UNIVERSITY OF DAR ES SALAAM
DEPARTMENT OF ECONOMICS

MAINSTREAMING ENVIRONMENT INTO MKUKUTA II PROCESS

INTERIM REPORT

To

Ministry of Finance and Economic Affairs

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List of Abbreviations

AP	Action Plan
ASDS	Agricultural Sector Development Strategy
CBD	Convention on Biological Diversity
CBO	Community Based Organisation
CCD	Convention to Combat Desertification
CSO	Civil Society Organisation
DAC	Development Assistance Committee
D-by-D	Decentralisation by Devolution
DED	District Executive Director
DFO	District Forest Officer
DNRO	District Natural Resources Officer
DPG	Development Partners Group
DWE	District Water Engineer
ECA	Economic Commission for Africa
EE	Environmental Education
EMA	Environmental Management Act, 2004
ENR	Environment and Natural Resource Issues
ES	Environment Segment (of a village, ward, district, region, sector plan)
EU	European Union
FRMP	Forest Resource Management Project
GDP	Gross Domestic Product
GEF	Global Environment Facility
GMO	Genetically Modified Organisms
GoT	Government of Tanzania
HIV/AIDS	Human Immunity Virus/Acquired Immunity Deficiency Syndrome
IFMS	Integrated Financial Management System
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
ILO	International Labour Organisation
JAS	Joint Assistance Strategy
LGAs	Local Government Authorities
LGCDG	Local Government Capital Development Grant
M&E	Monitoring and Evaluation
MDA	(government sector) Ministry, Department and Agency
MDGs	Millennium Development Goals
MOF	Ministry of Finance
MPEE	Ministry of Planning, Economy and Empowerment
MTEF	Medium Term Framework
NAP	National Action Programme
NBSAP	National Biodiversity Strategy and Action Plan
NEAP	National Environmental Action Plan
NEECS	National Environmental Education and Communication Strategy
NEMC	National Environment Management Council
NEP	National Environmental Policy
NGO	Non Government Organisation
NPES	National Poverty Eradication Strategy
NSGRP	National Strategy for Growth and Reduction of Poverty
NSSD	National Strategy for Sustainable Development
O&OD	Opportunities and Obstacles to Development Planning
PACD	Plan of Action to Combat Desertification
PBG	Plan and Budget Guidelines
PER	Public Expenditure Review
PFM	Participatory Forest Management
PMO	Prime Minister' Office

PMO-RALG	Prime Minister's Office-Regional Administration & Local Government
PMS	Poverty Monitoring System
PO-PP	President's Office, Planning and Privatisation (now MPEE)
PO-RALG	President's Office - Regional Administration and Local Government (now PMO-RALG)
PRS	Poverty Reduction Strategy
PRSP	Poverty Reduction Strategy Paper
R&B	Review and Backstopping
R&D	Research and Development
RCDO	Regional Community Development Officer
RDP	Rural Development Policy
RENED	Research Network for Environment and Development
RIO	Regional Informational Officer
RNRO	Regional Natural Resources Officer
RS	Regional Secretariat
SBAS	Strategic Budget Allocation System
SDPs	Sector Development Programmes
SEA	Strategic Environmental Assessment
SEAP	Sector Environmental Action Plan
SMART	Simple Measurable Accurate Realistic Time-bound
SOE	State of Environment
SPs	Strategic Plans
TAMISEMI	*Tawala za Mikoa na Serikali za Mitaa* (Regional Administration and Local Government)
TAS	Tanzania Assistance Strategies
TFAP	Tanzania Forestry Action Plan
TIP	Traditional Irrigation Programmes
TSED	Tanzania Socio-Economic Data base
UDEM	Urban Development and Environmental Management
UN	United Nations Organisation
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNCOD	United Nations Conference on Desertification
UNCTAD	United Nations Conference on Trade and Development
UNDDC	United Nations Dry land Development Centre
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organisation
UNPF	United Nations Population Fund
URT	United Republic of Tanzania
VEO	Village Executive Officer
VPO	Vice President's Office
WDC	Ward Development Committee
WEO	Ward Executive Officer
WFP	World Food Programme
WMAs	Wildlife Management Areas
WSSD	World Summit on Sustainable Development
WWF	World Wildlife Fund for Nature

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Executive Summary (In progress)

The build-up of Tanzania's experience, particularly during the preparation and implementation of MKUKUTA I shows the steps, with technical and financial support of Development Partners, that were taken to integrate environment and natural resources issues were more visible at the central government level (the championing and coordinating role of the office of the Vice President) and some of the natural resources sector MDAs. This

document attempts to piece together this experience with a view to informing MKUKUTA II. Environment and natural resources in Tanzania provide basic inputs for the livelihoods of majority of Tanzania, employment, foreign exchange earnings and government revenue. Unsustainable extractive activities erode not only the resources wastefully but also, where there is corruption, loss of government revenue and growth potentials. Good governance requires that the resources be administered with sense of commitment to transparency and accountability when granting access rights, collecting revenue and monitoring activities (surveillance) and enforcement of applicable laws.

Mainstreaming environment into development policy has aimed to increase the visibility of the need of having all productive activities take cognisance of the consequences of such activities on environment to avert possible environmental hazards. Environmental mainstreaming entails (i) integration of the sustainability principles into a development strategy within a country and where necessary, within an international agreement, (ii) building capacities at national and local levels for sharper understanding and identification of environmental concerns and opportunities (iii) implementing performance and easy-to-monitor indicators. The interventions should be integrated actions into plans and budgets.

Though not unique in the progress made, Tanzania's experience is comparable to other countries; it shows how some of the constraints to mainstreaming at the macro-level were dealt with. Problems remain, however, relating mainly to knowledge gaps and change in mind-set on the importance of environment. Lack of accurate data, capacity limitations in terms of requisite professional skills to suit the different sector situations as well as financial resources still remain major setbacks.

Key lessons for MKUKUTA II based on a review of successes and difficulties in implementation would inform future mainstreaming efforts

Strengths and good practices to be carried forward

- increasingly strengthening position of environment in policy frameworks, development partners' country assistance programmes, and active advocacy from national and international supporters of environment particularly in regard to the consequences of new projects on the settlement and livelihoods of the Tanzania population and resources of the country.

- The institutional frameworks and environmental law are adequately elaborate, with the limitations coming from human capacity gaps, commitment gaps (leading to corrupt practices that lead to waste of the country's resources and revenue). At sector level, there are variations; while the intention was to have all sector MDAs and LGAs integrate environment into their plans and budgets, natural sector-based MDAs have had an advantage of being associated with more closely with activities that entail direct environmental impacts.

Continued work on integrating multi-lateral commitments and opportunities on environment (e.g. climate change convention) into national policies and sector strategies

Strengthened environmental management capacity of government and private sector

Advocacy of closer scrutiny of the levels of public expenditure on environment and budgeting for environmental interventions at national, sectoral and local government level.

Strengthening environmental management and monitoring capacity for government and private sector

Use of variety of policy tools (legislation, economic instruments, public expenditure reviews poverty-environment indicators) to inform decisions making.

- Limitations

1. Introduction

1.1 Context

In the background of recent steps by Tanzania to mainstream environment into the national development frameworks, this assignment seeks to assess the progress made so far in integrating environment into the growth and poverty eradication strategies. The study seeks also to draw practical lessons that can best inform the preparation and implementation of the environment-related interventions in MKUKUTA II. The purpose is to deepening environmental mainstreaming and increasing the pay-offs derived from the process. Such pay-offs include and are not limited to more sustainable development of natural resources and environmental protection and social wellbeing (healthy and safe living and working conditions). The linkage between poverty and environment underscored in MKUKUTA1 suggests that a well functioning growth and poverty alleviation strategy cannot operate in isolation with sustainable environment and natural resource management and utilization. Since environmental degradation has more severe welfare implications on the poor than on the non-poor, all actors are required to protect the ecosystems that provide food, clean water, energy and shelter as well as sources of income from agriculture, fishing, forestry, tourism, manufacturing and service providing activities.

The conceptual justification for the massive effort in environmental mainstreaming in Tanzania and other countries, with special concerns for poor countries and communities, is found in the *environment-poverty nexus*; however, this study makes reference to the relevant practical relationships, where such relationships can help to clarify the issues that facilitate or limit environmental mainstreaming process itself. The scope of the review will include progress regarding mainstreaming environment at three distinct levels - national, sector and local government, that is, how the specific commitments/targets contained in MKUKUTA1 were implemented at these levels.

Mainstreaming environment requires (i) integration of the sustainability principles into a development strategy within a country and where necessary, within an international agreement, (ii) building capacities at national and local levels for sharper understanding and identification of environmental concerns and opportunities (iii) planning and implementing

appropriate interventions along with adequate performance and easy-to-monitor indicators. The interventions should be integrated actions into plans and budgets. All this should be based on creating public awareness that the environmental resources are a source of livelihoods and need to be protected for present and future generation. Environmental mainstreaming and protection further entails a need for legal provisions to enforce desirable actions. Though perhaps not comprehensive, this definition of environmental mainstreaming as a process and policy approach provides a checklist which guides this review.

1.2 Objective of the Review

Since the launch of the current NSGRP (MKUKUTA I) in 2005/06 efforts have been made to implement the environment-related actions/interventions. Financial and manpower resources were deployed to streamline environmental issues into sectoral policies, programs and plans, and budgets at central and local government levels. For instance, guidelines were drafted to help local government authorities and MDAs to mainstream environment into their plans and budgets (URT 2006, URT 2007). Various other methods and policy instruments were deployed to facilitate mainstreaming of environmental issues. The Environmental Management Act in 2004 continues to be a key institutional framework for environmental management.

It is of policy interest therefore to have an evaluation of how well the process of integrating environment into the national policy frameworks has been conducted; how effective it has been and what lessons can be picked from the mainstreaming experiences for deepening the integration of environment in the next MKUKUTA II (2010/11-15/16). The review seeks to:

(i) Assess the extent of environmental mainstreaming in the course of implementation of MKUKUTAI.

(ii) Identify lessons as inputs into MKUKUTA II (2010/11-2005/06) at the levels of Local Government and Central Government Level (MDAs) and extending coverage to the private sector and Non-Governmental Organizations.

(iii) Establish how effective the various *methods of mainstreaming* and *policy instruments* have been in facilitating mainstreaming of environment and from this,

(iv) Assess the scope for improvement lessons for MKUKUTA II, including the human capacity requirements for improving the effectiveness of environmental policies at the levels in (ii).

The main period of analysis is between the end of the 1990s (first PRSP) and today, that is, the final year of the first MKUKUTA I (2005/06-09/10).

Specific tasks include:

(i) To assess progress made (successes and/or shortcomings) towards mainstreaming environment into various sectors, Local Government Authorities, private sector and NGOs. The assessment shall use key monitoring indicators, where possible and relevant, disaggregated by key environmental problems and geographic location.

(ii) To assess the extent to which the institutional arrangement provided in the EMA is established at all levels of the government and their capacity. The assessment should also study the linkage between these institutions in the course of implementing environmental actions/interventions or guidelines.

(iii) To identify strategic areas which lacked progress and factors which acted as inhibitors and suggest how they could be addressed

(iv) To assess the effectiveness of approaches used in mainstreaming environment at all levels.

(v) To make an analysis of the lessons learnt and key challenges encountered.

(vi) To assess the key capacity development and institutional strengthening needs for achieving national development objectives and MDGs related to environment

(vii) To provide a set of recommendations and propose way forward for strengthening the mainstreaming and key outcomes.

1.3 Methodology

The assessment involves collection and analysis of secondary information from the respective institutions and consultative meetings with relevant authorities. The key documents covering environmental issues include the National Environmental Policy (six environmental Problems+Climate Change); MKUKUTA-I; National Environmental Management Act 2004; and National Plans and Strategies for Implementing Multilateral Environmental Agreements. They provide a guide on the scope of environmental mainstreaming and key policy instruments for integrating environment into the growth and poverty eradication process.

MKUKUTA and MKUZA monitoring systems have been producing various outputs through various working groups such as Research and Analysis Working Group (RAWG) and Survey and Routine Data Group. Furthermore, various stakeholders such as DPs, private sector and CSOs have produced various outputs on different occasion during the course of implementation to assess progress.

Collection and review of these documents as well as studies and reports on experiences of other countries and international environmental practitioner agencies form the first level of the analysis. Lack of a quantitative indicator of the extent or degree of mainstreaming of environment is a major limitation of a policy study of this nature. Only improvised qualitative indications, describing steps or activities are attempted. Indicators of successful mainstreaming would include evidence of inclusion of poverty-environment linkages in national development and poverty reduction strategies, strengthened capacity in key sector ministries to include environmental sustainability into their strategies and implement them, and improved livelihoods and access to environmental and natural resources for the poor.

The second level is consultation with key local and international institutions. Consultations (through presentation of the different stages of the report) have the advantage of eliciting first hand information on what is working/is not working. The aim is to validate the analyses and deepen our understanding of the problems and prospects of further integrating environment into the planned activities of MDAs and other economic agents.

1.4 Organization of the Report (to be recast)

The introduction is followed by Section II which makes an overview of the extent of environmental mainstreaming before and during MKUKUTA I, prefaced by background narrative of the ascendancy of environmental mainstreaming in the developing countries and in Tanzania's policy frameworks. It also presents the main institutional framework and policy instruments for environmental management in Tanzania. Section III points out major initiatives during MKUKUTA I. Section IV draws lessons of experiences to inform MKUKUTA II. It has two parts, the first part discusses the strengths which are qualified while section two discusses the limitations for Environmental Mainstreaming, suggesting at the same time what needs to be done to improve on the qualified strengths and weakness. Section V will put together conclusion and recommendation.

II. Extent of Environmental Mainstreaming

2.1 Ascendancy of Environmental Mainstreaming Agenda

Environmental concerns mean the same for all countries with differences only in the details given by country-specific circumstances such as the natural resource endowments and dominant economic activity (e.g. agricultural versus industrial economies). Tanzania's commitment to environment and natural resources (ENR) protection has historically been linked to global commitments on sustainable development, including the United Nations conventions on sustainable development such as the UN Conference on Human Environment 1972, UNCED 1992, the Millennium Declaration in 2000 and the 2002 World Summit on Sustainable Development (WSSD) which exhorted the international community to integrated and global response to poverty and environmental decline. The global approach was prompted by observed erosion of the capacity of the planet to sustain humanity due to human activities that degrade agricultural land, diminishing forestry and fishery resources, deplete clean water sources and biological diversity, and contribute to global warming (Melnick et al. 2005). Commitment by all nations owes to the fact that actions by an individual country can inflict indiscrete harm to many more countries, hence the importance of integrating multi-lateral commitments and opportunities on environment into national policies and sector strategies through partnerships involving exchange of expertise.

When the World Bank and International Monetary Fund (IMF) adopted a Poverty Reduction Strategy Paper (PRSP) approach to assist the developing countries alleviate the adverse effects of adjustment programmes towards the end of the 1990s, integration of environmental issues into the PRSP agenda was one of the conditions which aid-receiving countries had to abide with. Thus the World Bank's Environment Strategy aimed "…*to promote environmental improvements as a fundamental element of development and poverty reduction strategies and actions"* (World Bank 2001, Bojo and Reddy 2001).

In response, Development Partners have since sought to integrate environment into their development cooperation or *country assistance programmes*. This amounted to integrating environment in development financing. Thus European Commission developed its Environmental Integration Manual taking environment as a cross-cutting issue that had to be integrated in all projects and policymaking (Marsden 2006). International development organisations such as UNDP (UNEP, WFP, FAO) and independent think-tanks on sustainable development such as the International Institute for Sustainable Development (IISD), the Global Environment Facility (GEF), the International Institute for Environment and Development (IIED) and many others worked to support developing countries to include "principles of environmentally sustainable development" in their national development frameworks (e.g. IISD 2005, Mertz 2005, DFID 2004, DFID 2003, UNDP 2004, UNDP and UNPF 2001:5, , GEF 1998; UNCTAD and UNDP 1999) as well as assisting them in the implementation of commitments to Multilateral Environmental Agreements (MEAs). Iinclusion of environmental concerns (environmental hazards) and opportunities (possible environmental assets) into the project and programme cycles as well as development of appropriate monitoring indicators for evaluation have remained key attributes for assessing progress in environmental mainstreaming.

An initiative in the UN *Millennium Development Goals (MDGs)* is particularly reckonable. Table 1 depicts a variety of ways in which environment is linked to poverty reduction and MDGs, specifically Goal 7 although in fact the attainment of other MDGs directly or indirectly is associated with attainment of environment sustainability.

Table 1 Environment and the Millennium Development Goals (replace)

	Millennium Development Goal	*Examples of links to the environment*
1	Eradicate extreme poverty and hunger	Livelihood strategies and food security of the poor often depend directly on health ecosystems and the diversity of goods and ecological services they provide.
2	Achieve universal primary education	Time spends collecting water and fuelwood by children, especially girls, can reduce time at school.
3	Promote gender equality and empower women	Poor women are especially exposed to indoor air pollution and the burden of collecting water and fuelwood, and have unequal access to land and other natural resources.
4	Reduce child mortality	Water related diseases such as diarrheal and cholera kill an estimated 3 million people a year in developing countries, the majority of which are children under the age of five
5	Improve maternal health	Indoor air pollution and carrying heavy loads of water and fuelwood adversely affect women's health and can make women less fit for childbirth and at greater risk of complications during pregnancy.
6	Combat major diseases	Up to one-fifth of the total burden of diseases in developing countries may be associated with environmental risk factors-and preventive environmental health measures are as important and at times more cost-effective than health treatment.
7	Ensure environmental sustainability	Current trends in environmental degradation must be reversed in order to sustain the health and productivity of the world's ecosystems.

Sources: DFID, EU, UNDP, World Bank (2002)

It is for this reason that many countries including Tanzania began *integrating environmental* concerns into their planning frameworks, building on the environment-related concerns associated with the productive activities in the natural resources-based sector/sub-sectors such as agriculture, forestry, mining, fishing and for which international conventions were more established. The growth of the industrial and urban settlements, mostly unplanned or weakly regulated, have also highlighted a host of environment and health-related effects such as health and natural disasters (e.g. due to flooding), air and even noise pollution.

Countries and national and international non-state actors carried out incisive analyses of poverty-environment causal links in the developing countries. In the developed countries environmental concerns of different scales were also coming under close scrutiny, particularly in the way they affect the world (e.g. the CFCs), on the one hand, and the way consumption in the developed countries and environmental standards affect external trade opportunities of the poor countries. Increasing awareness thus prompted the developing countries into putting in place environmental management institutions at national and sub-national levels, devising new policy measures and policy instruments and exploring environmental indicators to assist in setting targets.

Syntheses of country experiences are now providing lessons on the "drivers" of environmental mainstreaming in developing countries including (e.g. Parnell 2000; NEMA 2007; UNDP-UNEP 2008a, UNDP-UNEP 2008b, Dalal-Clayton and Bass 2009, for countries like Tanzania, Kenya, Uganda, Rwanda, India, Bhutan, Mozambique and others) (Box 1).

Box 1: Drivers of Environmental Mainstreaming

Major drivers
- Increasing stakeholder awareness & demands
- National legislation & regulations
- Values of progressive organizations
- Donor conditions and initiatives

Moderately important drivers
- International commitments
- Major environmental events and disasters (e.g. floods)
- Company/business plans & objectives, regulations / requirements
- Risk management
- Traditional cultural reasons

Other drivers
- Visible 'real' issues
- Link between development/poverty reduction and environment
- Requirements of clients
- EU accession and approximation process
- Membership of international business groups (that embrace E M.)
- Desire to address rising poverty and inequality
- Need to protect ecosystems and stem environmental degradation

Source: Dalal-Clayton and Bass (2009, p. 54)

The poor countries undertook environmental mainstreaming activities almost at about the same time as the Poverty Reduction Strategy Paper (PRSP) approach spearheaded by the international financial institutions was becoming fashionable.

Though many mainstreaming activities were carried out at central government level, in collaboration with Development Partner financial and technical support, *initiatives* by independent think-tanks, often in collaboration with government undertook research and evaluative projects aimed at inducing inputs into poverty reduction strategies, developing poverty-environment indicators, appropriate formats for environmental impact assessments and environmental policy instruments such as user charges for water and charges related to exploitation of fisheries and wildlife resources (Dalal-Clayton and Bass 2009). A number of *consumer-based and ethical programmes* related to trade in endangered plant and animal

species, health and environmental standards on exports from developing countries, eco-labelling, and similar conditions have since influenced contemporary public behaviour and debate on environment (Vossenaar 2006, UNCTAD and UNDP 1999, Hudson, 1992).

Recent reviews of country experiences, however, reveal that progress in mainstreaming environment still faces a number of constraints (UNDP-UNEP 2008b, Dalal-Clayton and Bass 2009). Referring to the fact that environment has had a short history of presence in mainstream (traditional) policy setting, both into development partnerships funding (Marsden 2006) and in developing countries (Marsden 2006, Dalal-Clayton and Bass 2009) the first limitation was largely a conceptual one, with policy makers and planners feeling low pressure or need to assign weight to environment in the quantitative macroeconomic and sectoral policy frameworks. When this was finally overcome, there was slow political will in many instances to accepting environment as a key variable in policy making for sustainable development. As this there followed the painstaking search for appropriate approach and assortment of environment and natural resources issues and matching indicators to be build into the development strategies. The limitation was basically one of lack of a proper data base and poor skills and institutional capacity at country level, much worse at the sub-national levels. It also meant non-existence or limited availability of poverty-environment indicators. The early roles of development partners and emerging champions of environment within government of developing countries gradual acceptance of environmental issues as critical for sustained growth and reduction of many dimensions of poverty.

2.2. "Entry Points" for Environmental Mainstreaming towards MKUKUTA I

Though policy makers in developing countries were aware of the environmental consequences of unsustainable exploitation of natural resources and of bad methods of production, consumption and exchange (trade) there is significant impetus that the International Financial Institutions (IFIs) added towards the end of the 1990s through the conditions inherent in the Poverty Reduction Strategy Paper (PRSP) approach. [1] The developing countries had implemented environmental actions earlier, but the interventions

[1] The World Bank, together with the IMF, produced a PRSP source book to assist countries in developing their PRSPs. The chapter on environment laid out a number of critical linkages between poverty reduction and environment and environment and economic opportunity (role of natural resources on livelihoods, environmental shocks such as drought floods etc), environment and health (pollution & degradation).

were not organized in a manner amenable to a joint institutional approach at the national level. As Kimenyi, Nyangito and Kulindwa (2004) observe, therefore, at first most countries found the integration of environment into the PRSP process to be a challenge because both the PRSP process and analyses of poverty–environment linkages were relatively new, other than those specific issues confined to natural resources sectors. In the new approach (just before or with the PRSP), e*ntry points* for integrating the environment into planning would involve establishing and strengthening relevant legislation and institutions to deal with the coordination, management and conservation of the environment for sustainable development. A need was clear of a national authority and /or a ministry/department to oversee the environment as a basis for effective environmental mainstreaming initiatives and programmes rather than leaving environment to just a few sectors.

Tanzania followed this trend. As the second generation PRSPs came around, more concrete and home-adapted agenda and guidelines for integration of environment into development programmes were designed. Thus the early *entry points* as institutional framework linked the Division of Environment (DoE), (shifted from then Ministry of Natural Resources, Environment and Tourism to the Vice-President's Office), and the National Environment Management Council (NEMC) (established by Act of Parliament No. 19 of 1983) This was consonant with the motive underlying the National Environment Action Plan (NEAP) of 1994, and the National Environmental Policy of 1997, and the Environmental Management Act 2004 (assented by the President on February 2005).of establishing institutions responsible for systematic monitoring of the state of environment and fill information gaps on environment. The Division of Environment has overseen relatively faster integration of environment recently compared to before the mid-1990s. The first three-year PRSP (URT 2000) did include environment as one of the policy concern, but the government and development partners invested more heavily into environmental mainstreaming in the subsequent framework, the MKUKUTA I through more concrete and home-adapted agenda and guidelines than had been in the past. The one-year PRS Review process (2003/04) leading up to the MKUKUTAI developed crucial inputs based on various environment initiatives (research, public awareness campaigns). The Vice-President's Office championed the work of consolidating the rise in "environmental activism" into actionable interventions

through the *Guide and Action Plan to Mainstreaming Environment into the Poverty Reduction Strategy Review (URT 2004a).*

Providing clarity was one of the key steps in getting the environment and natural resources (ENR) appreciated by actors in different sectors. With this step emphasis was on showing ways through which environmental resources are related to livelihoods, health and economic growth. The purpose was to limit the negative effects or amplify the benefits of measures to forestall the damage to environment. Assey *et al*. (2007) termed this as "the awareness transition". This knowledge-building transition drew on the National Environment Policy was further supported by technical and research support from Development Partners (UNDP-UNEP 2008a, UNDP-UNEP 2008b, World Bank 2005, DFID 2004) and from local academic and non-governmental institutions involved in environment advocacy. Examples of critical analytic work that fed the MKUKUTA I drafting included the Tanzania Participatory Poverty Assessment (TzPPA), the first Public Expenditure Review for environment (VPO 2004), UNDP background technical and financial support (UNDP 2002, UN 2001). Work was also carried out on *the poverty-environment indicators* for use in poverty monitoring.

Awareness was also raised about the loss of government revenue from degradation of forest, fisheries and wildlife resources. Corruption and weak enforcement of rules and regulations led to wanton and destructive exploitation of forestry, wildlife and fishery resources and loss of government revenue and foreign exchange as a result of smuggling and illegal exports.[2]

With respect to land use, the checklist included persistent loss of productivity and soil stability due to bad agricultural practices which contributed to adverse effects on health and living conditions and poor incomes, the negative consequences of unplanned land use patterns in urban areas, particularly congested urban settlements, industrial activity with poor disposal provisions for effluent and emissions posing health hazards and consequent costs on the provision of health care and sanitation infrastructure, and finally intermittent conflict between farmers and itinerant livestock keepers.

[2] Tanzania was not unique, DIFD, EU, UNDP and World Bank (2002:34), for instance, cite a similarly problematic case of corruption in the Cambodian forestry sector.

By the time of the launch of the MKUKUTA I (mid-2005) the level at which environment was integrated could be characterized as much deeper than in the previous PRSP in that it was featuring a lot more activity towards expanding understanding the meaning (conceptual), its cross-cutting nature, and therefore the essence of combined effort of different actors as indicated in the MKUKUTA I matrix.

Box 2 shows the three major clusters of MKUKUTA I in which environment interventions are more direct. The MKUKUTA I annex provided more details of cluster interventions, by MKUKUTA I Goals/ and Targets for use by government, non-state actors such as civil society, private sector and development partners. There were at least 15 targets directly related to environment and natural resources in Cluster 1 aiming to support sustainable growth. The targets most related to environment include reduced negative impacts on environment and livelihoods; reduced land degradation and loss of biodiversity; increased sustainable off-farm income generating activities; and increased contribution from natural resources (fisheries, wildlife, mining etc) and the environment to incomes of rural communities provision of reliable and affordable energy.

Box 2: MKUKUTA I Major Clusters where environment features prominently

Cluster I: Growth and Reduction of Income Poverty
Broad outcomes:
→Broad based and equitable growth is achieved and sustained
Goals:

- Ensuring sound economic management
- Promoting sustainable and broad-based growth.
  - *Reduced negative impacts on environment and peoples' livelihoods.*
  - *Reduced land degradation and loss of biodiversity*.
- Improving food availability and accessibility.
- Provision of reliable and affordable energy to consumers

Cluster II: Improvement of Quality of Life and Social Well-Being
Broad outcomes:
→Quality of life and social well-being, with particular focus on the poorest and most vulnerable groups improved
→Inequalities in outcomes (e.g. education, survival, health) across geographic, income, age, gender and other groups reduced
Goals:

- Improved survival, health and well-being of all children and women and of specially vulnerable groups
- Access to clean, affordable and safe water, sanitation, decent shelter and a safe and sustainable environment and thereby, reduced vulnerability from environmental risk.

Cluster III: Governance and Accountability
→Good governance and the rule of law are ensured

Source: URT 2005

Under Cluster II, environment-related interventions would contribute to access to clean affordable safe water, sanitation, decent shelter and other interventions aimed at reducing vulnerability to environmental risks. The operation targets in this include sanitation and waste management, namely: increased access to improved sewage facilities from 17 percent in 2003 to 30 percent in 2010 in respective urban areas, adequate basic essential utilities and reduced water related environmental pollution level from 20 percent in 2003 to 10 percent in 2010. In this cluster the focus is to reduce harmful industrial and agricultural effluents, vulnerability and increase environmental conservation. It can be noted also that in cluster III there are no direct environment-related operation targets, but one could infer this in goal number 2 which requires ensuring equitable allocation of public resources with corruption effectively addressed. More emphatic is specific requirement to "Develop effective mechanisms to ensure equitable access and use of environment and natural resources especially for poor and vulnerable groups". Under Cluster III, good governance and accountability requires that laws ensure the poor have equitable access to and control over natural resources and conflicts over use of natural resources are forestalled and illegal exploitation of resources curtailed.

The main *challenge* is to have a critical assessment of the attainment or otherwise of the targets under MKUKUTA I looking forward to MKUKUTA II. Such an analysis requires:

(i) A reflection on the implementation of the arrangements provided in the Matrix which lined up different actors for sets of goals. The critical question is whether or not the anticipated collaboration took place and if so which of the poverty-environment indicator(s) changed.

(ii) For MKUKUTA II it might be useful to ask, based on (i), if the Matrix provided a good guide to the planning and implementation of environmental interventions.[3] In any case the matrix suggested possible combinations which would display synergic action and more efficient attainment of the goals. In practice, however, this was problematic as pointed out during consultation with the sector ministries. Many actors pursued environment target by focused largely

[3] It is plausible that the same question applies to other non-environment actions that are indicated in the Matrix for collaborative actions.

on their individual sector mandates, only doing their best to toe the institutional linkages provided by the Institutional Framework for Environmental Management (e.g. reporting requirements).

(iii) Implementation at local government level remains of interest due to the knowledge and capacity gaps that are relatively more severe there than at central (sector MDAs and non-state actors mainly located in urban areas)

2.3 Institutional Framework for Environmental Management

The institutional set-up for environmental management is anchored at the Ministry of State responsible for Environment where the Division of Environment coordinates the various environment management activities, advising government on legislative and other measures for implementation of international agreements on environment, monitoring and assessing environmental management and providing early warning on impending environmental problems. The Division prepares a report on the *state of environment*, coordinates and articulates environmental issues in other sector policies and implementation of the National Environmental Policy. The Environmental Management Act (2004) specifies the roles and responsibilities of different levels and responsibility-relationships as indicated in Figure 2.

The NEMC also reviews, approves and monitors environmental impact assessments, enforces compliance to quality standards and initiates procedures and safeguards against accidents that may cause environmental degradation. The Council is also expected to undertake environmental education and public awareness in collaboration with relevant sector Ministries and has to publish and disseminate manuals, codes and guidelines on environmental management and protection. It may also directly relate to villages, *mtaa*, ward, district, regional and sector levels in its roles of conducting surveys, research, investigation, dissemination and public awareness, enforcement of codes or guidelines, standards, cooperation with sectors, communities, technical support etc.

Figure 2: Institutional Arrangement for Environmental Management

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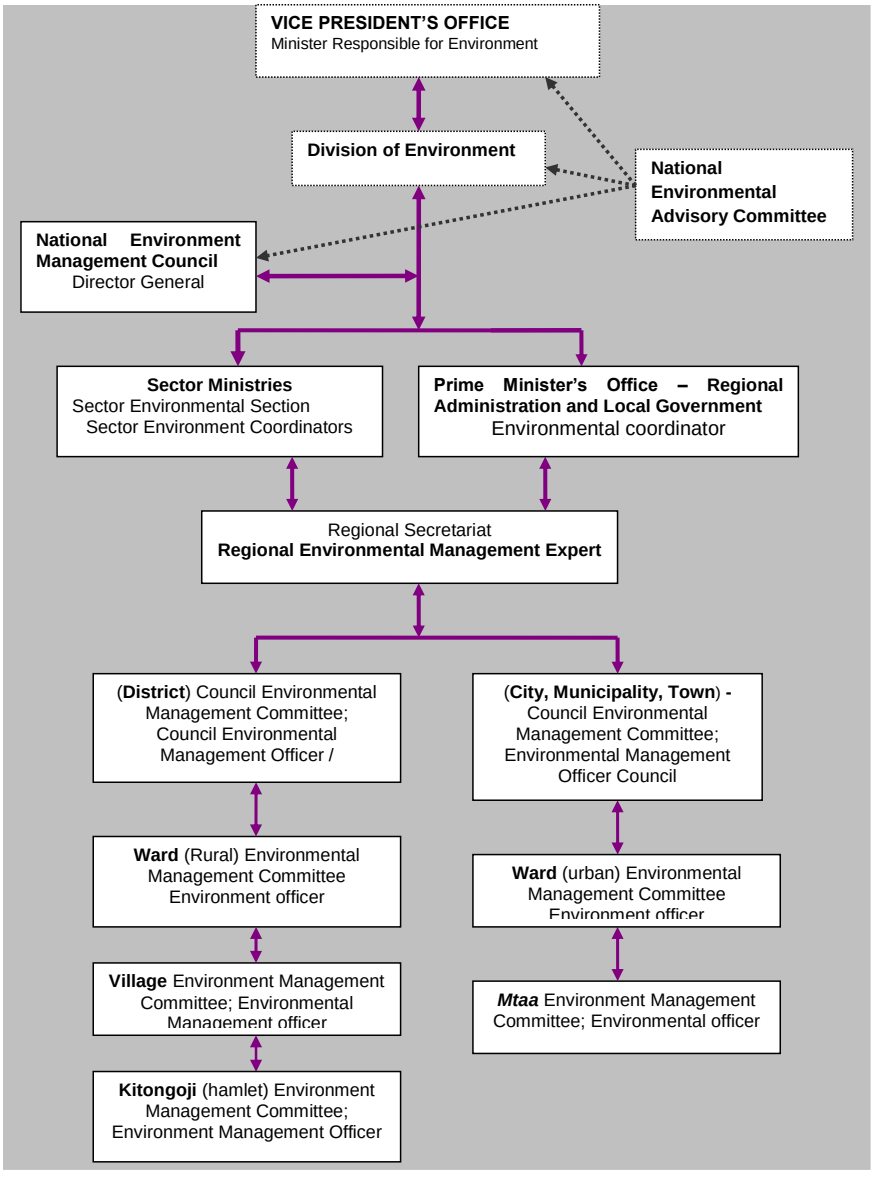

Source: EMA 2004

Each Ministry should have Sector Environmental Section to ensure that the Ministry complies with the requirements of the Act. The section liaises with the Director of

Environment and the Council on all matters involving environment. This way the Section has to integrate environmental concerns into the MDA's planning and projects, recommend relevant legislation and coordinate all activities related to environment and report on these. At the regional level, the Regional Secretariat is responsible for co-ordination of all matters of environmental management in the region. There is expected to be a Regional Environmental Management Expert who will also advise the local government authorities (LGAs) on the implementation of the Act.

At the LGA level, each City, Municipal, District and Town Council has to have an Environmental Management Officer who oversees implementation the Act, advise (the City, Municipal, District and Town Council) Environment Management Committee, promote awareness on environmental issues most pertinent in the area and gather information on the environment and natural resources utilisation and prepare reports on the state of environment in the area. The officer has also to monitor the preparation and approval of environmental impact assessments for local investments. It is further directed that Environment Management Committee be formed for villages (and *kitongoji*) and township wards and *mtaa* where Environmental Management Officers, together with respective Environmental Management Committees will link communities to the district.

Effective implementation for each level has been predicated on the availability of well-trained and motivated personnel, financial resource and accurate and timely flow of information within the network. It would also depend on "harmonious" working relationship between environmental officers and government officials and with the populations "at the bottom" in urban and rural areas. However, shortfalls on each of these factors turn out to constitute some of the hardest implementation set backs – that is inadequate personnel with expertise in the field especially at the local government level, budgetary constraints (at central and local government levels). Further, the working relationships between central government ministries responsible for environment and natural resources issues need indeed to be improved in terms of communication, level of participation in key choices of projects and programmes located in urban and rural councils which have consequences on environment and livelihood systems of the local populations. Otherwise, understanding of the EMA itself at all levels, that is, MDAs and LGAs, private firms and communities, remains a

challenge that must be picked through continual environmental education and enforcement of the Act.

2.4 Policy Instruments for Environmental Management

The stock of existing and new policy documents assisted in the learning process (see Table A1).[4] Tanzania is also a signatory to other key international conventions on the protection of biodiversity, endangered species, the ozone layer, wetlands and climate and so on. Legislation, particularly, EMA (2004) provides for frameworks for Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), economic instruments, environmental standards and application of precautionary principle as key priority policy instruments for environment management. SEA which is provided in the EMA 2004 is a systematic, proactive process for evaluating environmental effects in the holistic manner – covering social, biophysical, political and economic consequences.

The EIA procedures involve registration, screening, impact assessment, reviewing, permit decision, monitoring, auditing and decommissioning. National Environmental Management Council in consultation with a cross-sectoral Technical Review Committee (TRC) where necessary decide on the appropriate level of environmental assessment. Factors considered include project location and scale, applied technology, public concerns, land use considerations, environmental impacts and any other factors relevant to the particular project.

Increasing awareness on environmental effects of unplanned and unregulated investments was reflected in the requirement that major FDI projects undertake Environmental Impact Assessments (IES) before construction. Big projects such as those in mining, oil and natural gas sub-sectors, tourism projects in wildlife pars and coastal areas had to undertake IEAs to qualify for guarantee by the Multilateral Investment Guarantee Agency (MIGA) (CUTS and ESRF 2004). Besides, civil society organisations have also added their voices to demands for public participation in the assessment with admonition about possibilities of biased assessments (Hughes 1998). Limitations to the Tanzanian side which might lead to

[4] Immediate examples include the National Environmental Policy (1997), the National Climate Change Adaptation Plan (2006), the National Biodiversity Strategy and Action Plan (2000), and the National Action Plan to Combat Desertification (1999), Coastal Biodiversity Conservation Strategy (1995), the National Environment Action Plan (1994) and the National Plan for Agenda 21 (1993).

acceptance of projects that are not necessarily beneficial to the interests of the country's population may include limited "disclosure" of the environmental impacts and consequences to the livelihoods activities to the population in the project location (due to dominance of the proponent) or weak articulation of the environmental law. Besides the critical media, a number of civil society and community-based organisations that keep a "third eye" on environment are many and varied.[5]

Economic instruments operate through market mechanisms affecting price levels, costs to direct firms and household behaviour towards environmentally-friendly practices in production and consumption of goods and services. Examples of economic instruments include charge systems, liability rules and specified permits. Other instruments cover property rights, subsidy and information programmes. Rarely is the use of economic instruments clearly specified or used; the instruments need to be sharpened.

A number of companies and prospective investors have been complying with the requirement of conducting EIA prior the investment and abide to it during the production process. By 2007 there were 26 companies registered as complying with the EIA standards (URT, 2008). However, not in all cases are regulations followed; hence the continued need of the oversight role of the NEMC.

Regarding standards, EMA 2004 requires the government to formulate environmental quality standards, for instance, on water quality, standards for discharge of effluent into water, air quality standards, standards for the control of noxious smells, standards for control of noise and vibration pollution, standards for sub-sonic vibrations, standards for minimization of radiation and soil quality standards. Environmental Standards and Indicators make it possible for management to provide early warning relating to the potential environmental problems and make possible effective application of economic instruments to manage the environment.

[5] Some of the Key NGOs and CBOs dealing with Environmental Issues would include (to mention a few**),** Agenda for Environment and Responsible Development, Appropriate Technologies and Environmental Conservation Society, Association of Tanzania Travel Operators, The African Conservation Foundation, Dodoma Environmental Network, Environmental Professionals Organization (EnvriPro), Inades Formation Tanzania, Journalists Environmental Association of Tanzania, Kilimanjaro Environmental Development Association, Tanzania Association of Non-governmental Organizations, Tanzania Hunting Operators Association, Tanzania Traditional Energy Development and Environmental Organization, Wildlife Conservation Society of Tanzania, Kagera Agricultural and Environmental Management Programme

Indicators need to be defined, for example, on land-use conservation ratios (rural/urban, wetland/agriculture, etc) to make possible determination of ecosystems ability/resiliency/diversity relationships and evaluation of economic development strategies affecting natural resources. These standards, largely in the custody of NEMC need to be continually updated and one in which expertise of high level (engineering sciences) is in short supply in Tanzania (Table A2a).

Finally, since knowledge of environmental impacts is often incomplete and some impacts only give demonstrable effects after a long time, the precautionary principle, i.e. "it is better to be roughly right in time, than to be precisely right too late", is usually pursued. In certain cases action may be taken to protect and enhance environmental integrity even without complete knowledge of the causes and effects involved, or without waiting for more substantial proof of the damage. This tool is provided in the National Environment Policy, 1997. For example at the global level, nations are relating various environmental natural hazards such as cyclones to global warming and thus taking precautions to reduce *further global warming. The steps taken by government during the period of MKUKUTA I regarding climate change and emphasis on actions against desertification are a case in point.*

III. Major Issues and Progress during MKUKUTA I (up to 2009)

During the implementation of MKUKUTA-I further activities went on that are worthy recognizing because they add up onto the lessons for MKUKUTA-II. Mainstreaming activities on the part of government continued through policy guidelines or directives. The initiatives mentioned hereunder are not new, only that they demonstrate significant step worthy recognising.

3.1 Climate Change

MKUKUTA I had more emphasis, relatively, on *green issues* than on *brown issues* (e.g. air pollution, waste disposal, desertification). Table A2a which is extracted directly from the Guidelines draft (URT 2006a) summarizes issues that MKUKUTA II needs to carry a step further, being mainly *brown* environmental issues. These include air quality, desertification, urban pollution, biosafety and chemical pollution and climatic change and adaptation.

Current knowledge and experience suggest that climate change is a reality the impact of which cannot be ignored for its erosive impact on the productivity and sustainability of water resources, farming, human settlements, ecology, natural resources and human health. Africa's large catchment basins of Niger, Lake Chad, and Senegal and Lake Victoria basin and others face declining usable water levels. Tree-felling for firewood and logs, overgrazing, and improper management of water run-off, coupled with declining rainfall contribute to gradual, but steady desertification. For Tanzania, climate change impact emanates from such trends as rising sea-level in the Indian Ocean, shrinkage of the ice cap on Mount Kilimanjaro ice cap and an increasingly erratic rainfall pattern.

In April, 2006 the government launched the country-driven *National Strategy on Urgent Actions to Combat the Degradation of Land and Water Catchment Areas in Tanzania* in order to stem desertification due to unsustainable livestock keeping/pastoralism and agricultural practices that aggravate land degradation, water catchment areas and the erosion of the otherwise rich biodiversity of Tanzania.[6] (see URT 2006 for details Table A2b). These measures which are also included in the Tanzania National Adaptation Plan of Action (NAPA) represent an effort and manifestation of a step to deepening mainstreaming the environment.

In addition to the national initiative, Tanzania continues working within the framework of international agreements and use of such facilitation as the *Guidelines for Mainstreaming Post Rio Conventions*, and integration of the UN Framework Convention on Climate Change into Sector and local Government Authorities' Plans and Budgets. This will raise stakeholders' understanding and preparedness for the challenges of integrating climate change in their respective development programs and poverty eradication processes (URT 2006c).

[6] A Cabinet Committee on Environment, comprising of all key sectors (Vice President's Office, Ministries of Lands, Housing and Human Settlement; Forestry and Natural Resources; Agriculture, Cooperatives and Food Security; Finance; Planning and Economic Empowerment; Water; Livestock; Local Government; and Community development) was formed to provide general oversight and guidance over environmental protection and to monitor the progress in the implementation of the Strategy.

3.2 Public Finance and Environmental Mainstreaming

Three aspects are worthy noting about public finance management for environment as experienced during the implementation of MKUKUTA I: The first relates to the translation of the environmental priorities into national plans to budgets.

3.2.1 Scope of Funding of Environmental Priorities

This has been one of the challenges for the implementation of interventions at all levels. Sectors have to cost and seek budgetary resources for implementing natural resources and environment protection interventions. The budgetary requirements included in the plans and budgets of sector MDAs and local government are then tabled for financing by central government and donor support mostly through general budget support. It all depends on whether or not they are articulated at all in the sector or LGA plans and budgets.

The Department of Environment (DoE) which does overall coordination has since 2006/07 reported a substantial increase in budget, staff and activities. The approved estimates suggest that the DoE recurrent budget from GoT sources has significantly increased from 1billion Tshs in 2005/06 to 5.7 billion Tshs in 2006/07. The 2006/07 budget speech was the first year that environmental issues were explicitly included as a priority issue. However there was a slight fall in the budget estimates for 2007/08 to Tshs 4.195 billion (Table 2).

Table 2: Recurrent Expenditure by the DoE: actual vs Approved Estimates, 2001/02-2007/08

Year	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07(estimate)	2007/08 (estimate)
Actual	1.44	0.88	0.83	0.92	1.145		
Approved estimate	0.56	0.7	0.82	0.885	1.08	5.675	4.195

Sources: Luttrell and Pantaleo, (2008)

The DoE budgets makes up 39 percent of the estimated total VPO budget for 2007/08. In the VPO MTEF for 2007/08, DoE was allocated 12.1 billion Tshs and NEMC 7 billion Tshs. Figures for the recurrent budget for NEMC suggest NEMC's spending, though increasing substantially in amount, is decreasing relative to spending by the rest of the DoE. In 2004/05 expenditure for NEMC was 64 percent of the total DoE budget, but in the 2006/07, the proportion dropped to 30 percent of the budget (Luttrell and Pantaleo 2008).

The *initial* focus of both MKUKUTA-I and the EMA was at the national level. Allocations are made directly to sector ministries which decide on further allocation for activities they do at the local level. Such resources are not channelled directly through the decentralized structures of LGAs. LGAs have to make their own plans and budgets. Each sector ministry was required to implement EMA.[7] The problem with this directive is that though the fund was set aside for the purpose there was no clear guidelines and work plan for each specific ministry on how the implementation will be carried out. This reason could partly explain why almost all sector ministries received a flat rate of Tshs 71-75 million for the implementation of EMA. Lack of work plan and specific targets means little be traced.

Furthermore, the EMA states that the Minister of State for Environment has to foster co-ordination of the central government (sector MDAs), LGAs and other bodies on environmental management. Since the implementation of MKUKUTA-I and the EMA rely heavily local government, and since some of the MDAs' activities are environment-related, there is chance that the MDAs and LGAs may find themselves doing similar activities. However, in recognition of this weakness, NEMC has begun implementing the decentralization of policies and enforcement of environmental management laws by opening zonal NEMC offices in 2009. Nevertheless, the capacity for both DoE and NEMC to fully implement this is still inadequate due financial and human resources constraints.

The whole idea of mainstreaming through education or awareness-raising implies that there are actions by agents that do not necessarily entail direct costs – such as proper use of chemical inputs, proper ridging in agriculture, not starting bushfire (as examples from agriculture), actions that could save money as well as protect the environment in the end. Given increased scope for extending the mainstreaming activities to the lower (sub-national) level, work that has to be spearheaded by both the Division of Environment and NEMC, for all technical direction, it is anticipated that funding requirement will expand.

[7] More than 80 percent of LGAs budgets are largely transfers from central Government for operational costs. The coordination of urban development and environmental management falls under the Urban Authorities Support Unit (UASU) which is part of the Environment sub-section of the Economic and Productive Sector Section in the Sector Coordination Division of the PMO-RALG. The work of UASU has been supported by external sources through the Sustainable Cities Programme (SCP), mainly UNDP, UNHABIT and DANIDA supported.

Citing an example of the agricultural sector, it is noted that despite the fact that agricultural performance depends very much on the quality of the environment no fund was set aside for the protection of environment or even to create the capacity within the ministry to monitor the environmental status. Table 4 shows the financial requirements for the implementation of ASDP. It shows nothing is set aside for environment. It is obvious that during the implementation of ASDP there are negative effects on the environment. For example, expansion of the farmland may require clearance of the forest and other environmental resource which means a budgetary allocation should be set aside for mitigation and monitoring. For example on the use and disposal of pesticides, use of irrigation and fertilizers and so on. This is an oversight for the programme of almost 7 years without allocating money to cater for the environmental impact.

Table 3: Agricultural Sector Development Programme Financial Requirement (TZSs Million)

	2006/07	**2007/08**	**2008/09**	**2009/10**	**2000/11**	**2011/12**	**2012/13**	**Total**
A Local programme								
1. In short								
	4,56	4,744	4,919	5,100	5,288	5,483	5,686	36,795
	6,102	7,707	10,105	13,722	17,088	19,478	25,764	100,085
	13,738	148,428	151,405	255,513	263,567	324,987	335,779	1,4478,366
2. Services								
	16,004	17,486	17,954	18,083	16,083	15,855	15,733	117,590
	2,03	4,392	8,338	11,097	13,598	15,908	16,496	72,042
3. Capacity Building	2,999	3,086	3,148	3,264	3,384	3,509	3,639	22,909
	2,993,086	3,148	3,264	3,384	3,319	3,509	3,669	22,919
	95	1,139	1,377	86	618	682	682	6,433
	4,396	1,350	1,467	2,621	1,845	994	3,160	15,794
	643	1,369	1,518	1,950	2,097	2,174	2,474	12,225
Sub-Total Local Programme	**5,306**	**19,021**	**20,120**	**32,578**	**323,773**	**388,976**	**49,414**	**1,876,340**
B.National Programme								
1. Agricultural Services								
Research	11,744	14,305	15,361	13,439	13,580	13,087	12,776	94,312
	1,007	2,677	1,719	1,563	1,072	980	906	9,894
Livestock	786	889	812	284	144	70	50	3,084
	1,788	63,335	68,345	84,510	1,575	1,575	1,628	11,362
4.Food Security	388	1,199	1,230	1,236	1,255			5,308
Sub Total National Programme	**109,057**	**86,290**	**90,666**	**104,718**	**110,069**	**56,165**	**57,998**	**615,901**
	180,363	**276,261**	**29,887**	**407,296**	**433,783**	**46,140**	**467,412**	**2,412,141**

Source:MAIR 2008

3.2.2 Taxes for Environment and Natural Resources Protection Outcomes

The second aspect is the noted progress towards applying tax instruments to induce desirable environment and natural resources protection outcomes. Interest is wide as to the potential revenue generation through environmental fiscal reforms (EFR) as recent studies across countries (World Bank 2004), citing pressure for resource overexploitation combined with weak enforcement and poor governance that promote illegal logging and corruption. As Ikiara, et al. (2009) show, in the case of Tanzania, there is poor revenue collection from forestry resources, fisheries and wildlife due to under-pricing and cheating on actual data of extraction and exports. While in OECD countries, 90 percent of revenue comes from environmentally-related taxes on vehicle fuels and motor vehicles, the corresponding figures are Tanzania (7%), Kenya (6%) and Mozambique 10% (Ikiara, et al. 2009).

The 2006/07 budget (Box 3) deployed a mix of taxes for environmental protection, a feature which is much more inclined for protection of environment than perhaps for revenue enhancement. This is a positive development which is supposed to be a permanent feature, flexibly adjustable for any new developments on the environment agenda.

Box 3 Highlights of the 2006/07 Taxes for Environment Protection

- Exemption from Value Added Tax (VAT) Liquefied Petroleum Gas (LPG) and LPG cylinders to encourage the use of gas; and reduction of the excise duty rate on kerosene (IK) from shillings 122 per litre to shillings 52 per litre to encourage the use of kerosene in place of charcoal and firewood with a view to preserving our environment;
- Increase of excise duty rates on plastic bags not banned, from the current rate of 15 percent to 120 percent with a view to protecting the environment; an excise duty of 20 percent on imported used non utility motor vehicles aged 10 years or more;
- Elimination of import duty on gas cylinders in order to promote the use of gas and protect environment;
- Exemption of all solar powered equipment and specialized accessories from import duty. The aim is to promote the use of alternative sources of energy given the current energy crisis in East Africa.
- Reduction of the duty rate on energy saving bulbs to zero percent. The measure is aimed at make efficient consumption of electricity.

Source: Extracted from Budget Speech 2006/07

So far, however, it is not clear how much has been collected and if the collected money was allocated for environment and natural resources protection or for other government uses as a normal tax revenue. Within this, the other aspect relates to revenue-generation activities while conserving/protecting natural resources and environment. More visible are sectors of

mining, tourism, fishing, construction (the paving of land). Tax and non-tax revenues are probably not fully exploited. This remains a source of concern for sustainable domestic revenue collection and an area for serious consideration in the MKUKUTA II.

Relevant questions remain as to how the collected revenue should be shared among different stakeholders (e.g. communities, local and central government), whether all revenue should be allocated through the central government budget or through more decentralised structures, and or earmarking of revenue for different specific uses such as for monitoring and law enforcement. This applies mainly for natural resources sectors.

3.2.3 Allocation of Resources to Cross-Cutting Issues

The third aspect relates to allocation of resources to the cross-cutting issues of which environment has been one in MKUKUTA I. Table 5 shows the allocation of resources to selected sectors that are critical for poverty reduction and economic growth including education, health, agriculture, water, roads, judiciary, HIV and AIDS and energy. This suggests that environment has not been perceived as a key sector that can play significant role in poverty reduction, unless it is argued that allocations for environment are those directed to the Division of Environment and NEMC. It may be important, however, to remember after all, that the sectors in the table (except HIV/AIDS) are expected to have included environment interventions in their plans and budgets. The expenditure lines for environment interventions are not easy to identify from the Table. The main reason is that the apparent reluctance of the government to give a budget code to the environment. HIV/AIDS as a cross cutting issue is having a code in the budget, but environment is not given. Even though money might have been allocated for the environment is difficult or completely impossible to trace its expenditures. It is high time therefore the government give a budget code to the environment.

Table 4: Resource Allocation to Selected Major Sectors_2008/09

	Billion Tshs			Percent of total budget		
	Recurrent	**Development**	**Total**	**Recurrent**	**Development**	**Total**
Education	1,216.40	196.60	1,413.00	25.7	7.9	19.6
Health	457.00	286.60	743.60	9.7	11.5	10.3
Water	33.80	199.50	233.30	0.7	8.0	3.2
Agriculture	158.90	137.80	296.70	3.4	5.5	4.1
Roads	301.40	668.90	970.30	6.4	26.9	13.4
Judiciary	52.60	30.60	83.20	1.1	1.2	1.2
HIV/AIDS	19.10	87.90	107.00	0.4	3.5	1.5
Energy	43.70	335.20	378.90	0.9	13.5	5.2
Sub-Total	2,282.90	1,943.10	4,226.00	48.3	78.0	58.5
Others	2,443.80	548.00	2,991.80	51.7	22.0	41.5
Grand Total	**4,726.70**	**2,491.10**	**7,217.80**	**100.0**	**100.0**	**100.0**

Source: MAIR (2008)

IV. Lessons: Strengths to Inform MKUKUTA II

4.1 Strengths Qualified

Factors which facilitated the mainstreaming processes, with collaboration and knowledge-sharing DPs and independent research think-tanks, non-governmental organizations, civil society and interface with private sector may now be identifies "good practices", with a caveat that they present a big challenge of maintaining them or doing better during MKUKUTA II. Bringing together institutions (MDAs, LGAs, civil society, communities, individual households and private firms etc.) on board remains one of the strongest institutional arrangements for environmental mainstreaming. Ability to sustain interest and communication channels amongst interested parties is a key challenge upon which MKUKUTA II would be time-tested. The following represent some key process strengths which need to be kept in focus or improved upon further in connection with mainstreaming environment.

4.1.1 Early Advantages

Box 4 lists ten *strength* points beginning with early mainstreaming attempts building on the entry points (identified earlier), championed by national institutions and individuals as well as support of development partners (in the environmental working group). It is fair to long that this "litany" remains as true today as it was in the beginning of the more intense activity in 2003/2005.

Box 4: Ten Success Steps

…. The ingredients to success in Tanzania are the strong recognition that environment matters and the development of ten practical steps to mainstreaming:

1. Strong national group of stakeholders to champion environment.
2. Increased awareness on why environmental issues are of crucial importance to poverty reduction and achievement of MDGs.
3. Greater understanding of, and increased analytical work on, the links between poverty and environment including the contribution of environment to growth, livelihoods, government revenue, and importance to achievement of many of the MDGs.
4. Establishment of a cross-sectoral forum to work on environment that is led by government.
5. Review and strategic assessment of policies, plans and programmes for impact on environment and poverty.
6. Assessment of the levels of public expenditure on environment against contributions to growth and poverty reduction, and policy objectives.
7. Integration of environment issues and appraisal into planning processes, particularly at the local level (village and district).
8. Integration of multi-lateral commitments and opportunities on environment (e.g. Climate Change Convention) into national policies and strategies
9. Strengthened environmental management capacity of government, non-government and private sector, and development of sectoral guidelines on mainstreaming
10. Inclusion of poverty-environment indicators in local and national monitoring systems –including the PRS.

Source: Howlett (2006)

Most mainstreaming activity took place relatively more at the national level (centred in Dar es Salaam and at best regional and district headquarters), with intensive dialogue around themes and studies among MDAs, academia and Development Partners. There was less of such dialogue of interaction with agents at the sub-national level (especially villages). Nevertheless it is important to take note of a few advantages which the process built on:

(i) There was, at the sub-national level, already some basic awareness, interest and minimum administrative capacity for the output of the Environment Working Group and such other alliances involving development partners and local NGOs to be picked at the lower levels (e.g. through government or donor supported projects at community levels, and *village committees* that include subjects of environment for health – cleanliness of homestead compounds, roads and footpaths, guard against bush-fires on village land, land use patterns etc.).

(ii) The natural resource-based sector ministries were historically already operating in the districts. Examples include forestry, wildlife and fisheries sub-sectors for which by-laws were in place to protect the resources against wanton exploitation.

In many cases the sectors employed experts as public servants at district levels responsible through regional officers to the ministries in Dar es Salaam.

(iii) A number of national policy strategies and programmes were picking up environmental aspects related to their areas of mandates (see Appendix 1).

(iv) *Interventions for environment at the Local Government Authorities* exploited the existing knowledge and local government institutional framework, the O&OD as a basis for institutionalizing the mainstreaming of environment into the local government plans and budgets all the way down to the village and *mtaa* level.

4.1.2 Public Awareness and Environmental Education

The government has recognized the power of public education and outreach efforts for awareness rising on citizen rights and obligations regarding natural resources and environment. The government has championed public awareness campaigns on the importance of environment in poverty reduction through mass media and public and private education and research institution.[8] Increasingly new civil societies have been established carrying out environmental action agenda and with others participating fully in environmental mainstreaming processes. Through education, the public understand their obligations to participate in decision making at central and local government levels, freedoms to monitor government performance on environment and natural resources protection (ability of media to blow the whistle, for instance) and demand compliance and environmental accountability from those put in charge of guarding the resources.

Environmental Education (EE) has long been carried out for many years through sector-oriented agriculture, forestry or community development outreach or extension programmes. The National Environmental Education and Communication Strategy (NEECS) aimed at complementing the implementation of national policies, strategies and international commitments on environment and particularly giving support to the implementation of the

[8] The Rio Declaration on Environment and Development Principle 10 upholds the freedom of access to information and declares that "states shall facilitate and encourage public awareness and participation by making information widely available" (UN, 1992)

MKUKUTA I communication strategy in sharing knowledge and experiences on poverty-environment linkages.[9]

For secondary and primary levels issues of environment are already popularized into practical school programmes such as tree planting and other eye-opening instructions about the need to protect environment. Thus, in line with the 1995 National Education and Training Policy which, among other objectives, calls for the teaching of environmental education in schools WWF supported the programme aimed at helping teachers, students and community leaders to take part in decisions and actions on environmental management. The support covers teachers' colleges, selected primary schools and communities on subjects like soil erosion control measures, composting and management of wastes, use of fuel efficient stoves, establishment of tree nurseries and vegetable gardens; publication of various resource materials such as readers for primary schools and communities, resource book for teacher educators, school greening manual and posters; themes like trees, water, soil and wildlife conservation, air pollution, energy and marine conservation guidelines for teaching in primary schools. It has also supported environmental publications on subjects such as forest, water, soil and wildlife conservation.[10]

For *local government* officials and environmental officers training workshops have been carried out on various topics on environment, among others (TAMISEMI 2004, 2005)

(i) The essence of sustainable development and the place of environment for growth and the MDGs, integrating "sustainable development" principle in all possible areas of production and services – environment as ***cross-cutting***

(ii) Links between poverty and environment including climate change (environmental assets and environment hazards identified;

(iii) Importance of environment appraisals into planning processes, particularly at the local level,

[9] http://www.nemctan.org/neecs.htm
[10] Other partners include the National Environment Management Council (NEMC), Malihai Clubs, Ministry of Natural Resources and Tourism, and Ministry of Education. See, Environmental Education in Tanzania http://www.panda.org

The levels of detail and language of instruction are programmed to match the capacity and needs of the target audience but the key idea is that mainstreaming is greatly made easier when the agents are fully apprised of the basic motive and what they are expected to do. Since a lot of activity has been carried out during the past five years, *it may be time to review or take stock of these activities and determine gaps in terms of topics coverage, what sections of population, country or institutions need to be covered or re-visited during MKUKUTA II and beyond.*

4.1.3 Research-to-Policy on Environment

Research activities have involved the networks for exchanging knowledge and information amongst local environmental groups within government and external links with DPs. Specifically they include the development of research agenda at the national level (e.g. by the National Environmental Management Council, specific research agenda within universities and other educational institutions and with technical and financial support of DPs such as UNDP, UNEP, World Bank, DFID.

Support of research and dissemination of output of such research helps expand knowledge of environmental issues at the appropriate levels. In higher education where courses on sustainable development or sharper as environment and development equip future technocrats, bureaucrats, planning officers, social workers etc. with tools to analyses environmental inputs into plans and budgets as well as interpret findings into actionable agenda or even articulate the problems on the ground into researchable hypotheses or questions. One of the examples of multi-disciplinary research based at the University of Dar es Salaam is the *Study of the Malagarasi Wetlands Ecosystem* (Nkotagu and Ndaro 2004) which involved scientists/engineers in the subjects of water resources and socio-economist. Universities have projects of this nature and the strategic networking is when they can share knowledge with government and other key interested parties in the project cycle. Sharing is possible when the project management includes options for linking up with government department in charge of environment and all the natural resources.

The NEMC has, as one of its responsibilities, to stimulate public and private interest and participation in the natural resource management activities and in this case developing and

operating an information system for storing and disseminating information. It is not certain, however, the extent to which NEMC and the Division of Environment have full access to environmental information from other MDAs and local governments as well as private investment projects unless/until it can be established that the MDAs disclose fully to NEMC necessary information as would be based on environmental impact assessments (which are mandatory but which may not be fully disclosed). Surveillance or research projects may face barriers to such information for "sensitive" projects or those which prioritise personal rather than society gain.

Analytic work has accumulated overtime in the wake of the PRSP approach, combining research-cum-practice output (the term suggested here to mean output that blends (technical) empirical research tested by the eye of the practitioner in policy-making and implementation (practice) (as opposed to purely academic derivations). Environment appears in most of these works, ranging from *MKUKUTA monitoring systems* such as Research and Analysis Working Group (RAWG) and MKUKUTA Implementation Reports (MAIR) and sector reports and studies, Public Expenditure Reviews, the Poverty and Human Development Reports (PHDR).

During MKUKUTA II it is expected that research activity will continue but it would be useful in addition to assess the extent to which proposed actions (the recommendations) implemented, consistency with other policies/guidelines or directives, as well as the implementation challenge in relation to capacity at different levels - national, versus local, private (small versus large) and community versus public sector undertakings (by capacity here is meant the adequacy of skills and training competencies).

4.1.4 Natural Resources and Good Governance

Good governance is one of the three main clusters in MKUKUTA-I which notes that "*in order for broad-based growth and improvement of quality life and social well being to take place, good governance has to prevail*". However, the strategy also clearly points out that today corruption and bad governance is a major issue. In general, MKUKUTA-I and the many policies and plans linked to the natural resource sectors provide a sufficiently coherent framework for sustainable natural resources management in Tanzania.

There are several examples of lack of good governance in natural resources management. Some of these are serious "distortions" in key sectors such as mining, forestry, wildlife/tourism, fisheries, forestry, and lands/agriculture. Many reported cases of natural resources mismanagement, such as illegal logging[11] and charcoal[12] production illegal hunting and destructive fisheries are evident (Jessica and Slunge, 2005). The strong resistance to reforms of the Wildlife sector is another example of the lack of good governance (*op cit.).*

The result of the lack of good governance is the loss of economic benefits both to the community and the government in general. Moreover, poor communities often bear the cost of environmental degradation from larger investments or are simply pushed away due to weak ownership rights and poor implementation of existing regulations and laws. This is particularly crucial for the common property areas that the poorest community members typically depend on. Weak governance regimes will also cause resources to be offered below market price to the benefit of a few powerful tricksters, and at the loss of the majority of the rural population

Market and policy failures, especially corruption, in natural resource based sectors are leading to unsustainable extraction, the loss of much needed government revenue and lost opportunities for growth and poverty reduction and therefore a risk to seriously compromise the achievements of MKUKUTA-I (Luttrell and Pantaleo, 2008). It is estimated that only 4-15 percent of public revenue from logging operations in selected distracts of southern Tanzania were collected. Both government and DPs have raised alert on other similarly predatory methods of extraction such as dynamite fishing, theft (overhauling of fish) (Assey et al. 2007; UNDP-UNEP 2008:29).

[11] One example is the so called "logscam" from July 2004, which made headlines in the national media, as has similar stories, where the Minister of Natural Resources & Tourism visited the harbor of Dar es Salaam to establish whether the new Forestry Act was implemented. During this visit, 187 containers were found containing logs that either had not been legally acquired or were not licensed/allowed for export. Since most of the logs originated from the Coastal Region, further inspections were ordered in all coastal districts. These revealed 6,898 m^3 of illegally harvested logs that were valued at 382.65 million TZS, or 55,715 TZS/ m^3.

[12] One estimate indicates that the charcoal industry in 2002 have utilized 21.2. Mill. m3 of wood, equivalent to 624,500 ha of woodland, providing 43.7 million bags of charcoal to 6.8 mill. mostly for urban consumers. The annual net value of this charcoal trade was 4.8 mill. USD! Recent price increases in Dar es Salaam to 10,000 TZS per bag of charcoal is an indicator of an unaccounted and dwindling resource (Jessica and Slunge, 2005)

4.1.5 Trade and Environment Issues

Trade and environment has broad dimensions that bear on the prosperity of a nation but also implications on the sustainability of the country's natural resources, the basis of comparative advantage upon which trade is predicated. There two strands of thought in this regard:

(i) the notion that unrestricted markets make the most efficient use of resources, and therefore, to protect production and maintain their profitable investments, entrepreneurs will use their wealth to protect productive resources (ideally speaking) and

(ii) That globalization which makes possible exchange of goods, services, intellectual property, cultures etc. is accompanied by fast production and exchange processes seems to facilitate faster exploitation of the natural resources with adverse consequences on the environment if safeguards are not in place.

There are groups opposed to the trade policies of the WTO; they claim that increased trade is widely associated with deterioration of the natural environment; especially the destruction of native forests in LDCs as well as diminish forest protection in advanced countries. Good examples in the latter case for Tanzania would include exports of logs, hunting blocks, and bad practices such as illegal and unreported catches from the exclusive economic zones). Increased production – deforestation and intensive use of chemical inputs – can have negative effects on water and soil quality/quantity.

The dilemma is that tightening environmental regulations may lead to reduced export production (and possibly job losses) although this has to be weighed against long-term view of livelihoods prospects of the country.

Technical requirements imposed by importing advanced countries usually, legitimate or protectionist require innovations which LDCs may not have capacity for such as the Technical Barriers to Trade and Sanitary and Phytosantary requirements. These invariably include *standards* (common, repetitive use, rules, guidelines, features of products, processes… conformity voluntary), *technical regulations* (on product features, processes or production methods, conformity mandatory) and *procedures for conformity* (procedures and

instructions of a technical standard or technical regulation - include sampling, testing, inspection, evaluation, accreditation, certification and others. Capacity and flexibility to accommodate such requirements in their production processes need to be developed in Tanzania exploiting all available external assistance that can be obtained.

In Tanzania, quite a few studies have been done regarding environment impact of mainly international trade. Bagachwa and Limbu (1995) and Mjema and Kulindwa (2000) covering issues like linkages between Structural Adjustment Policies (SAPs) and environment, environmental implications of agricultural development, irrigation, deforestation, wildlife conservation, urban pollution and sanitation, mining and industrialization policies. Although trade is not explicitly mentioned, the key point here is the assessment of the implications of the movement toward market-oriented reforms, which also included trade policy reforms.

For the purpose of MKUKUTA II, it may be pertinent to examine how opportunities in trade using natural resources (comparative advantage) supported by radical efforts to build knowledge-driven competitive advantage can be exploited, broadly speaking. Specifically, the sectors that are sources of exports or potential exports would need to identify the institutional framework (regulatory or otherwise, related to the EMA 2004, on protecting the resources and capacity needed to understand and adhere to standards for the good of consumers both in advanced and developing countries as well.

4.2 Limitations to Environmental Mainstreaming

4.2.1 Process Constraints

At the process level, mainstreaming as part of the planning and implementation faced the following constraints (and these problems are more-or-less still significant):

- At first, slow up-take due to limited public awareness and at the institutional level, limited interest in some MDAs which would not consider environment as relevant to their mandates or a priority at all.
- Little experience or ability to quantify actions and costing on these activities into plans and budgets (more severe at the local level)

When the MKUKUTA I finally was ready for implementation, as the Matrix clearly shows, the main challenge (apart from budgetary allocation) was that most targets and interventions were very general and difficult to assign responsibility for the failure or credit to specific institutions in most case. The problems also included inadequacy of budgetary allocation – often falling short of anticipated (Luttrell and Pantaleo, 2008, VPO 2009).

- No clear prioritization among targets-108 targets ate too many to implement-there is a need for prioritization
- Policy coherence between MKUKUTA and EMA- The MKUKUTA and the EMA processes were not formally linked.

4.2.2 Financing, Participation and Role of Private Enterprise

4.2.2 Financing, Participation and Role of Private Enterprise

Central government, donors and environment-NGOs (local and foreign) so far mainly (conditions applying) have been extending financial and technical support in order to fill the gap left by government. Implementation gaps still exist in terms of funding levels and monitoring. At the local level, environmental committees at the district and village levels face the same problems as do majority of the districts and villages environmental committees. This affects the effectiveness of enforcement of laws and regulations. For the past two financial years (i.e. 2006/07 and 2007/08) the government has set aside funds only for the implementation of EMA at the ministerial levels. Nothing has been allocated at the local and regional levels where most of the environmental impacts are happening.

There is a need to ensure that communities, private enterprises and non-governmental organizations are brought on board (already happening especially for private enterprises in towns mainly "encountering" NEMC on environmental impact assessments and compliance terms) and capacities built in the process for local communities to operate and maintain relevant infrastructures and facilities. A better form and level would be at the local government level where private firms locating in the neighborhood in urban areas or in rural areas (near a quarrying site) are invited/or required to attend a roundtable joint preview of the impacts on environmental in the area. The financial and in-kind contribution of local communities should also count. There must be a way of attracting private sector in

participating in supporting, financially and materially, environmental and natural resources protection especially at the community level.

4.2.3 Lapses in Governance and Natural Resources Exploitation

The experience and overwhelming evidence suggested huge *lapses in governance* in relation to the exploitation of natural resources, each sector/sub-sector popping up problems of their own nature. For land, there were sometimes violent conflicts between farming and grazing, between human settlements and location of mining and/or industrial activities, over-logging, over-fishing, wild-bush fires, etc. Failures here variously reflected inability of enforcement or inadequacy of existing laws and institutions.

4.2.4 Grappling with Multiple Environmental Issues at the Sub-National Level

There are environmental concerns at the LGAs level that are complicated or affected by the involvement of central government. These are likely to take time to resolve as they require "negotiated solutions". In large part these relate to the utilisation of natural resources and for which there are national statutes which may (usually and wrongly perhaps) override the local government by-laws. Thus the common concerns and questions for environmental management and by extension, mainstreaming) for both local and central government joint attention may be listed as follows:

(i) Handling of property rights over natural resources when the natural resources are located within a local government geographic area.
(ii) Arrangements for "benefit sharing mechanisms" on natural resources – the fact that local populations may be indifferent to the environment when they have no incentive to contain degradation and conserve the environment and natural resources.
(iii) How to deal with varying population and settlement patterns induced by natural resource availability e.g. new areas for mining, construction sites, rapid urbanisation, farming versus livestock keeping, (land policy);
(iv) How to deal with poor enforcement of environmental laws: including the capability of the law enforcers in the rural areas to enforce and monitor compliance to law;

adequacy of modern working tools (surveillance or patrol gear) or legal materials; and level of understanding of relevant laws, by-laws and directives; the central government has to intervene with adequate support to local government;

(v) How deterrent to offenders of environmental violations the fines are. Penalties must match the actual economic costs of damages to natural resources and environment.

(vi) Whether the LGA structure provides adequate autonomy to LGAs over issuance of licenses for exploitation of forests on public lands or collection of revenue on products from forest reserves or utilization of funds collected hunting blocks etc.;

(vii) Good working relationships between the LGAs and technical staff (e.g. at the Regional Secretariat)

4.3 Capacity Development and Institutional Strengthening Needs

4.3.1 Human Capacity Gaps

It is possible to identify capacity gaps for environmental management across all levels of government, and other stakeholders, including private firms and community level. Environmental education which is supposed to be given all time has to be backed by or "refreshed" with new findings from research and policy application experience. At higher levels specialised training is envisaged in policy formulation, management and implementation of environmental tools and laws at both national and international levels. Specialised environmental expertise range from natural and social sciences – need for ecological experts, scientists, engineers and socio-economic planners. Capabilities in these areas combine to develop and undertake Environmental Impact Assessments (EIAs), environmental audits/ accounting, surveillance and monitoring of different environmental indicators. Technical assistance from development partners has been handy in environmental management but as with other sectors and areas, the purpose has been to use the opportunity to strengthen local capacity in the same areas.

The problem is that since all sectors are required to mainstream environment based in turn on the fact that environment is multi-dimensional, sectors are required by the Institutional Framework (q.v.) to have environmental officer(s) who would link up with the Division of Environment and work closely with NEMC depending on the issue at hand. This relates with

the requirement that sectors develop environmental interventions suitable for inclusions in sector plans and budgets (the essence of mainstreaming). As noted earlier, these have been more direct for natural resources based sector MDAs (e.g. for agriculture, mining, tourism, energy and water and sanitation). Experts from these sectors are able to identify and quantify inputs, desired physical features, measurements etc., for the desirable environmental standards and such indicators. The human capacity gaps are more vivid at the district and regional levels where majority of the environmental officers are former district/regional natural officers. The same problem was also found at the ministerial level, for example, at the ministry of Livestock and Fisheries Development, the environmental Unit is at the Livestock Department. It is likely that such officer will mostly be concerned with environmental issues related to livestock and not issues arising from fishing activities and so on. The problem is that without proper training on general environmental issues, these officers tends to bias their focuses on natural resources based environmental problems and less on the other aspect of environment, e.g. the brown issues. Pioneered by the Vice President's Office Division of environment and the National Environmental Management Council, mainstreaming effort has been in form of educative programmes (training workshops) of officials in MDAs and LGAs especially where there are few experts. Training has been supported by guidelines and policy documents drawn by experts at the Division of Environment and NEMC. By and large, however, more work is required particularly in raising the level of training of the responsible officer mainly at central and local government level during the operaionalization of MKUKUTA II.

At the local government level, the human capacity gaps are probably more severe than at central government level. Fears lay with level of expertise or training of ward and village/*mtaa* Environment Management Officers where these are available for all wards and villages. It is expected that problems of availability of suitably qualified Council Environment Management Officers (for district/ municipal/ city/town councils) and Regional Environmental Management Experts are less severe than at the ward and village levels. It is only important to verify their competence and ability to "be innovative" and flexible to adopt, adapt and share new ideas. Many of the villages have the environmental management committees, but again the problem is most of the committees are more of natural resources

management committees than the environment per se. They are more concerns with natural resources such as forests, wildlife and fisheries. This calls for NEMC/VPO to conduct more awareness training at village and mtaa levels. There is a need to show that environment goes beyond natural resources.

Overall, successful environmental mainstreaming is determined by the adequacy (in numbers) and quality (level of training) of personnel in all the sections, and level of education of the general population. Environmental experts and sector experts such as mining engineering, agronomists are still needed in various fields: industry, marine sciences, economics and planning etc. These would be instrumental in carrying out technical assessments of the social and environmental impacts of proposed investments. For example, whether investments on land are likely cause degradation of soils and water, the likelihood of pest, impacts on biodiversity and impact on long-term to longer-term sustainable soil and water management. Legal experts would handle issues of land tenure, water rights, cartographers handle mapping and demarcations etc., all this having to be communicated in non-technical terms to the populations inhabiting the land.

According to URT (2004e), areas for capacity strengthening should include (Box 4):

Box 4: Areas for capacity-building to strengthen environmental management

- *Environmental impact assessment skills:* based on precautionary, anticipatory and preventive approaches.
- *Environmental legal skills:* to ensure enforcement of environmental laws to facilitate effective environmental management all the way to ward or village level.
- *Valuation of environmental resources:* for experts who can ensure that environmental resources are not undervalued and that market-based approaches are used for environmental protection.
- *International negotiation skills to* sharpen capacity to negotiate at an international level
- *Publicity campaigns:* to enable environmental officers to raise environmental awareness among the rural and urban people.
- *Monitoring and inspection at the regional and district level:* to set up and strengthen the institutional capacity-especially the field offices for monitoring and enforcing environmental regulations.
- *Environmental audits:* To equip environmental officers at the regional and district levels with the capability to evaluate the performance of existing mines and other extraction sites and to identify areas for improvement.
- *Environmental Economics* to enhance capacity for integrating environment into District Authorities/Municipal Councils development plans.

Source: adapted from URT (2004d)

4.3.2 Data and Information system.

Institutional strengthening as well as a system for information sharing would complement to capacity development for the institutional framework for environmental management to function properly. Staffing levels should go hand in hand with requisite level of working tools, particularly those for storing and sharing data and information. Information management systems experts and data collection capacity are important for the well-functioning institutional framework. Expertise will differ with levels of government but appropriately apportioned programmes would be designed to ensure a level of simplicity without compromising comprehensiveness for local government, especially village/*mtaa* level to be able to record and store basic data for basic poverty-environment indicators. This attempt, at the lower levels (village/*mtaa* level) would benefit from the already existing TSED system which already has modules/questions relevant for environment and MDGs at that level.

V. Summary and Recommendations

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Table A1: Major National Policies / Strategies and International Agreements on Environment

Sector Strategies and Programmes	**Sector Policies**
• *National Strategy for Growth and Reduction of Poverty (2005)* • *Poverty Reduction Strategy Paper (2000)* • *The National Poverty Eradication Strategy (NPES, 1998);* • *Rural Development Strategy (2001);* • *Tanzania Development Vision (Vision 2025);* • *Tanzania Assistance Strategy (TAS, 2001);* • *Agriculture Sector Development Programme (2003);* • *Health Sector Reform (1999);* • *Agriculture Sector Development Strategy (ASDS, 2001);* • *Education Sector Reform & Development Programme (1999);* • *Road Sector Development Programme (1997);* • *Local Government Reform Programme.*	• *National Land Policy (1995);* • *The Wildlife Policy of Tanzania (1998);* • *The Mineral Policy of Tanzania (1997);* • *National Forest Policy (1998);* • *National Fisheries Sector Policy and Strategy Statement (1997);* • *Agriculture and Livestock Policy (1997);* • *National Tourism Policy (1999);* • *Sustainable Industrial Development Policy (1996);* • *Energy Policy of Tanzania (2002);* • *National Water Policy (2002);* • *Construction Industry Policy (2002);* • *National Transport Policy (2003);* • *Road Sector Investment Programme (2000)* • *Country Programme for Phasing Out Ozone Depleting Substances* • *National Health Policy (1990); and* • *National Human Settlements Development Policy (2000).* • *National Forest Policy (1998)* • *Wildlife Policy of Tanzania (1998)* • *National Beekeeping Policy (1998)*
Cross-cutting sector policies	**Environment-specific policies/ strategies plans**
• *National Policy on HIV/AIDS (2001);* • *Women and Gender Development Policy (2000);* • *National Gender Policy (1992);* • *National Micro Finance Policy (2000);* • *Small & Medium Enterprises (SME) Development Policy (2001);* • *Tanzania Women in Development Policy (1998);* • *Cooperative Development Policy (1998);* • *Community Development Policy (1996).* • *National Population Policy (1992)*	• *A Strategy of Urgent Actions on Land Degradation and Water Catchments (2006)* • *National Environmental Education and Communication Strategy (NEEC) (2005-2009)* • *National Biosafety Framework for Tanzania-2004* • *National Environmental Policy (NEP) (1997)* • *National Environment Action Plan (NEAP, 1994);* • *National Biodiversity Strategy and Action Plan* • *The National Action Programme to Combat Desertification (NAP)* • *National Implementation Plan (NIP) For the Stockholm Convention on Persistent Organic Pollutants (POPs)* • *The Development of Indicators of Poverty-Environment Linkages*
Multilateral Agreements / commitments on Environment	
• *Bamako Convention on the ban of the import to Africa and the control of transboundary movements of hazardous wastes within Africa (Bamako Convention)* • *Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal* • *Convention for the Protection, Management and Development of Marine and Coastal Environment of the Eastern African Region and Related Protocols* • *Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern Africa Region, Lake Tanganyika Treaty* • *Convention on Biological Diversity (CBD)* • *Kyoto Protocol* • *Protocol on Liability and Compensation on Damages resulting from Trans-boundary Movements of Hazardous Waste and their Disposal* • *Rotterdam Convention on Prior Informed Consent Procedure on International Trade of Certain Hazardous Chemicals and Pesticides* • *SADC Regional Environmental Education Programme (SADC-REEP)* • *Stockholm Convention on Persistent Organic Pollutants (POPs)* • *UN Decade for Education for Sustainable Development (2005-2009)* • *UNESCO's International, Environmental Education Conference (Tbilisi 1997)* • *United Nations Conference on Environment and Development (UNCED) – Rio Earth Summit (1992)* • *United Nations Convention to Combat Desertification* • *United Nations Framework Convention on Climate Change (UNFCCC)* • *Vienna Convention on Protection of Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer,* • *World Summit on Sustainable Development (Johannesburg 2002)SADC Regional Environmental Education Programme (SADC-REEP)*	

Source: URT 2006a

TableA2a: Environmental Issues, Impacts and Control Measures

Environment And Natural Resource Issues	Negative Environmental Impact	Proposed Courses Of Actions
	• Fragmentation of wildlife habitats leading animals into migration into human settlement, damage to crops and loss of human life	▪ Wildlife Management Areas (WMAs) ▪ Joint forest management
Desertification: Removal of vegetation cover due to overgrazing, bad farming practices e.g. slash and burn,, farming on steep slopes without across-terraces etc.	• Migration people and animals • Drying of rivers • Loss of biodiversity • Gullies erosion resulting from torrential rainfall	▪ Tree planting and protection of forests ▪ introduce communal forest management ▪ use energy serving stoves ▪ De-stoking/ modern livestock keeping practices ▪ use modern farming practices ▪ control bush/forest fires
Air Quality Poor air quality (indoor and ambient) due to land-based activities such as slash-and-burn, forest fires, industrial, traffic and domestic gaseous emissions (use of fuel wood); dust due to wind in dry lands	• Smog (heavily polluted air) leading to health hazards (e.g. respiratory diseases, lung cancer, stillbirths); • Problems from fuel wood smoke • Visibility problems to air traffic (smog esp. in urban areas) • Loss of ability to work and generate income	▪ Promote the use of cleaner technologies, especially in urban areas ▪ Improve farming practices ▪ Introduce/use by-laws to control setting of forest fires/bush fires ▪ Establish/encourage joint/communal forest management ▪ Afforestation and protection of forest reserves ▪ Clear production; emission permits ▪ Traffic licensing and management (e.g. public transport system, fuel and vehicle standards, road pricing charges; differentiated vehicle taxes ▪ Enforce guideline on use of / or ban harmful chemicals
Urban (air, land, water) **pollution** • Manufacturing activity versus population settlements • Farming and animal husbandry in urban and peri-urban areas • Untoward disposal of solid waste • Use and disposal of plastic packaging material, scrap metal • Petty/informal commercial activities • Consumption of alternative energy sources • Sources of water	• Improper industrial location, • disposal of effluent and gaseous emission leading to pollution in settlement areas • Complicating solid waste management • Health problems – hazardous pollutants from cast away plastics such as toxic gases ("dioxins") leading to reproductive abnormalities, cancer etc	▪ Improve land-use planning ▪ Upgrading of unplanned settlements ▪ Improve liquid and solid-waste management; Storm water drainage and erosion protection; Urban Greening and Management of Open Spaces; Urban transport infrastructure; Urban water supply system and management; Tanzania's "Sustainable Cities Programme ▪ Traffic management and licensing (e.g. public transport system, fuel and vehicle standards, road pricing charges; differentiated vehicle taxes ▪ International agreements e.g. voluntary agreements for toxic emissions: global ozone policy and new technology ▪ Management of industrial pollution and Cleaner Production Technologies ▪ Support strategies to recycle plastics, scrap metal and other wastes; managing extraction of building materials; petty/informal trading, enforcement of laws/ by-laws

Chemical pollution improper use of chemicals leading to pollution of the environment, leakage and spillage of oils in garages from industrial and energy equipment; use of hazardous chemical and poor management of hazardous wastes poses risks to health and the environment	• Loss of biodiversity • Contamination of water resources • Loss of soil fertility • Increase in diseases associated with pollution or intoxication	▪ Promote and encourage use safe of chemicals and protective gears ▪ Strengthen policies and legal provisions on chemicals and hazardous waste; educational on hazards of chemicals and safe handing procedures ▪ Implement regional and international agreements -Stockholm Rotterdam, Basel and Bamako conventions; the Strategic approach for International Chemicals Management, Globally Harboured system for labelling and Chemical Hazard Communication ▪ Strengthen requirements on chemical labelling; prohibit use of toxic and hazardous chemicals; Regular training of inspectorate services of key sectors such as Agriculture, labour Environment and Health; provide working tools; manage chemicals and hazardous waste; screen imported technologies and products that contain heavy metals ▪ Control air pollution from transport including efficient public transport system, fuel and vehicle standards, road pricing charges, differentiated vehicle taxes, introduce and effective by laws to control/ prevent pollution. ▪ Introduce emission and discharge permit based on levels of pollutants and pollution loading
Climatic Change and Adaptation Stresses from extreme weather - drought, floods, storms; patterns of productive activities; Global warming resulting from greenhouse gases emissions primarily from combustion of fossil fuel	• Increase of temperature • Increase in frequency and scale of extreme weather – drought, floods, storms/ cyclones, desertification • Sea level rising, coastal erosion, decrease in volumes of rivers affecting hydropower; • Ozone layer thinning • Worsening existing vulnerabilities – low harvests, food insecurity; • Loss of biodiversity; human health risks; coastal zone degradation	▪ Integrate responses to climate change and adaptation measures – ; ▪ Early warning, integrate impacts into macroeconomic projections for disaster relief, recovery efforts ▪ Reduce dependency on rain-fed agriculture; do rain-water harvesting ▪ Reducing emissions; removal of carbon from atmosphere through enhanced fixation in forests or in the sea ▪ CO_2 separation, sequestration, and storage Search for renewable energy and energy-saving technologies (energy)
Biosafety **E**xtent/ causes of loss of animal habitat / loss of plants and rare plant species poaching, population pressure, expansion of agricultural activities at expense of forests, development of human settlement.) Risk to environment and to human and animal health as a result of Genetically Modified Organisms (GMOs).	• Risks to human and animal health, biodiversity and environment, raising socio-economic and ethical concerns • Loss of balance of ecosystems	▪ National Biosafety Framework (NBF) as a set of policy, legal and administrative and technical instruments ▪ Establish risks to environment, human and animal health resulting from use of GMOs. Opportunities emerging from GMOs in improving human and animal health, agriculture, industrial production and environmental protection ▪ Public awareness on the NBF ▪ Nature protected areas ▪ Provision of information to public (e.g. mandatory labelling and accurate disclosure of content,, labelling, and certification by bureau of standards ▪ Eco-labelling explore and use opportunities available as a result of our country being a part to certain multilateral environmental agreements

Table A2b: Environmental Issues and Control Measures

No.	Problem stated	Major actions planned
1	Environmental degradation arising from the encroachment of water sources and catchment areas by livestock keepers/herdsmen	Identification and mapping of all of water sources countrywide; water catchment areas encroached by large numbers of livestock; areas suitable for livestock development; information on type of livestock, quantities/numbers and carrying capacities of the land; relocate and resettle livestock keepers, use of traditional methods and indigenous knowledge for environmental protection
2	Environmental degradation arising from illegal human activities related to agriculture and human settlement along steep slopes of mountains and mountain ranges, near river banks and around water sources	identification of encroached and severely degraded areas, removal of illegal occupiers of areas concerned, boundary of mountain ranges above which no human activities will be allowed, rainwater harvesting technologies and programmes
3	Environmental degradation due to deforestation and massivetree cutting for:- Fuel wood and charcoal and construction in urban areas	Institutions such as prisons, schools, and training institutions that use massive amounts of wood, to have wood plantations, nurseries for appropriate tree species, forest farms for firewood and charcoal, and research, development, and application of alternative energy sources and technologies, use of kerosene, gas and coal as alternatives to wood fuel.
4	Unsustainable small and large scale irrigation projects and programmes, with negative consequences on biodiversity and general water availability	regulations and procedures related to water rights, maintenance of irrigation infrastructure and regular inspecting ofirrigation canals
5	Inadequate accurate data and information at district level regarding water sources and land use (	Identification of all water sources and their environmental status, development, dissemination and implementation of land use master plan, issuance of title deeds to water source areas
6	Environmental degradation due to wild fires.	To award individuals or organizations that provide information on forest or rangeland fires; empower local leadership in the prevention and control of forest fires in their areas of jurisdiction; creating a data/information on incidences of wild fires.
7	Land and water degradation resulting from alien and exotic tree species.	Identification of unsuitable tree species; community participatory programme promotion of tree species suitable for the conservation of land and water sources countrywide.
8	Desertification and drought in many parts of the country.	Further guidelines for continued implementation of National Tree Planting and Maintenance Campaign, o Establishment of tree nurseries, with each district required to plant and maintain 1.5 million trees per year, o Preparation and gazetting of a list of types of protected indigenous flora (trees and other plant species).
9	Public awareness and involvement in environmental protection and sustainable utilization of natural resources.	Preparation and implementation of a countrywide Environmental; education and public awareness programme; monitoring and evaluation of the programme.
10	Land use conflicts among various stakeholders.	o Preparation of environmental conservation and participatory land use plans for every district; determination of livestock carrying capacities in villages and districts; Surveying and mapping 6000 villages, and mainstreaming the Environmental Management Act 2004 into sector environmental laws and oversees their implementation.

Appendix 2: Guide Questions for consultation with the stakeholders

2.1 Reflect on Government MDAs and LGAs

Information and discussion around the following will enrich the discussion on how environmental mainstreaming can be advanced further.

2.1.1 MDA/Sector level

The main question is if and how the MDA has had environmental aspects specific to it addressed in its strategic plan/annual plan, annual budget sector in any of the five years of MKUKUTA I.

- If the answer to is Yes, the MDA will be requested to suggest its own assessment of whether the integration of environment has been effective, with specific examples where possible.
    - To ease the extraction of information, the MDA may provide authoritative policy documents/literature in form of current policy document(s) which are "public", commissioned studies and any such consultancy reports for the team to extract information that shows what the MDA has done and the challenges it faces.
    - In terms of the institutional framework, the lead ministry/division of environment will provide their own assessment of the feedback loops in Figure 3 (how they relate to the Division of Environment and units below on environment issues specific to their mandates;
    - Human capacity or staffing levels for key officers (as per EMA 2004 (URT 2005f):: note the capacity constraints if in terms of *level* of education and number of experts.
- If the MDA has not had any environment-related issues in its plans and budgets in the past five years, it would be interesting to hear their candid account why environment is not of interest to their entity.

2.1.2 LGA level (from PMORALG)

- The LGA will be requested to suggest its own assessment of whether the integration of environment has been effective, with specific examples where possible.
    - Given that it is not possible to make field vists to districts (which are too varied), an attempt will be made to extract basic information from documents sought from the Division of Environment or PMOLARG on the specific activities at the LGAs (directives/guidelines aimed for application by LGAs).
    - In terms of the institutional framework, such information will be used to highlight possible activities at the sub-national level as reported (e.g. level reached in environmental mainstreaming, and the capacity or staffing levels constraints at the lower levels right to village/*kitongoji*)..

2.1.3 Common Concerns for both central and local government

The *institutional framework* provides room for MDAs and LGAs together to take stock of the problems that affect the linkages between the central and local government in relation to the management of environment and natural resources.

Corruption in natural resources as a common concern for MDAs, LGAs and private sector stakeholders and the role of civil society giving specific examples.

Capacity development (strengthening needs) analysis at all levels: Training & learning at different levels of school system and out of school (starting with URT (2004f)

2.2. Development Partners

Specific questions for the private sector will explore the extent to which enterprises integrate environment and natural resources issues into their plans and projects. Tentatively, it is acknowledged that environmental mainstreaming in the private sector can be captured in at least two ways:

(i) At the community level/ LGAs where the local authorities enforce environmental regulations or by-laws related to a variety of productive and consumption activities;

(ii) For private industry where companies are required by law to include environmental assessments before a project is established. The industry or project is also governed by the local government by-laws.

2.3. Private sector

2.4 Local non-state actors