, machines or their devices made by humans; and
- (e) Any solids, liquids, gases, odour, heat, sound, vibration or radiation resulting directly or indirectly from the activities of human beings.

From this definition one can conclude that development activities such as timber and firewood extraction, cattle grazing, industrial processes, farming, water extraction, development of settlements and fishing activities, are also environmental issues.

These notes will dwell more on current major environmental issues in Tanzania. Also proposals will be made on the role of journalists in the protection and management of the country's environment.

2. TANZANIA'S ENVIRONMENTAL POTENTIAL

Tanzania is endowed with a wealth of environmental resources. It has fertile agricultural lands which supports agricultural and livestock production; large water bodies such as Lakes Victoria, Tanganyika and Nyasa which are used for fisheries and lake transport; fabulous national parks which attract tourists all over the world; unique forest ecosystems used for timber, fuelwood and medicines. The country's uniqueness and abundance of species both plant and animal, attracts many scientists and eco-tourists from many countries.

3. THREATS TO THE COUNTRY'S ENVIRONMENT

Despite the country's riches in natural resources it is faced with many environmental problems. The National Environmental Action Plan identified six major problems needing urgent attention, they are:-

- (a) reduction of soil productivity due to land degradation;
- (b) lack of accessible clean water for both urban and rural populations;
- (c) environmental pollution that effects populations in towns and in rural areas;
- (d) Loss of habitats for wildlife, and reduction in biological diversity of natural forests and other habitats;
- (e) Deterioration of river, lake, coastal and marine waters due to pollution and poor resource management; and
- (f) Deforestation through clearance for agricultural expansion, harvesting of woodfuel and other forest-based products

These environmental problems hinder a sustainable use of the country's resources, and could be future major courses of the country's poverty.

4. EFFORTS MADE TO ALLEVIATE THE COUNTRY'S ENVIRONMENTAL PROBLEMS

The government has taken a number of steps to alleviate environmental problems. The National Environment Policy is now in place to provide a framework for interventions by various governmental as well as non governmental sectors, and the private sector. Also since environmental issues are cross-sectoral in nature, several sectoral policies have been revised to take on board environmental concerns. Examples are the National Forest Policy, the National Agricultural Policy. Also new policies are being formulated that take care of environmental

considerations, such as the National Wildlife Policy, and the National Fisheries Sector Policy and Strategy Statement.

Related to the review and formulation of policies that impact on environment, efforts have been made by the Government to prepare national strategies, programmes and projects for the implementation of the National Environmental Policy. As you are aware, just recently, a national forum was held on the preparation of the National Action Plan to Combat Desertification. The process is expected to be finalized in a few months time. Also the government is leading the process of preparing a National Strategy and Action Plan for the Conservation of Biological Diversity. Environmental programmes which are currently being implemented by the government are the Lake Victoria Environmental Management Programme, the Lake Tanganyika Biodiversity Project, the Cleaner Production Technologies Project (implemented under the ministry of Industries and Trade), and many other under the ministry of Natural Resources and Tourism.

To-date there are more than 55 laws under these acts. For example the Fisheries Act No. 6 of 1970 as amended by supplement No. 32 of September, 1989 and the Forest Ordinance Cap. 389 as amended by Act No. 18 of 1997 stipulate heavy penalties for breach of these laws. In addition, various sections of Acts No. 7 and 8 on Local Government Authorities and Urban Authorities respectively, are of relevance to prevention of land degradation, overgrazing, human settlements, mining, forest, industrial pollution, deforestation, wildlife and biodiversity, sanitation, liquid and solid wastes, and offensive trades. The government is also in the process of preparing a framework environmental law.

The government has established specialized institutions to take care of environmental functions. Examples of the relevant acts of parliament are the National Environment Management Act No. 19 of 1983 which established NEMC; the Tropical Pesticides Research Act which established TPRI; and the National Radiation Commission Act of 1983 which established the National Radiation Commission.

With regard to non-governmental initiatives, there are more than 160 NGOs which are registered as Environmental NGOs, JET being one of them. These NGOs are engaged in public awareness, carrying out community based environmental activities, tree planting, cleanliness of urban centers, environmental law, and the like.

In addition to formal NGOs, there are community based organizations which implement village level activities.

5. THE ROLE OF JOURNALISTS IN ENVIRONMENTAL PROTECTION AND MANAGEMENT IN TANZANIA

There is a lot of information which the public needs to know on environmental matters. Journalists have been very instrumental in transmitting environmental information to the general public. In order for the message to be transmitted accurately, there is a need for an in-depth search for such information.

The government depends to a very large extent on the role of journalists in educating the public as to the existing environmental related policies, programmes, projects and laws. On the other hand the government depends heavily on journalists to have a feedback on the public opinion on government policies and actions.

HOW MEDIA PLAY ITS ROLE

- Collection, processing and dissemination of news and information on environmental issues on daily basis.
- To raise public awareness on various aspects of environmental protection and management
- Public education on various aspects of environmental protection and management.

- To empower and enrich local communities on matters related to environment through media debate.
- To investigate and expose environment destruction and mismanagement
- To provide communities with a forum to discuss/debate environmental issues.

MEDIA TOOLS

- Newspapers
- Radio
- TV
- Posters
- Leaflets
- Newsletters
- Brochures
- Bill boards
- Internet

Application of media tools

- News coverage on daily basis
- Environmental news/features syndication
- Radio Programs
- TV programme
- Editorialisation/commentaries
- Letters to the editor
- Phone -ins
- Testimonies
- Investigative journalism

Publication and distribution of Kiswahili environmental newspaper has made rural populations to have access to information on environment and sustainable development. Thus, rural communities are now participating and contribute to the public debate that shapes decision making on sustainable natural resource management in Tanzania. The Vingunguti case and Dar es Salaam abattoir cases serve as examples.

Successful case studies by JET

In 1997 JET launched a media campaign against the proposed controversial prawn farming project in the Rufiji Delta. The campaign was successful undertaken by feature writing and publications also we had a Radio programme which run for the whole year.

Between 1998 and 2003 JET had a project on dissemination of environmental information including publication of a monthly news letter (*JET News*) and Kiswahili newspaper *KASUKU* which strengthened journalists' investigative reporting capacity on sustainable environmental conservation and natural resource management in Tanzania.

6. CONCLUSION

Environmental journalists, particularly JET that has massive experience in environmental public awareness raising, must meet the challenge by providing information in such a way that all levels of people can be aware that they have the power to do something for conservation of the natural resources.

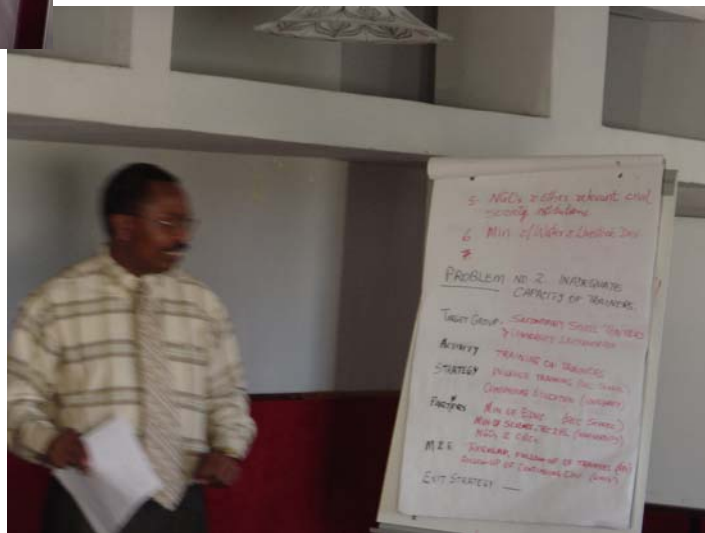
I thank you for your attention.

II. Annex II: List of Participants

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II. Annex III: Some Pictures from the Workshop
Please listen!!!!



Developing Tanzania's EE&A National priorities



Tanzania is not starting from zero.

