

Education for Sustainable Development (ESD)

Kenya Country Report

2005-2012

Preface

In her strive towards achieving vision 2030; Kenya is searching for more sustainable economic and financial alternatives, renewable energies and lower carbon footprints, and greater social equity. In doing so, Kenya intends to put people at the centre of the three pillars of sustainable development.

The government, private sector and civil society organisations have tried to raise awareness to the Kenyan population. However there is still need for different stakeholders to re-orient their activities. For instance, engineers place their efforts in greener technologies while lawyers focus on national laws, policies and international conventions while NEMA, the education sector and RCEs place our efforts on promoting education that facilitates the attainment of sustainable development goals.

The DESD calls on governments and other stakeholders to incorporate the principles and values associated with sustainable development into every one of their education programmes. Kenya moved quickly and developed an implementation strategy in 2008. How have different stakeholders implemented ESD activities? What challenges and lessons have been learnt during implementation? NEMA commissioned a consultant to work with stakeholders to provide answers to some of these questions. This national ESD audit highlights activities implemented by different stakeholders throughout the country to introduce sustainability in the education sector. The audit also provides a recommendations which will enhance implementation of activities to enable Kenya attain the objectives of not only the ESD decade but also the ESD Implementation strategy.

I hope that this national audit of ESD activities in Kenya and the recommendations for pre and post decade activities will provide a framework to stakeholders, especially RCE in accelerating implementation of ESD in Kenya.

Director General
NEMA

Acknowledgment

This report is a result of successful cooperation from a number of stakeholders implementing and/or direct beneficiaries of ESD activities in Kenya. These include the Government, the private sector and civil society organisations.

I am grateful to NEMA, specifically David Ongare for having conceptualized the need for an audit, prepared the terms of reference and alerted stakeholders about data collection.

I extend my appreciation to all the RCE coordinators, more specifically, Monica Omulo - REC Nyanza, Dr. Maarifa Mwakumanya - RCE Greater Pwani, Dr. John Momanyi Mironga - RCE Mau Complex. I am also grateful to Emmanuel Gumbi - AFEW, Margaret Otieno - WCK, Dorcas Otieno - KOEE and Gregory Odeke - UNEP for sharing activities, achievements and constraints while implementing ESD work.

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Acronyms

| | |
|---------|----------------------------------------------------------------------|
| AFEW | African Fund for Endangered Wildlife |
| ASAL | Arid and Semi-Arid Lands |
| CSO | Civil Society Organization |
| EABL | East Africa Breweries Limited |
| EE | Environmental Education |
| EFA | Education for All |
| EMCA | Environmental Management and Coordination Act |
| ESD | Education for Sustainable Development |
| GoK | Government of Kenya |
| GDP | Gross Domestic Product |
| JKUAT | Jomo Kenyatta University of Agriculture and Technology |
| KESSP | Kenya Education Sector Support Programme |
| KIE | Kenya Institute of Education |
| MDGs | Millennium Development Goals |
| MEMR | Ministry of Environment and Mineral Resources |
| MESA | Mainstreaming Environment and Sustainability in African Universities |
| NEMA | National Environment Management Authority |
| OM | Outcome Mapping |
| RCE | Regional Centres of Expertise |
| RCEGN | Regional Centre of Expertise Greater Nairobi |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UN DESD | United NationDecade of Education for Sustainable Development |
| UNLD | United Nations Literacy Decade |
| WCK | Wildlife Clubs of Kenya |
| WSSD | World Summit for Sustainable Development |
| WWF | World Wide Fund for Nature |

Executive summary

The United Nations Decade of Education for Sustainable Development (DESD, 2005–2014), encourages governments to develop their own strategies and frameworks in order to reorient education and learning towards sustainable development.

In Kenya, national agency - NEMA and civil society organizations play a key role in leading, but also supporting, learning opportunities for change towards sustainable development across the sectors. The development and adaptation of a national ESD Implementation strategy in April 2008 formed the basis of coordination, implementation, monitoring and resources mobilization for ESD activities.

A wide range of ESD activities are taking place in Kenya and are being led by the government, civil society organizations, the private sector as well as communities. These activities include raising awareness, providing capacities and skills, and empowering people and communities to create more sustainable futures. However, synergies among these initiatives, as well as greater support from the business sector, are still challenges that need to be addressed.

As part of the implementation strategy, NEMA has spearheaded the formation of nine RCEs - RCE Greater Nairobi, REC Mau Complex, RCE Rift Valley, RCE Greater Western, RCE Nyanza, RCE Coast, RCE Narok, RCE Central and RCE Upper Eastern. These RCEs are trying to implement thematic ESD issues, which are relevant to their local communities.

Advocacy and community sensitization has been undertaken at three levels, government departments, NGOs and the private sector and at community levels. A number of Kenyans have an understanding of sustainable development issues; however some still feel that the ESD concept is still an abstract.

The formation of RCEs have enhanced consultation among stakeholders. The consultation has helped in all the undertakings of ESD at every level so as to own the vision and participation in planning and implementation of local and national initiatives and activities.

Networks have been established at international level with other institutions including RCEs. For example REC Western Kenya has established links with RCE Denmark. Partnership and networking has also been enhanced by the formation of RCEs at regional level. However, lack of regular forums inhibits regular and systematic exchange of experience and therefore poor synergies.

A number of capacity building and training initiatives have been realised. However, majority of these trainings are on sensitization. There is need to broaden the scope to include ESD materials development, planning, management and monitoring.

Institutions of higher learning and other research institutions are spearheading several innovations and research on ESD. Innovations include; development of e-content, pilot projects on greening schools and use of sisal waste to produce biogas and mushroom growing substrate.

The use of ICTs to enhance networking, storage of data and sharing information among stakeholders is still very low. Efforts are need to enhance sharing of experiences through development of a national platform (intranet) or using existing applications like Drop box.

A monitoring and evaluation system based on outcome mapping exists. NEMA produces an annual ESD progress report. However there is need for capacity building at RCE level and development of new indicators so as to capture impact.

The RCE are at different levels of formation, registration and implementation. The governance structures of RCEs need to be structured and strengthened to necessitate effective and efficient way of achieving their objectives.

Recommendations on how to accelerate implementation and planning for post decade are mirrored on the Bonn Declaration (UNESCO, 2009a), the UNESCO Strategy for the Second Half of the DESD (UNESCO, 2010) and the Rio+20 Outcome of the conference - *The future we want* - section II.

1. INTRODUCTION

1.1 Background to the UN ESD decade

In 2005 the United Nations launched the Decade of Education for Sustainable Development. This was the result of a long process of international deliberation on the sustainability of development models, which began in 1972 at the United Nations Conference on Human Development held in Stockholm. Twenty years later, in 1992, the international community affirmed the important role of education, training and public awareness in achieving the goals of sustainable development in Chapter 36 of Agenda 21 at the United Nations Conference on Environment and Development held in Rio de Janeiro. Agenda 21 indicated that all levels of education and training would need to re-orient towards a more sustainable model of development that meets the needs of the present generation without compromising or jeopardizing the capacity of future generations to meet their needs. Through emphasizing education, training and public awareness, Agenda 21 indicated that all sectors of society should be involved in a life-long learning process oriented towards sustainable development.

Ten years later, the Johannesburg Implementation Plan produced at the World Summit on Sustainable Development in 2002, confirmed the importance of Education for Sustainable Development in achieving the interrelated and intergenerational social, economic and environmental goals of sustainable development. The Johannesburg Implementation Plan recommended the declaration of a UN Decade on Education for Sustainable Development, which was adopted by the UN General Assembly through resolution 57/254 with UNESCO designated as the lead agency. In 2005 UNESCO released an International Implementation Scheme for the UN Decade of Education for Sustainable Development (UNESCO, 2005), which has led to implementation processes across the world at regional, sub-regional and national levels. The objectives of the decade are:

- Improve quality of education at all levels for sustainable development;
- Reorient education at all levels for sustainable development;
- Enhance public understanding and awareness of sustainable development;
- Build capacity for sustainable development.

In March 2006 African Ministers of Education made a commitment to implement the UN Decade of Education for Sustainable Development in the context of the Second Decade on Education in Africa. Their statement of commitment emphasizes the need to situate UNDESSED activities within key policy initiatives such as the Millennium Development Goals, the United Nations Declaration on the New Partnership for African Development (NEPAD), the African Union's Second Decade on Education Plan of Action, and the Dakar Framework for Action aimed at achieving the Education for All goals.

Since the DESD launch, nations and regions across the world have engaged in developing ESD strategies and frameworks or reviewing existing ones. However, the first DESD Global Monitoring and Evaluation Report (UNESCO, 2009b) highlighted that no country is close to embedding sustainable development into its structures or systems. This global report was released at the UNESCO World Conference on ESD in Bonn, Germany (30 March – 2 April 2009) and sought to celebrate and review the progress of the first half of the DESD as well as to identify key priorities and ways forward for the second half of the decade.

The Bonn Declaration (UNESCO, 2009a) continues to call for the development and adjustment of ESD policies and frameworks in order to guide the implementation of ESD in all educational sectors. Drawing upon the recommendations from this authoritative document, the UNESCO Strategy for the Second Half of the DESD (UNESCO, 2010) calls for creating spaces to discuss a common vision towards sustainable development, and emphasizes the need to create ESD strategic documents which are context-based and address

the specific challenges that individuals, communities and nations are facing in different parts of the world.

1.2 ESD in Kenya

Kenya faces a myriad of challenges in sustainable development despite that fact that the economy is driven by its natural resources base. Sustainable development issues in Kenya are complex and interlinked. The issues can be classified as societal, economic and environmental. It is therefore imperative that national resources are utilized sustainably. ESD has been recommended as one of the tools to ensure that this happens. The Government, CSOs and private sector have made notable ESD-related responses in relation to society, environment and economic spheres of sustainable development. These include; policy formulation, advocacy and public awareness, resource material development, research and innovations, capacity building, networking, partnerships and vision building.

Societal issues encompass; poor governance, corruption, bigotry towards cultural diversity, ethnic animosity, gender inequality, HIV/AIDS, malaria, tuberculosis (TB) and other communicable and non-communicable diseases, human rights abuses, all forms of violence and increased insecurity, degraded lifestyles and behaviour, drug and substance abuse, and erosion of cultural values and morals, among others.

The economic issues revolve around systems of production, consumption, investments and service delivery towards an enhanced GDP. However, several challenges such as high levels of poverty and related issues impede optimal performance of the economy. The current projections indicate that 56 per cent of the Kenyan population live below the poverty line earning less than US \$1.00 per day. Further, the gap between the rich and the poor has continued to widen with a per capita income of about KES 1,239 per month in the rural areas and KES 2,648 in urban areas. As such there are predominantly more poor members of society.

Other challenges affecting economic growth and performance include inadequate investment infrastructure leading to rising levels of unemployment, rural/urban migration, corporate irresponsibility and lack of accountability and corruption. The inefficient and wasteful production systems lead to unsustainable utilisation of natural resources resulting in their degradation. Further, the poor enforcement of policies and regulations governing production and marketing hinder economic growth and the attainment of its optimal performance.

The environment sector has a number of challenges too. These include; frequent droughts, natural disasters, acute water shortages, climate change and variability, loss of biodiversity and poor waste management systems. This has resulted in land degradation and loss of forest cover, which currently stands at 1.7 per cent of the total territorial surface area falling far below the globally recommended 10 per cent minimum cover. Moreover, about 88 per cent of the country's total surface area is comprised of ASALs while desertification is on the rise as a result of fragility of the ecosystems.

Negative impacts on the environment have been as a result of the robust industrial development experienced in the country over the last four decades. This has resulted in increased waste generation leading to unsustainable waste management practices.

The Vision 2030 has, as a key goal, the attainment of status of a 'nation living in a clean, secure and sustainable environment' driven by the principles of SD. To realize this, the focus will be on four strategic thrusts, namely; conservation of natural resources, pollution and waste management; ASALs and high-risk disaster zones and environmental planning and governance.

Kenya has developed an ESD implementation strategy¹ to provide an enabling environment and capacity for all sectors and stakeholders to effectively contribute towards the achievement of sustainable development. The development and implementation of the ESD strategy was, therefore, a major step towards attaining sustainable development in Kenya through appropriate learning, capacity building programmes and development of skills in sustainable use of resources at all levels. This will inculcate sustainability values among the citizenry aimed at influencing informed decisions on various issues on sustainability.

1.3 ESD Strategy for Kenya

Kenya developed an ESD Implementation strategy to provide an enabling environment and capacity for all sectors and stakeholders to effectively contribute towards the achievement of sustainable development. The strategy is aimed at;

- Enhancing the role of education and learning for equitable, efficient and sustainable utilisation of the country's resources;
- Promoting quality education through diverse learning and public awareness for improved quality of life and productive livelihoods; and
- Promote teaching and learning that inculcates appropriate values, behaviour and lifestyles for good governance and sustainability.

The implementation and coordination of ESD activities in Kenya are being carried out in line with the implementation strategy. This is through seven strategies namely; advocacy and vision building, consultation and ownership, partnership and networks, capacity building and training, research and innovation, use of ICT and monitoring and evaluation. The strategy also proposed that Regional Centres of Expertise² be established to enhance this process.

The ESD strategy implementation framework also specifies the strategic objectives, activities, outputs, objectively verifiable indicators, means of verification and actors involved in implementation.

A national steering committee drawn from representation from government sector, civil society and the private sector spearheads the process of ESD implementation in Kenya. Sectoral ESD committees have also been established in order to address specific key sustainable development issues while regional and provincial ESD advisers and district ESD coordinators oversee ESD activities at the grassroots level.

1.4 Objective of consultancy

In recognition of Kenya's leadership role on the ESD sphere, the country has been selected to host the 2013 global conference on Regional Center of Expertise on Education for Sustainable Development. In addition, the UN ESD decade comes to an end in 2014 and it is therefore prudent to plan for both the end of the decade and post-decade activities. In light of the aforementioned NEMA's department of Environmental Education, Information and Public Participation commissioned a consultant to undertake a study of the ESD country progress for Kenya and to document its status, provide a detailed analysis of each of the implementation strategies and recommendations for the period after the UN ESD Decade in 2014.

2. APPROACH AND METHODOLOGY

¹ NEMA. 2008. Education for Sustainable Development Implementation Strategy. Nairobi, NEMA

² An RCE is a network of existing formal, non-formal and informal education organisations mobilised to deliver ESD to local and regional communities. RCEs aspire to achieve the goals of the DESD by translating it's global objectives into the context of the local communities in which they operate (ref see: www.ias.unu.edu).

This assignment was conducted through a comprehensive literature review on ESD. The information was collated from a checklist distributed to ESD stakeholders; an Internet and desktop review of ESD activities in Kenya; site visits to RCEs, and Civil Society Organizations and the UN (UNESCO and UNEP).

A list of people interviewed and the tool used in collection of information is appended as annex I and II respectively.

A draft report was circulated to stakeholder for input and a validation workshop was held, where the findings were presented and comments from the participants used to finalise this report.

3. THE STATUS OF ESD IN KENYA

A wide range of ESD activities are taking place on the ground and are being led by the government, civil society organizations as well as indigenous communities. These activities are raising awareness, providing capacities and skills, and empowering people and communities to create more sustainable futures.

In order to critically review the status of ESD implementation in Kenya, it is imperative to use the ESD Implementation strategy as a mirror. The seven strategies are discussed as a gauge of the depth of activity implementation. An analysis is given at the end of each strategy.

3.1. Advocacy and vision building

The advocacy and vision building strategy advocates for an aggressive awareness campaigns for understanding root causes of unsustainable outcomes in social, environmental, cultural and economic ventures of development. The strategy also calls for awareness creation on the Kenyan population for living and working sustainably. On vision-building, the strategy roots for awareness to reflect a sense of social responsibility and consciousness of individual actions and how they affect social interaction and production in the endeavor of development.

To achieve nation wide advocacy and vision building, the strategy prescribed three main activities.

3.1.1 *Sensitize the public*

The government, the private sector and civil society organizations working on ESD have strived to raise public awareness on sustainability and environmental issues using various media.

The creation of RCEs have also help in sensitization of the public through a series of sensitization workshops supported by NEMA. There have been a number of workshops mainly in the form of training of trainers.

3.1.2 *Produce materials for sensitization*

A number of sensitization materials have also been produced. These include; the publication of ESD tool kits, periodic ESD newsletters, posters, brochures and factsheets, which are distributed for free to learners, teachers and other education-relevant stakeholders. With both technical and financial support from UNESCO an 'ESD Media Training Kit' has been developed.

3.1.3 *Conduct awareness campaigns*

Awareness creation has been mainly through national and international days. In 2010 NEMA carried public awareness campaigns World Wetlands Celebration at Naivasha, World Water day Celebrations at Mombasa, World Meteorological Day celebrations, World Environment

day held in the rift valley. UNEP is supporting the World Environment Day activities in Kenya, which creates awareness on sustainable development issues.

A number of civil society organizations have also sensitized the public, mainly through workshops. For example, Chanuka Express is an ESD mobile outreach programme, promoting sustainable development among youth.

UNESCO supported the training of ESD Media Training Kit as a boost to awareness creation through media.

Analysis

In general the Kenyan populace are now more aware of sustainable development issues than during the beginning of the UN ESD decade. However, the advocacy and vision building activities implemented so far are not as prescribed in the strategy, where advocacy is to be central at all levels and by all stakeholders. The opportunity of making advocacy an educational process for thinking critically of the current and future circumstances has been missed.

There is some evidence that primary stakeholders are maintaining some dialogue on ESD issues. However, there is lack of evidence for a common agenda and in lobbying for particular issues of sustainable development through responsible media and other learning processes committed to encouraging informed and active citizenry.

While media is instrumental in any advocacy work, there is no evidence of affirmative action in involving media.

3.2 Consultation and ownership

The consultation and ownership strategy puts emphasis on consultation and participation in the formulation and planning processes of local and national initiatives and activities among stakeholders as a pre-requisite for ownership. The strategy prescribes consultation to include:

- Transparent and timely dispensations of information on policy proposals and budgetary provisions by the various sectors.
- Processes to solicit inputs from stakeholders into local, regional and national plans and initiatives.
- Legislative affirmation and commitment towards the ESD process.
- Public awareness campaigns that invite feedback to the process and other ESD initiatives.
- Commissioning of research.

Two main activities have been proposed as means of implementing the strategy;

3.2.1 Hold consultation meetings

There have been a number of consultation meetings both at national and RCE level. The consultation at national level led to the development of the implementation strategy and a draft national policy. At the RCE level, there is evidence that consultations with partners are an on going process. See the RCE section for examples.

3.2.2 Draft policy discussion papers and MOUs.

A number of consultations have led to the formulation of ESD policies, for example, JKUAT, and Pwani Universities have developed institution based ESD policies. There are also drafts for Kenya Institute of Education (KIE) and RCE Nyanza. Through consultation, a number of partnerships have been formed, however, their formation is loose, more often than not based on individuals and have no written MOUs.

NEMA in collaboration with the Ministry of Environment and Mineral Resources has developed a draft National ESD Policy. The draft has been validated by stakeholders and is awaiting cabinet approval.

Analysis

As the RCEs get efficient in planning and implementation of activities within their geographical scope, this strategy will become more instrumental in ensuring that ownership and therefore sustainability of activities is better than the current set-up.

NEMA has been instrumental in supporting these consultation processes. There is need for RCEs to find sustainable mechanisms for ensuring that consultations are a continuous process.

3.3 Partnership and network

The Partnership and network strategy stemmed up from the realisation that the ESD process is too great and too complex for any single institution to promote on its own. While the Government's role is mainly coordination and resource mobilization, the strategy advocates for establishment and strengthening of partnerships for synergy and cooperation between diverse partners. The strength and inclusiveness of the partnerships, networks and alliances formed by the stakeholders at all levels will determine the effectiveness of the ESD implementation in Kenya. The success will also be measured by the regular and systematic exchange of experience and information regarding ESD as a motivational force of learning across the country.

Two main activities are listed; identification of partners and outlining the working mechanisms.

3.3.1 Identify partners and stakeholders

The ESD process in Kenya is multi-sectoral with partnerships between the public sector, private sector, civil society organizations and the media.

The ESD Implementation strategy annex II, gives a list of stakeholders. However, a number of RCEs have also conducted stakeholders' analysis and developed databases, which include new partners in ESD implementation.

Networks and linkages have been established with institutions such as the South African Development Cooperation – Regional Environmental Education Programme (SADC-REEP) and RCEs in other countries such as RCE Graz, RCE London, RCE Kwa Zulu Natal, RCE Denmark, etc.

Partnerships have also been formed, mainly between the NGOs, RCEs, development partners and the private sector. Partnerships have also been created with London South Bank University, the United Nations University, the Nile Basin Initiative and Rwanda. A partnership between RCE Greater Pwani and REA Vipingo on research is a flagship example based on need.

ESD initiatives implemented by partners are summarized below.

The Government Initiatives

- **Kenya Education Sector Support Programme (2005–2010).** The Kenya Education Sector Support Programme (KESSP 2005–2010) was the result of the Ministry of

Education Session paper No.1 of 2005 (MOEST, 2005a) which outlined the overall government policy to achieve Education for All (EFA). It is a five-year plan in which investment programmes are prioritized. It focuses on the programmes that aim to enhance access, retention, quality and equity for the most under-privileged (MOEST, 2005b).

- KESSP has contributed to a number of achievements in terms of sustainable development in the country, it has: (i) provided a framework for formulating education policies and costing by means of a sector-wide approach; (ii) steered Kenya to speed up the realization of EFA and the Millennium Development Goals (MDGs); (iii) enhanced the role of CSOs in the adoption and use of EFA goals; and, (iv) promoted the creation of national coalitions and networks (Pamoja Kenya, Elimu Yetu, the African Network Campaign on Education For All – ANCEFA, among others). In addition the KESSP policy provides various opportunities for ESD implementation in formal education (MOEST, 2005b).
- In 2009, the Ministry of Public Health and Sanitation and the Ministry of Education developed a **national school health policy** to enable the government to coordinate for better available resources to improve children's health³. Guidelines have been developed in order to operationalize this policy and to better integrate the ad hoc health education activities organized by NGOs across the schools.
- The Ministry of Environment and Mineral Resources and the Ministry of Forestry and Wildlife have developed the 2009 **National Climate Change Response Strategy (NCCRS)**, and an investment framework programme for Kenya. Both frameworks emphasize the importance of climate change education⁴. An entire chapter of this strategy is devoted to communication, education and awareness programmes in Kenya
- The Kenya Government's Economic Recovery Strategy (2003) seeks to create 500,000 new jobs annually and plays a key role in the promotion of ESD as the policy focuses on growth, employment and poverty reduction. The strategy promotes a teaching and learning approach based on skills training to youth, women and other vulnerable groups.
- The Kenyan school curriculum has been reviewed to incorporate life skills. In light of the 2008 post-election violence, the targeted themes include conflict management, social cohesion and ethnic tolerance, survival skills, and gender equality, among others. The Kenya Institute of Education has developed, piloted and implemented the curriculum, and trained the teachers and education officers at the national scale.
- **The Ministry of Education and the Ministry of Public Health and Sanitation** have developed a national school health policy that guides a comprehensive school health programme. The objectives are: (i) to promote the teaching of positive values and life skills; (ii) to promote gender related issues in schools; (iii) to promote hygiene, sanitation and the use of safe water; (iv) to provide conducive, fully accessible and inclusive environments for learners with special needs and disabilities; and (v) to ensure that mechanisms are put in place for assuring the longevity of school health programmes.
- **The Ministry of Education** is currently working with various ministries in order to implement ESD initiatives. For example, it implements health education at school

³ <http://www.publichealth.go.ke/>

⁴ <http://www.environment.go.ke/>

level together with the Ministry of Public Health and Sanitation; organizes environmental education and climate change initiatives in schools with the Ministry of Environment and Mineral Resources; implements the Economic Stimulus Package with the Ministry of Planning and, Vision 2030 and the Ministry of Finance; and has participated in the development of the curriculum for technical, industrial and vocational education and training (TVET) with the Ministry of Youth Affairs.

- **Kenya Institute of Education (KIE)** in collaboration with NEMA are implementing a pilot on ESD in schools. The pilot project encourages teachers to use projects in delivering of curriculum. The pilot (two schools – Jamhuri Secondary and City Primary School) has established ecological gardens, composite site and ESD initiative resource centres. Schools were facilitated with tools. KIE has also conducted a nation-wide baseline survey on ESD and is trying to initiate a 6 weeks course on teacher development and a two-year teachers training course. Although in a proposal stage, KIE is in the process of developing ESD and climate change curriculum research. The Institute has developed a HIV and AIDS syllabus to help mainstream HIV and AIDS education in Kenyan primary and secondary schools. This has been made possible through UNAIDS Global Initiative on Education and HIV & AIDS (EDUCAIDS). Through this programme, both learners and teachers acquire skills on preventive education.
- **NEMA** as a lead implementing agency for the government has collaborated with the private sector, formal and non-formal education institutions, NGOs, CBOS and religious groups to undertake;
 - Awareness campaigns focusing on the root causes of unsustainable outcomes in social, environmental, cultural and economic ventures of development.
 - Continuous consultation (information exchange and feedback) with all actors in order to build ownership and shared vision
 - Partnership and networking to build synergies at various levels. At the international level, NEMA has established networks with SADC-REEP, WWF ESARPO and RCE Denmark.
 - Capacity building and training, where over 20 Government Ministries and Departments have been trained on ESD. NEMA has been part of the RCE capacity building modules targeting RCE Coordinators in Africa.
 - research and innovation is being conducted in collaboration with institutions of higher learning and research institutions. Examples xxx. NEMA in collaboration with KIE is conducting three pilot projects; (i) 20 primary and secondary schools’ green school programme (ii) a botanical garden at Pwani University and (iii) use of environmental education packs to promote positive behaviour change for pupils.
 - Monitoring and evaluation using outcome mapping model on a continuous basis. To date, 100 primary, 100 secondary and 100 tertiary institutions have been monitored on ESD Implementation. NEMA and KIE have carried out a nation-wide baseline survey to establish the level of awareness, determined the practice, identified ESD resources within learning institutions, and the participation level of learners and teachers on ESD.
 - NEMA has spearheaded the formation of nine RCEs.
 - Development of an ESD Policy for Kenya in collaboration with the Ministry of Environment and Mineral Resources.

The Civil Society Organizations

- **Wildlife Clubs of Kenya (WCK)** provides conservation education to youths and support wildlife clubs through training, information sharing and advocacy. WCK seeks to share knowledge and stimulate interest on ESD, especially about wildlife conservation and biodiversity. This is supported through (i) a teacher-training

programme and (ii) an annual student competition on ESD best practices. WCK has also published and distributed a number of ESD related materials including thematic pack on; conservation of forests, energy, water, wildlife and combating climate change. As part of awareness creation WCK carries out an annual community conservation day and support radio programmes on Environment and the Youth. WCK also has a mobile education environmental outreach programme to schools and tertiary institutions.

- **Lake Victoria Catchment Environmental Education Programme**⁵. Coordinated by World Wide Fund for Nature (WWF), the programme aims to empower catchment communities, schools and regional partners in sustainable use and management of natural resources. This is done through a whole school approach, looking at health, sanitation and food security (nutrition) and children right to education which is infused through training. While the programme covers four countries, Kenya has eight pilot schools (1 in Nandi, 1 in Homabay, 2 in Transmara and 4 in Kisumu town). The programme has a capacity building component, where eight trainers from each country have been trained since the inception of the project. This has strengthened the capacity of teachers and teacher trainers in delivering environmental education as part of their daily educational activities including: the development of various environmental education materials; raising awareness and understanding on the conservation of freshwater ecosystems; capacity-building on the topic of conservation for riparian communities; and the creation of a partnership mechanism for environmental education. The LVCEEP has also developed a number of resource materials including; Learning sustainable ways and methodologies for the future-a guide to develop education for sustainable development, both aimed at teachers and trainers.
- **African Fund for Endangered Wildlife**. This organization provides support for environmental education programmes on wildlife conservation with a special emphasis on endangered species. The African Fund for Endangered Wildlife (AFEW) has established a resource centre and developed a programme for training trainers. AFEW has produced ESD teaching and Learning Pack for High school and transcribed it into Braille and has a draft for the Primary level pack. As a member of RCE Greater Nairobi, AFEW has taken part in key policy developments. AFEW has contributed to various. AFEW is also keen on research and innovation and has supported three studies on ESD needs assessment with regards to resources utilisation.
- **Jacaranda Designs** - Chanuka Express is an ESD mobile outreach programme on safety, peace, health, hygiene and sanitation, environment, youth and community development for young people run by Jacaranda Designs in collaboration with UNESCO.
- **Kenya Organisation for Environmental Education (KOEE)**: KOEE is mainstreaming ESD into the primary and secondary school curriculum based on an environmental action-learning approach in the Eco-Schools Programme⁶ and ESD teacher training programmes. The programme focuses on the following areas of ESD: (i) reorientation of existing education systems at all levels to address sustainable development; (ii) raise public understanding and awareness of sustainability through schools (iii) conducts training in ESD through micro-projects which involve school communities;

⁵ [wwf.panda.org](http://www.panda.org)

⁶ <http://www.koee.org/koee/Programmes/NaturalResourceManagement/ECOSCHOOLS/BRIEF/tabid/158/Default.aspx>

(iv) adopts a multiple stakeholders approach during micro-projects are implementation and (v) encourages schools to development own ESD strategies. KOEE is also working with Faith Based Organizations (FBO) in raising awareness and building capacity on ESD.

The UN

- UNESCO has participated in the development of the national ESD implementation strategy in Kenya, the ESD implementation guidelines for the provincial and district level, the ESD monitoring and evaluation tool, the establishment of RCEGN, and the production of the RCEGN documentary. UNESCO also supports HIV/AIDS education in Kenyan schools. In addition, UNESCO was instrumental in the development of ESD Media Training Kit⁷.
- UNEP's Directorate of Environmental Education ESD activities focuses on higher education and works through universities. It has three main programmes; education, networking and training.
 - In education, the UNEP inspires universities to re-orient their curricula towards sustainability. This is done by provision of tools – higher Education curriculum re-orientation guidelines, support workshops and provision of resource persons. A pool of resource persons has been established and supports local institutions - Wangare Maathai Institute has benefitted recently. UNEP is also repackaging the concept of greening universities, as a reference point for teaching and a living laboratory.
 - The networking programme provides a platform for sharing knowledge, expertise and resources. It also facilitates the MESA⁸ programme whose membership comprises six Kenyan universities.
 - Training is mainly on scheduled courses for university dons conducted in selected 10 universities in the World, including Dresden, Juen, etc.
 - UNEP also supports environmental education activities in Kenyan schools and universities. It is involved in and provides support to community education for the Nairobi river rehabilitation and restoration project. Nairobi was part of the survey.
 - In collaboration with Tangy University of China conducted a survey of the status of water in Africa.
 - There are number of publications on ESD. These include; (i) Higher Education curriculum re-orientation guidelines (ii) Greening University tool kit, (iii) Graduate curriculum development source book on (a) for ecosystem management and (b) green economy.
 - UNEP also facilitates the biannual Youth Council, which will be held in Kenya in November 2012.
- UN-HABITAT is a member of the ESDA project (ESD joint project between UNU-ISP and Kenyatta University). It also provides technical support on urban issues.
- UNU (United Nations University): Education for Sustainable Development for Africa Project (ESDA)⁹ is jointly implemented UNU Institute for Sustainability and Peace (ISP) and Kenyatta University in Kenya. The project is aimed at developing and testing graduate-level education programmes for professionals potentially engaged in sustainable development in Africa. Professionals at the graduate school level will

⁷ The 'Media as Partners' training kit is available online at: <http://unesdoc.unesco.org/images/0015/001587/158787e.pdf>

⁸ <http://www.unep.org/Training/ mesa/ toolkit.asp>

⁹ <http://update.unuhq.info/2009/03/08/education-for-sustainable-development-in-africa>

be trained to acquire relevant knowledge, skills and experiences related to sustainable development.

3.3.2 Outline working mechanisms

NEMA through the department of Environmental Education, Awareness and Information (EEAI) and in collaboration with the national ESD steering committee coordinates ESD activities nationally. In 2008, NEMA developed ESD implementation guidelines¹⁰ at the provincial and district levels to facilitate its decentralised structure, which is now at county level. The formation of 9 RCEs across the country is expected to facilitate further planning and coordination of ESD activities within the RCEs which encompass a number of counties. It is envisaged that RCEs will also coordinate ESD activities within their geographical scope.

Analysis

While there are efforts by NEMA to coordinate ESD activities implementation and monitoring, there lacks a clear structure on coordination especially on the flow of information to and from stakeholders. Another example of lack of synergy is teacher training, which is done by KOEE, NEMA, AFEW and WCK.

There is need for RCEs to develop plans on forming partnership with the private sector and development partners as a resource mobilization strategy.

Regular and systematic exchange of experience and information regarding ESD as a motivational force of learning across the country has not been realised. There is need for an annual or biannual forum to allow stakeholder share experience and encourage learning.

3.4 Capacity building and training

This strategy is aimed at ensuring that the ESD partners and stakeholders acquire and constantly improve their capacity and skills. The strategy identified key vital areas for training as follows;

- Communication and public awareness that will provide avenues for networking and establishing partnership towards ESD.
- Planning, management, evaluation and analysing skills are developed in ESD initiatives for focused partnerships that are built on clarity of purpose through assessments and feedback for effective progress.
- Training and refresher courses for educators to promote values, attitudes and behaviours to stimulate learning that embraces issues of sustainable development.
- Instructional content and materials that are suitable and relevant to ESD are developed in all forms (written, electronic, and audio-visual) to stimulate concerns and offer knowledge in each context.
- Instructional methodologies and facilitation techniques that reflect common concerns of ESD and show a commitment towards learner-centred engagement and participation modes of instruction to open up learners to issues of sustainability.

The strategy suggests four main activities.

3.4.1 Review/reorient curricula at all level to address ESD (formal and non formal)

The Kenya Organization of Environmental Education (KOEE), through the Eco-schools Programme, AFEW and WCK, are promoting environmental action-learning. Learning is facilitated using micro-projects and promotes creativity, innovation, critical thinking and problem-solving. The environment of the surrounding area is used as a resource for learning and teaching. The local context is taken into account in the process of teaching and learning.

¹⁰ NEMA. 2008. ESD Implementation Guidelines for the Provincial and District Level's Implementation. Nairobi NEMA.

NEMA in collaboration with KIE is piloting greening of schools which is based on a similar model. It is worth noting that the approaches generally used in the Kenyan education system do not tend to support ESD pedagogical perspectives.

UNEP has developed guidelines for re-orienting curriculum in higher education institutions - *Higher Education curriculum re-orientation guidelines*. NEMA through a consultant has developed a simple tool for re-orienting existing curriculum at tertiary institution. The tool was developed in collaboration with JKUAT and lecturers were trained on how to re-orient existing curriculum.

3.4.2 Training of trainers/educators at all levels and in all sectors

Some organizations and universities such as the UNU Sustainability Institute for Community Development, the Commonwealth Scholarship Commission, East African Breweries Limited, SIDA and different governmental ministries offer scholarships for M.Sc courses in the area of sustainable development and ESD.

At the regional level, some RCEs have carried out a number of training of trainers mainly for sensitization.

A number of NGOs are also building capacity of educators. WWF Lake Victoria Catchment Environmental Education Programme has organized training on ESD within Eastern Africa to enhance the understanding and plan for activities.

3.4.3 Develop relevant infrastructure e.g. resource centres

Key stakeholders such as UNEP, UNESCO, Kenyatta University, University of Nairobi, KOEE, WCK, Kenya Wildlife Services, NEMA, and the Ministry of Agriculture, among others, have also contributed to raising awareness and facilitating understanding on sustainable development issues through establishing resource centres and libraries in the country.

3.4.4 Produce ESD resource materials

Several measures have been initiated to ensure that adequate tools and materials for ESD are made available and accessible to learners and teachers, especially in the formal system. Various stakeholders have included relevant links on their websites to provide ESD information and have established ESD resource centres. KOEE has produced ESD theme packs for teachers and learners in primary and secondary schools, and developed ESD teacher guides, a teacher training manual and a handbook, as part of the Eco-Schools Programme. WCK has published an environmental education resource book for teachers and learners of primary and secondary schools. Nature Kenya has produced an ESD resource book for both students and teachers called *Learning for Sustainable Living in Kenya*. WWF has produced some ESD manuals.

In UNEP several resource materials have been produced. These include; (i) Higher Education curriculum re-orientation guidelines (ii) Greening University tool kit, (iii) Graduate curriculum development source book on (a) ecosystem management and (b) green economy.

In the non-formal and informal education sector, the government is yet to develop the requisite pedagogical materials to support ESD. However, various ESD stakeholders in the country are using ESD micro-projects to contribute towards enhancing contextual learning and problem solving approaches for communities.

Analysis

The integration of ESD in the curriculum, as proposed by the ESD implementation strategy, is generally weak in all learning environments. Initiatives have been taking place especially at tertiary level under the MESA programme and NEMA. In lower levels of education, piecemeal curriculum reviews have taken place. However, ESD has been approached as

another adjectival education to add to the curriculum. Although these reviews exist in formal education, they cannot take place in the non-formal and informal sector as no written curriculum exists.

The Kenyan curriculum is essentially exam-oriented. Thus, embedding ESD in the curriculum constitutes a challenge that requires pre-service and in-service teacher training. In addition, the curriculum is overloaded with content and learning outcomes, making the integration of ESD extremely complex. The KESSP policy provides opportunities for ESD implementation in formal education. However, it requires an appropriate curriculum review and policy guidelines for teachers training and re-training as well as in ESD materials development.

Comprehensive reviews of schools and colleges curricula are needed to integrate ESD in teaching and learning processes.

The lack of materials on ESD, particularly in the informal and non-formal sector, is another major challenge to the progress of ESD implementation. There is need to produce more ESD resource materials and made available to a wider audience.

The concept of ESD is yet to be fully understood by many people in Kenya. There are few ESD experts in Kenya to facilitate the process of understanding education for sustainability. There is need for networks of experts and interested groups enhance and strengthen capacity-building processes.

3.5 Research and innovation

The ESD Implementation strategy anticipate that baseline studies; situational analysis; longitudinal studies and other sector specific/institutional demonstrations will be conducted to identify and further delineate key issues to be addressed as ESD innovations and implemented in thousands of local situations across the country. The strategy also envisaged that research will foster ways of integrating ESD into multitude of different learning situations, geographical divides, socio-cultural contexts and ranges of development programmes to bring possible strategies for meeting the various challenges.

Three main activities are prescribed.

3.5.1 ESD needs assessment with regards to resources utilisation

NEMA provides resources (approximately KES 7 million per year) to selected RCE for various activities. However, this is not based on a needs assessment. Innovations from CBOs and small community groups do not get adequate support for their projects. In addition, many of these innovations come from groups with limited capacities to draft successful bid proposals to donors. There is need for a national needs assessment, which will form the basis for resources utilisation.

3.5.2 Document and disseminate research findings and innovations

Efforts are being made by RCE to document and disseminate research findings and innovations. RCE Mau Complex is using the annual research week to show case ESD research results. A number of RCEs have attempted to produce a brochure and/or a poster listing their objectives and activities. Presentations in workshops are the most common way of dissemination.

3.5.3 Mainstream research and innovations in ESD

The RCE Greater Pwani is conducting a number of research and innovations. The use of sisal waste as a substrate for mushroom production and biogas generation is a good example. Other examples include; mericulture and botanical garden. The RCE Western is also conducting a series of research. An International Training Programme (ITP) change project is looking at community engagement as an ESD approach.

Analysis

There is very little ESD related research being undertaken in the country. For this strategy to be achieved a move towards participatory action research – which involves the beneficiary – need to be prioritized.

Research and Innovation requires resources. While NGOs and RCEs are encouraged to partners with the private sector and development partners, there is need for a national kitty, which will allocate resources annually and thematically through a call for proposal model.

There is a lack of systemized support of ESD innovation in Kenya. The support provided by UNESCO, UNEP and some few civil society organizations has provided some impetus to the ESD process. Wider support would be possible by establishing a common and binding vision for ESD.

While RCEs are hosted within Institutions of higher learning, documentation is not systematic but ad hoc.

Dissemination of findings is still within the inner circle. There is need for a mechanism to ensure wider dissemination. Uploading documents in the Internet will greatly improve dissemination.

3.6 Use of ICTs

The use of ICT strategy is the lifeline of networking by linking partners, storing data and sharing of information among ESD stakeholders. ICTs offers new modes of communication and learning spaces thus magnifying opportunity to explore global grounds for dialogue and experience sharing for mutual support in building consensus towards sustainable development.

The strategy will be achieved through implementation of five main activities.

3.6.1 *Develop action plans on ICT*

In line with AMCEN Decision 6 on environmental education and technology-supported learning, NEMA coordinated the development of an e-learning strategy for the environment sector.

Institutions of higher learning like JKUCAT has an elaborate ICT programme inculcated within its ESD policy¹¹

3.6.2 *Develop ESD ICT programmes like e-learning*

Kenyatta University has a postgraduate e-learning programme hinged on environmental sciences. The MESA programme has made e-learning a key focus of its activities. For instance, in the creation of partnerships with UNEP's Online Access to Research in the Environment (OARE)¹² and the Global Virtual University that provides training on the design and development of e-learning courses for MESA participants.

NEMA also spearheaded the development of e-waste guidelines for Kenya. There is little evidence on the existence of other ESD ICT programmes in the country.

3.6.3 *Production of ESD ICT resources materials*

Production of ESD materials in general has not been taken up in the country. ESD ICT resource materials are lacking.

¹¹ JKUAT - ESD Policy WI-2-22-1

¹² <http://www.oaresciences.org/en/>

3.6.4 Training on ICT

NEMA has partnered with UNEP to provide ICT related capacity building programmes.

3.6.5 Develop ICT infrastructure

An e-learning strategy has been developed by stakeholders from government, CSOs, the private sector and media institutions. This strategy seeks to create a collaborative environment for information sharing, the dissemination of knowledge and the promotion of ESD. Its implementation is on going. Another milestone is the development of e-learning policy, which provides a framework for implementing e-learning in environment sector.

Analysis

The use of ICT to enhance ESD is minimal. However, there is good knowledge and experience in use of ICT in other sectors in Kenya. This could be used to catapult ICT use for ESD through development of action plans at national and RCE level, development of ESD ICT Materials and development of ICT platforms for easy of access.

3.7 Monitoring and Evaluation

The ESD Implementing strategy depicts how Monitoring and evaluation will be used to assess progress of implementation in attaining ESD objectives in Kenya. This is expected to be an in-built exercise that ascertains the impact of the ESD process.

The strategy proposed three main activities.

3.7.1 Develop M&E tools

The Kenyan ESD implementation strategy provides status, communication, facilitative and result indicators to monitor the implementation of ESD at different levels.

Outcome Mapping is being used as a monitoring and evaluation tool to assess the outcomes of activities and the progress of ESD implementation.

The provincial and district ESD implementation guidelines, developed for provincial and district environmental committees and other stakeholders, are also instrumental tools for the monitoring and evaluation process.

Civil society organizations use institution based M&E systems to conduct M&E. They do not have separate ESD activities monitoring tools.

3.7.2 Build capacity on M&E

NEMA facilitated a capacity building workshop for the primary stakeholders on outcome mapping as an M&E tool. There is need for a similar training to be conducted at the RCE level to reach more stakeholders.

3.7.3 Undertake M&E

NEMA coordinates the monitoring and evaluation of ESD activities in Kenya. Stakeholders, using outcome mapping, fill relevant data and submit to NEMA for compilation. The product is the annual ESD Journal, posted on NEMA website. To date approximately 100 primary schools, 100 secondary schools and 100 tertiary institutions have their ESD activities monitored. NEMA facilitated KIE to undertake a nation-wide ESD baseline.

Analysis

ESD stakeholders need to be trained on how to use the monitoring and evaluation tool developed for ESD in order to assess progress. The strategy also needs to be reviewed so as to: (i) ensure indicators are clear for all stakeholders; (ii) is aligned to related strategies developed in other sectors; and (iii) is aligned to the new developments in both the public and private sector.

To monitor and evaluate change requires more than outcome mapping M&E tool. There is need for developing a monitoring and evaluation framework, with links activities at the community level to RCEs. This data is then amalgamated at national level and share regionally and internationally.

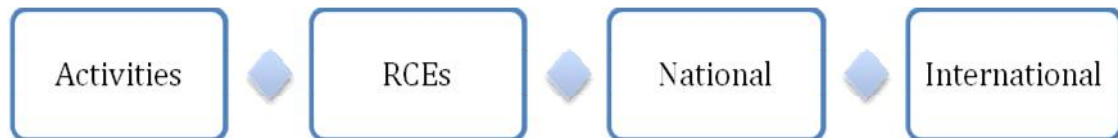


Figure 1: *Proposed M&E framework.*

3.8 Regional Centres of Expertise (RCE).

The Regional Centres of Expertise (RCE) concept was initiated by the United Nations University in 2005 to achieve the goals of the DESD by translating its global objectives into the context of the local communities in which they operate. An RCE is therefore a network of institutions brought together to address sustainable development challenges in a particular area by exploiting opportunities within their respective mandates. They build innovative platforms to share information and experiences and promote dialogue among stakeholders through partnerships for sustainable development. RCEs are aimed at promoting long-term goals of ESD, such as environmental stewardship, social justice, and improvement of the quality of life.

In Kenya, NEMA has spearheaded the establishment of nine RCEs (Table 2) to address local thematic issues.

Table 2: RCEs in Kenya

| # | RCE | Host Institution | Main Issues |
|---|----------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1 | RCE Greater Nairobi Region | Kenyatta University | Urbanization (waste, pollution, slums, transportation, ethnic intolerance). |
| 2 | RCE Mau Complex | Egerton University | Addressing issues of deforestation, indigenous rights, Indigenous knowledge, climate change adaptation and mitigation). |
| 3 | RCE Western Kenya | Masinde Muliro University | Dealing with Indigenous knowledge, land degradation, flood risk mitigation, siltation. |
| 4 | RCE Nyanza | Maseno University | Dealing with waste management, soil erosion, quarrying/ mining, flood risk mitigation |
| 5 | RCE Rift Valley | Moi University | Dealing with agriculture, land degradation |
| 6 | RCE Narok | Narok University | Land degradation, climate change, biodiversity, water and health |
| 7 | RCE Coast | Pwani University College | |
| 8 | RCE Central Kenya | Kimathi University College | |
| 9 | RCE Upper Eastern | Kenya Methodist University | |

An RCE should have four main elements¹³: (i) *Governance* - addressing issues of RCE management and leadership (ii) *Collaboration* - addressing the engagement of actors from all levels of formal, non-formal and informal education (iii) *Research and development* - addressing the role of research and its inclusion in RCE activities, as well as contributing to the design of strategies for collaborative activities, including those with other RCEs and (iv) *Transformative education* - contributing to the transformation of the current education and training systems to satisfy ambitions of the region regarding sustainable living and livelihood.

The core functions¹⁴ of RCEs include; (i) re-orient education towards sustainable development, designing an integrated sustainable development curricula tailored to address issues relevant to the local context; (ii) Increase access to quality basic education that is most

¹³ www.ias.unu.edu/efsd

¹⁴ ibid

needed in the regional context; (iii) Deliver training programmes for all levels of society as well as develop methodologies and learning materials; and (iv) Lead advocacy and awareness raising efforts focusing on educators and the essential role of ESD in achieving a sustainable future.

This section provides an analysis of selected RCEs. The analysis looked at the main elements and the core functions.

3.8.1 RCE Greater Nairobi Region. Hosted by Kenyatta University

The goal of RCGN is to advance public awareness, education, training and capacity building to achieve sustainable development. The RCE has six main objectives (i) promote understanding and raise awareness of ESD and enhance active participation by stakeholders; (ii) establish a training of trainers programme in ESD for stakeholder organisations; (iii) develop content-specific materials and tools for implementing ESD in the region; (iv) establish a regional information system to document and disseminate best practices and deliver ESD to local community (v) improve the livelihood of slum dwellers in Nairobi and (vi) promote sustainable urban development in Nairobi and its environs.

Governance – The RCEGN is guided by a Steering Committee and managed by coordination team composed of representatives from Government, civil society and private sector. The coordination team is the structure for implementation, resources mobilization, information communication and documentation. The coordination team also ensures implementation of work in priority areas like research and innovation, curriculum review and re-orientation, advocacy and public awareness.

The RCEGN has facilitated the implementation of ESD through:

1. Advocacy and vision-building: many advocacy and public awareness campaigns have taken place since the launch of RCE Greater Nairobi (RCEGN) in 2007. The media has been instrumental in creating awareness on ESD using the UNESCO Media Training Kit developed and tested in 2007.
2. Consultation and ownership: in order to address the ESD agenda, RCEGN has organized several consultation meetings and workshops. As a result, a national ESD strategy and sectoral policies have been developed;
3. Partnerships and networks have facilitated sharing and the exchange of ESD best practices, as well as disseminating ESD knowledge and innovations to wider audiences through forums.
4. Capacity-building and training processes have delivered appropriate, needs-specific and contextualized training programmes for ESD stakeholders;
5. Research and innovation: the RCEGN research, innovation and documentation sub-committee conducted a baseline survey and produced a documentary highlighting pertinent ESD issues and proposed interventions;
6. Use of ICTs: an environment sector e-learning strategy has been developed by stakeholders from government, CSOs, the private sector and media institutions. This strategy seeks to create a collaborative environment for information-sharing, the dissemination of knowledge and the promotion of ESD; and,
7. The development of Outcome Mapping (OM), as a tool for monitoring and evaluating ESD implementation in Kenya, provides guidelines for recognizing and assessing the contributions made by development initiatives (i.e. a project, programme or organization) in achieving ESD outcomes.

The Kenya National Chamber of Commerce and Industry (KNCCI) is a member of both the national ESD steering committee and the RCEGN. KNCCI is offering entrepreneurship training to low income and poverty marginalized groups in the rural areas of Kenya.

Nairobi City Council Directorate of Environment has developed a solid waste management strategy based on community training on sustainable solid waste management, including

waste for wealth creation. The project is expected to connect with the ESDA training that will take place at Kenyatta University

JKUAT has developed its local policy on ESD and trained lecturers on mainstreaming ESD on existing curriculum.

3.8.2 RCE Mau Complex hosted by Egerton University

The RCE Mau Complex addressing issues of deforestation, indigenous rights, indigenous knowledge, climate change adaptation and mitigation.

Since its formation in 2011, the RCE Mau Complex has implemented the following activities.

1. Advocacy and vision-building: The RCE has used environmental education and awareness as a tool of sensitization of schools and communities. RCE Mau complex has also produced posters and holds an annual environment week involving all the stakeholders.
2. Consultation and ownership: RCE Mau complex has organized consultation meetings with various stakeholders under its mandate, including the Municipal council of Nakuru and the communities in Mau.
3. Partnerships and networks. The RCE has expanded its membership by forming partnership with neighbouring primary and secondary schools, women and youth groups. The RCE has 26 groups. The RCE has six thematic groups, which spearhead implementation of activities towards achieving the mission of the RCE.
4. Capacity-building and training. ESD stakeholders (24 people) have been sensitized on ESD and trained on proposal development and climate change mitigation and response mechanism. The RCE has also influenced the university to develop and launch new programmes on environmental management both at certificate and degree level
5. Research and innovation: Through customary land use planning, community-based mitigation initiatives are being promoted by the government using learning-based approaches. The Ogiek's indigenous knowledge and skills are being utilized by the Ministry of Forestry and Wildlife to restore and conserve the extensively deforested Mau Forest. The RCE is influencing Egerton University in supporting research by members of staff and graduate students that promotes sustainable development. Examples of research being carried out include biogas utilisation, awareness and attitude change. Dissemination of findings is through the Division of Research and Extension, which holds an annual research week to disseminate findings. The RCE is also planning to launch a Journal for Mau for wider readership.
6. Use of ICTs: ICT is used for communication. The RCE has not developed a platform for sharing knowledge on ESD.
7. Monitoring and Evaluation. RCE Mau complex holds annual meetings with all stakeholders to review progress and plan for the coming year. This activity is used as a monitoring tool.
8. Future plans - The RCE wants to mainstream curriculum, develop and use case studies from within the catchment area, for example river Njoro, Mau complex and Nakuru town. Secondly, use more ICT and develop resource materials by themes.

3.8.3 RCE Greater Nyanza hosted by Maseno University.

RCE Nyanza is in the process of being registered. The VC constituted a seven-member committee, which has developed a roadmap for the RCE Greater Nyanza. The RCE covers the six counties in Nyanza and has 14 themes (Pollution, Waste Management, Soil Erosion, Unsustainable mining, Invasive species, Floods and drought, Wetlands degradation, deforestation, Food insecurity, HIV/AIDS, Poverty, Poor Marketing strategies, Fisheries and Tourism).

Unlike other RCEs, Nyanza has not implemented any activities. However there is an existing action plan indicating interventions for all thematic areas. The action plan shows list stakeholders for each activity. It is however not clear if a stakeholder analysis was carried out and a sensitization meeting organized to ensure ownership and sustainability.

The action plan is considered as future plans.

The RCE has had a number of constraints. These include;

- Communication break down between NEMA and Maseno University, which delayed the appointment of the RCE Coordinator
- RCE Coordinator has a full time job and hence there is need to have a coordination desk officer.
- There is lack of clear understanding of the role of the university as a host institution. There is need to sensitize the management on the same.
- There are pockets of ESD activities being carried out in Nyanza RCE but they are not documented and shared.

3.8.4 RCE Greater Pwani hosted by Pwani University College

RCE Greater Pwani is in the process of being registered. A second registration draft has been sent to UNU.

The RCE Greater Pwani is governed through a committee of five lecturers, who meet whenever there is need.

The RCE Greater Pwani has facilitated the implementation of ESD through:

1. Advocacy and vision building: A number of advocacy activities have been implemented. Awareness of ESD has been created within the University Management and staff, schools and primary stakeholders have also been sensitized. Brochures on RCE Pwani objectives and activities have been produced and disseminated as part of the advocacy campaigns.
2. Consultation and ownership: Three consultative meetings have been held between Pwani University, NEMA and stakeholders. In addition, three workshops have been organized to discuss workshop formulation process. A draft policy for RCE Greater Pwani is in place.
3. Partnerships and networks: The RCE has conducted a stakeholder analysis and developed a database. Meetings have also been held with stakeholders to outline working mechanisms. The main partners in activities implementation include; WWF, Coast Development Authority, Lafarge, Coconut development authority, KARI Mtwapa, etc.
4. Capacity building and training: A training of trainers for lecturers is on going. The RCE has also produced one brochure and ESD policy as resource materials.
5. Research and innovation: The RCE Greater Pwani is conducting a number of research and innovations in collaboration with various stakeholders. These include;
 - Using a botanical garden for teaching, identification and domestication of medicinal plants.
 - Mericulture project in collaboration with KEMRI, on the production of fish in sea.
 - Coconut tissue culture project with funding from the National Council for Science and technology
 - Bio innovation or waste management project in collaboration with REA Vipingo, funded by SIDA. The project is using sisal waste to produce a mushroom substrate and production of biogas.
 - The Bamburi Portland Cement Company has developed the Haller Park in Mombasa as a best practice in land derelict rehabilitation, environmental conservation and ecotourism. The Haller Park is used both as a learning

centre and ecotourist site. Educational institutions – from primary to higher education level – utilize the site as an ESD resource.

6. Use of ICTs: RCE Greater Pwani has not started any ICT initiatives and innovation to facilitate implementation of ESD. However, this is stipulated in the policy document.
7. **Monitoring and Evaluation:** The RCE participates in the annual data provision for the national Outcome Mapping (OM) monitoring and evaluating for ESD implementation in Kenya.

3.8.5 RCE Western Kenya hosted by Masinde Muliro University.

RCE Western Kenya covers Vihiga, Kakamega, Bungoma and Busia Counties. The RCE has a governance structure, with a steering committee.

The RCE has implemented a number of activities;

1. Advocacy and vision building: A number of advocacy activities have been implemented. This year, one general meeting has been held and several consultative meetings with stakeholders.
2. Consultation and Ownership: xxx consultative meetings have been held between the RCE and XXXX. The outcome of the consultations include; xxx
3. Partnerships and networks: The RCE is working with several partners. A workshop on xxxx was conducted in collaboration with PALWECO. There is need for a stakeholder analysis. The RCE has established collaboration with RCE Denmark. This has helped the RCE to xxxxx
4. Capacity building and training: The RCE has built capacity of various stakeholders on xxxx. In addition to training the RCE is engaging educators on the sustainable development discourse. The RCE has started re-orienting the curriculum for higher institutions of Learning to address ESD.
5. Research and innovation: The RCE Western has initiated research geared towards ESD in collaboration with various stakeholders. The RCE is conducting research in Spirulina and Mushroom
6. Use of ICTs: There are no reported ICT innovations with the RCE
7. Monitoring and evaluation: Like all the other RCEs, the RCE Western has been contributing towards the national outcome mapping, coordinated by NEMA.
8. Future plans: The RCE plans for (i) Curriculum Innovation, Green campus/Institutions and Knowledge society creation; (ii) Leadership Programs and Community engagement and (iii) Research partnerships and capacity building
9. Challenges
 - No specific funding to cater for the RCE has so far been realised. This makes coordination difficult. There is need for secretariat with full time staff especially to enhance effective communication
 - Illiteracy and low awareness on what entails ESD among political leadership and the other institutions.
 - There is lack of documentation and dissemination of progress realised by stakeholders since RCE establishment.

4. RECOMMENDATIONS OF AREAS TO BE EXPEDITED.

The Bonn Declaration (UNESCO, 2009a) continues to call for the development and adjustment of ESD policies and frameworks in order to guide the implementation of ESD in all educational sectors. Drawing upon the recommendations from this authoritative document, the UNESCO Strategy for the Second Half of the DESD (UNESCO, 2010) calls for creating spaces to discuss a common vision towards sustainable development, and emphasizes the need to create ESD strategic documents which are context-based and address the specific challenges that individuals, communities and nations are facing in different parts of the world.

In Kenya, a number of activities have been implemented as highlighted in this document. However, a few recommendations are listed below to fast track implementation in achieve the ESD goals and objectives for Kenya before the end of the decade.

1. Advocacy and vision building:
 - Standardizes advocacy activities
 - Strategic use of media for a wider coverage
2. Consultation and ownership
 - All RCEs to conduct a stakeholders forum and discuss roles
3. Partnerships and networks
 - Take affirmative action in establishment of partnership and building of strong networks both within the country and outside. This could be enhanced through study tours, ICT platforms, etc.
4. Capacity building and training
 - Domesticate the ANU RCE coordinators module and train all coordinators
5. Research and Innovation.
 - Set up a national research and innovations priorities based on an assessment.
 - Initiate an annual forum to disseminate findings and share experiences at national level, while participating at international level forums
6. Use of ICT
 - Facilitate ways of use ICT for data storage, analysis and dissemination and networking. This could be achieved through the development of an intranet or existing applications like Dropbox.
7. Monitoring and Evaluation
 - Align the outcome-mapping framework to the Implementation strategy; this will enable to get a clear picture of ESD activities at any given time.
 - Build capacity of M&E of ESD activities
8. Regional Centres of Expertise
 - Governance – Ensure that all RCEs have management structures and effective leadership, which understands their roles.
 - Collaboration - Establish a mechanism to enhance engagement and learning within and among RCEs.
 - Research and Development – Conduct a research needs assessment based on the RCE themes. Develop a resource mobilization strategy based on the needs assessment and available collaborators, including other RCEs.
 - Transformative education- to ensure that the RCEs have communities with sustainable living and improved livelihoods, curricula have to be re-oriented and the delivery mechanisms changed.

5. RECOMMENDATIONS FOR THE PERIOD AFTER THE UN ESD DECADE IN 2014

It is envisaged that UNESCO will commission the end of the UN ESD decade study and within it there will be a number of recommendations on the way forward. There will also be end of decade workshop, where a declaration will include several recommendations. However, based on the current rate of implementation and guided by the Bonn Declaration and the Rio +20 *the future we want* document, a number of recommendations have been suggested as follows;

1. Advocacy and vision building:
 - Whereas there have been a number of advocacy and vision building activities, there is need for a standardized way of sensitization. This will ensure that stakeholders have the knowledge and understanding on ESD and sustainable development and their role in ensuring that the being championed are implemented and lived
2. Consultation and ownership

- Develop coordination mechanisms that involve a wide range of key stakeholders.
3. **Partnerships and networks**
 - Identify needs and actions to support partnerships for ESD.
 4. **Capacity building and training**
 - Clearly identify capacity-building needs and address these through specific activities.
 - Encourage national plans and actions to clearly identify pedagogical approaches, which support ESD and encourage and promote these across activities.
 - Encourage whole-of-institution initiatives, social learning approaches and the development of learning organizations.
 - Ensure that ESD pedagogical resources are available to educators and learners.
 5. **Research and Innovation.**
 - Create specific funding and structure mechanisms to support ESD innovation and research activities.
 6. **Use of ICT**
 - Develop a national platform (intranet) or use existing applications like dropbox to enhance networking.
 - Encourage development of e-content
 7. **Monitoring and Evaluation**
 - The outcome mapping has been adopted as an M&E tool, however, ESD indicators (Reids et al, 2006) are required;
 - To use existing monitoring of formal education contexts to track developments in ESD, reporting these to all stakeholders annually, through a reflective overview.
 - To encourage NGOs and others involved in non-formal ESD contexts to report developments on an annual basis through reflective commentaries.
 - To encourage communities and institutions to agree and adopt their own ESD indicators in terms that make contextual and conceptual sense to them, reporting these in appropriate ways from time to time, and holding such indicators permanently under review.
 - To commission biennial research studies with the purpose of benchmarking ESD in formal, informal and non-formal sectors.
 - To bring stakeholders together on a biennial basis to share developments and consolidate learning.
 - To ensure that the ESD indicators have a clear conceptual linkage to SD and education, and, to remember that no matter how positive an ESD indicator may be, this can be no guarantee that a contribution to SD is actually being made.
 - Develop multi-stakeholder monitoring and participatory evaluation systems.
 - Create monitoring and evaluation processes that assess the quality of ESD learning processes and experiences and not just outputs.
 8. **Regional Centres of Expertise**
 - Encourage the mapping of needs and actions in support of non-formal and informal learning opportunities for sustainable development.
 - Encourage the development of action plans that emphasize the role of the business sector, indigenous communities and the media in providing ESD learning opportunities.
 - Build synergies among ESD initiatives and programmes to promote a shared vision of sustainable development.
 - Develop plans to review the quality and appropriateness of ESD initiatives.

6. CONCLUSIONS

The first DESD Global Monitoring and Evaluation Report released at the UNESCO World Conference on Education for Sustainable Development in Bonn in 2009 acknowledges that substantial progress was made regarding structural and policy changes in ESD across and within regions including Kenya, but suggests that limited understanding of ESD processes and approaches is still a fundamental challenge (UNESCO, 2009b). This challenge is slowly being managed in Kenya.

The impact of the DESD is yet to be ascertained. However, this audit provides evidence that small activities at different places within the country, cooperation among stakeholders and commitment from the government, civil society organizations and the private sector can lead to strategies and actions for sustainable living for all communities.

“Our biggest challenge in this new century is to take an idea that seems abstract- sustainable development – and turn it into reality for all the world’s people” – Kofi Annan. Is the challenge still there in Kenya today?

Annexes

Annex I. List of people interviewed

| No | Institution | Contact Person | Contact Address |
|-----|---------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 1. | AFEW | Emmanuel Gumbi Assistant Manager - Head of Conservation Education | Emanuel Gumbi 0720 974 277 |
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| 3. | KOEE | Dr. Dorcas Otieno CEO | berlyotieno@yahoo.com 0722 777 734 |
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| 5. | KIE | Lucy Ogol Deputy Director | lucyogol@gmail.com 0733 820 829 |
| 6. | UNEP | Gregory Odeke Programme Officer | odekes@yahoo.com 0722 962 245 |
| 7. | Kenyatta University, RCE Greater Nairobi | Professor Stephen Njuguna | Njuguna.steven@ku.ac.ke 0716372097 |
| 8. | Pwani University College RCE Greater Pwani. | Dr. Maarifa Ali Mwakumanya | maarifaali@yahoo.com 0733 852 226 |
| 9. | Masinde Muliro, RCE Greater Western | Gabriel Angule | angulegabriel@gmail.com 0721315467 |
| 10. | Maseno University RCE Nyanza | Monica Omulo | omuloma@gmail.com 0716452213 |
| 11. | Egerton University RCE Mau complex | Dr. John Momanyi Mironga | +254-722602132 |

Annex II. Data collection tool

| Institution | Advocacy and vision building | Consultation and Ownership | Partnership | Capacity building Training | Research and Innovation | Use of ICTs | Monitoring and Evaluation |
|---------------------|-------------------------------------|-----------------------------------|--------------------|-----------------------------------|--------------------------------|--------------------|----------------------------------|
| RCE Greater Nairobi | | | | | | | |
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