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## **Universities and Sustainable Development: Integrating Environment into Socio- Economic development through Regional Centres of Expertise**

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Coordinator RCE Greater Nairobi,  
Kenya**

# Key Issues in the Presentation

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- **Introduction: Environment and Socio-Economic development**
- **Integration of Environment in Development**
- **Education for Sustainable Development (ESD) as a Tool for Integration**
- **Universities and ESD**
- **RCEs as avenues for University Public Private Partnerships on ESD**
- **Individual Professional growth and leadership in community Transformation for SD**
- **Conclusion.**

# **Introduction: Environment and Socio-Economic development**

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- **Most countries all over the world are committed to achieving their development vision objectives and Millennium Development Goals (MDGs).**
- **MDG 7 “to ensure environmental sustainability” is integral to all development processes**
- **Environmental issues are connected to risk and vulnerability, and are inseparable from people’s individual, social and economic wellbeing.**

# *Millennium Development Goal 7: Ensure Environmental Sustainability*

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**Target 9:** Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources

- Proportion of land area covered by forest
- Ratio of area protected to maintain biological diversity to surface area
- Energy use (kilograms of oil equivalent) per \$1 GDP (PPP)
- Carbon dioxide emissions per capita and consumption of ozone-depleting chlorofluorocarbons (ODP tons)
- Proportion of population using solid fuels

**Target 10** Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

- Proportion of population with sustainable access to an improved water source, urban and rural
- Proportion of population with access to improved Sanitation, urban and rural

**Target 11** By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers

- Proportion of households with access to secure tenure

# Environment, Development and Poverty linkages

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- **Healthy environment and equitable access to environmental goods and services are amongst the key factors underpinning sustainable development processes**
- **Poor people in developing countries are, much more than others, dependent on natural resources for their livelihoods.**
- **Development strategies, plans and programs cause environmental impacts which, in some extreme cases, may even undermine development efforts.**
- **Thus its importance to integrate environmental concerns from the earliest stages of the definition and programming of development cooperation all the way through implementation, monitoring and evaluation**

# Environment MDGs- linkages, case of Rwanda

|  |  |
|--|--|
| <b>Eradicate Extreme Poverty and Hunger</b>      | <b>90% of the population depends on agriculture, with the poorest depending for livelihoods on forests and natural environment</b>   |
| <b>Achieve Universal Primary Education</b>       | <b>Time spent on collecting fuel wood and water is time lost for education.</b>  |
| <b>Promote Gender Equality and Empower Women</b> | <b>Exposure to wood fuel smoke affects women's health; lack of rights on land dis-empowers women</b>   |
| <b>Reduce Child Mortality</b>                    | <b>Exposure to indoor air pollution increases underweight births; 20% of child mortality is due to diarrhoea, cholera and related diseases caused by polluted water and lack of sanitation</b> |
| <b>Reduce Maternal Mortality</b>                 | <b>Heavy loads of wood and water affects health of mothers &amp; increases risks during pregnancy;</b>   |
| <b>Combat HIV, Malaria and other diseases</b>    | <b>About 30% of morbidity in Rwanda is due to environmental causes</b>   |
| <b>Ensure Environmental Sustainability</b>       | <b>Loss of soil in Rwanda is estimated to result in a loss of capacity to feed 40,000 persons a year. The droughts in 2003- 2004 caused stagnation in agricultural growth.</b>                 |

# Integration of environment in Development?

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- The Mainstreaming of environmental issues into Socio-Economic Development.
- Participatory process strengthens the chances of a well mainstreamed strategy and *transparent* policy choices made by decision makers.

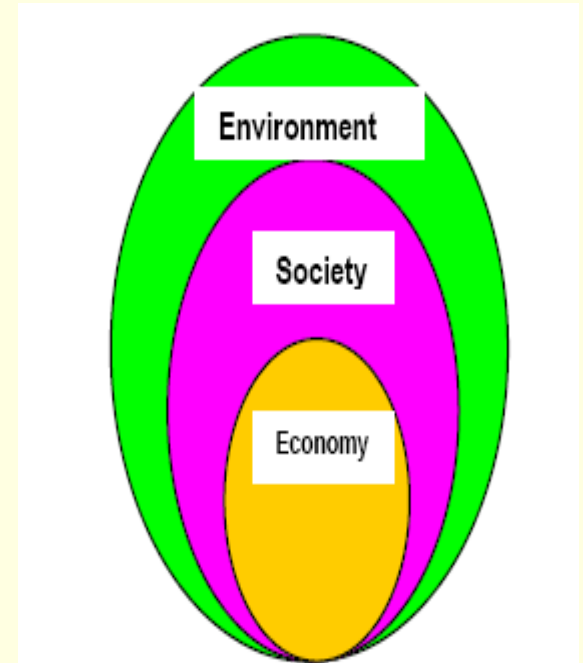
## The analysis of development challenges

- Design of responses or solutions
- Allocation of resources
- And indicators to monitor implementation

Integration is aimed at identifying opportunities to benefit from good environmental practice.

# Importance of Integration of the environment

- Environment is closely linked to poverty and economic growth which are the key pillars of development.
- The impacts of environmental degradation are higher on the poorest, which is why environment needs to be integrated into the in the Development and Poverty eradication Strategies.
- Environmental degradation affects the quality of growth in the long term.



# Continued.....

- **The links between environment and poverty are based on a broader definition of poverty which includes the dimensions of health and vulnerability, in addition to income and consumption.**
- **Livelihoods of the poor are often directly dependent on natural resources, and therefore the income dimension of poverty is determined by the quality of the natural environment.**
- **Vulnerability: The poorest are the most vulnerable to the impacts of disasters and emergencies – floods, droughts, epidemics and civil wars increase the levels of poverty as the poor do not have the safety nets to cushion against such crises.**



# Why environmental integration is usually ignored

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- **Environment can wait: ‘Let’s get on with growth we can deal with environment later’.**
- **Wrong perceptions of what is environment: ‘Environment is about tree-planting’.**
- **Environment is seen as a restriction / obstruction: Viewing environment as a constraint to development, and not as an opportunity.**
- **Environment is the business of the environment sector: ‘I am responsible for delivering health plans’.**
- **Falling between the cracks: ‘If it is cross-cutting who is ultimately responsible and accountable for environmental actions?’**
- **Insufficient budgets: Budgets are not linked to policy priorities.**

# Tools for integrating environment

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- **Guidelines at sector level on mainstreaming and Practical actions for implementation.**
- **Laws and regulations suited for transforming environment and development policies into action.**
- **Research, monitoring and evaluation,**
- **Advisory services**
- **specialized training**
- **institutional capacity-building.**

# Education for Sustainable Development (ESD)

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- **Sustainable Development** is defined as ‘the development that meets the needs of the present generation without compromising the ability of future generations to meet their needs’.
- The concept of sustainable development emerged in the 1980s in response to a growing realization that economic and social activities have potential to compromise environmental quality as well as lower the productive potential of natural resources.
- Sustainable development takes into account society, environment and economic factors conceptualized as pillars in order to ensure a more balanced form of development. However, it is an evolving concept embracing emerging challenges and concerns.

# **Role of Education in Integrating Environment into Socio-Economic Development**

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- **Education is the process of imparting intellectual, moral, social skills and values to learners for a particular purpose.**
- **Education and training, both formal and non-formal, are key processes by which human beings and societies can reach their fullest potential. Education is key to sustainable development.**
- **Educating people for sustainable development should provide the skills, perspectives, values and knowledge to live sustainability.**
- **It must be interdisciplinary i.e. integrating concepts and analytical tools from a variety of disciplines and be reoriented to include the changes needed to promote sustainable development.**

# 1. Universities Practicing ESD at the campus

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- **Enhancing the quality and policy relevance of university education in the context of sustainable development and the achievement of the MDGs.**
- **Increasing the relevance of teaching and research for the societal processes leading to more sustainable and discouraging unsustainable pattern of life.**
- **Produce skilled and professional graduates who can address real societal needs and challenges of sustainable development.**

# Practicing ESD at the campus cont

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- **Interactions through collaborative projects between universities, civil societies, private sectors and communities.**
- **Decentralize management concepts and styles.**
- **Demonstrate SD principles and practices through Environmental Management Schemes.**
- **Co-operate with international and academic institutions to provide, trainees from developing countries, postgraduate programmes and in-service training facilities in sustainable development.**
- **Co-operate with relevant organizations in SD harmonize curriculum**

# 2. Leadership in Development Decision-Making Processes

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- **Demonstrate the linkages between environment and development**
- **Ensuring the integration of economic, social and environmental considerations in decision-making in all development sectors**
- **Monitoring and evaluating the development process through annual environment and development reviews,**
- **Ensuring transparency of, and accountability for, the environmental implications of economic and sectoral policies.**
- **Domestication of Global environmental Multilateral agreements**
- **Promoting Awareness and information on environment for public participation.**

# 3. Leadership in Development Planning and Management Systems

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- Improving the use of data and information at all stages of planning and management,
- Assessment of the impacts of decisions, to policies and programmes;
- Analysis should also include assessment of costs, benefits and risks;
- Designing integrated management systems, particularly for the management of natural resources.
- Regular review of policy instruments (legal/regulatory and economic) as a tool for planning and management
- Mobilisation of communities with gender sensitivity to participate in planning and management
- Training communities on industrial accidents, disaster preparedness and management.

# 4. Public-Private Partnerships for Sustainable Development

- The increased importance of market dynamics and economic agents as carriers of ecological reforms in addition to the transformations in the role of national governments and increased involvement of social movements regarding environmental reforms, emphasize the importance of networks and partnerships.
- Both the private and the public sector are faced with increased pressures from a number of different actors in the field, and governments are increasingly met by demands from citizens and NGOs to live up to their obligations of protecting the environment

**Public –Private Partnership in this paper will mean:**

■ *“People and organisations from some combination of public, business and civil constituencies who engage in voluntary, mutually beneficial, innovative relationships to address common societal aims through combining their resources and competencies.”*

# **RCEs as avenues for University Public Private Partnerships on Education for Sustainable Development**

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- **RCE is a network of existing formal, non formal and informal education organizations, mobilised to deliver ESD to local and regional communities.**
- **RCEs aspire to achieve the goals of the UN Decade of Education for sustainable Development (DESD,2005-2014), by translating its global objectives into the context of the local communities in which they operate.**
- **Universities require viable strategic partnerships to support the process of Integrating and enhancing compliance to environmental requirements. This should be sustainable, inclusive and participatory in nature ultimately fostering solidarity and equity in sustainable development and this could be done through RCEs as an Avenue.**

# The case of RCE Greater Nairobi

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- Participating Universities include Kenyatta University, University of Nairobi, catholic University and Daystar University
- The **goal of RCE** Greater Nairobi is to promote public awareness, education and training to promote sustainable development and build the capacity of Greater Nairobi community to achieve sustainable development.

## Short-term objectives

- Carry out a participatory needs assessment for ESD in Nairobi to identify stakeholders, local problems, priorities and existing capacity for ESD in the region.
- Establish networks, partnerships and resource center of and for organizations concerned with ESD in Greater Nairobi with KOEE serving as a hub of networking.
- Identify and promote examples of good practices in ESD

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## Long-term objectives

- Reduce waste through ESD by Promoting understanding and raising awareness and to enhance active participation by stakeholders.
- Establish a training of trainers programme in ESD for stakeholder organizations.
- Develop materials and tools for implementing ESD in the region
- Establish a regional information system to document and disseminate best practices and deliver effective ESD to the local community
- Improve the livelihoods of communities living particularly in the Slum areas of Nairobi
- Promote sustainable urban development

# Expected RCE Greater Nairobi Outputs

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- **Appropriate Innovations for contextualized socially critical (transformative) research programs developed through universities**
- **Knowledge built and disseminated on positive socio-economic transformation, ecological sustainability, innovations, research findings, best practices and success stories to a wider audience for probable replication**
- **Awareness created and Understanding raised on sustainable development challenges and the need to address them through Appropriate innovations for active participation by stakeholders.**
- **Appropriate, needs-specific and contextualized training programs for ESD stakeholders developed**

# Expected outputs continued.....

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- **ESD resource materials to ensure quality and compliance with ESD objectives and guiding principles developed**
- **Sustainable Development issues and concerns in the Greater Nairobi that need to be incorporated into the curricula at all levels established.**
- **Opportunities for Integration and Infusion of Sustainable development concerns/issues into the curriculum for learning institutions identified.**
- **ESD knowledge and innovations adopted.**

# RCE Programme Areas and Actors

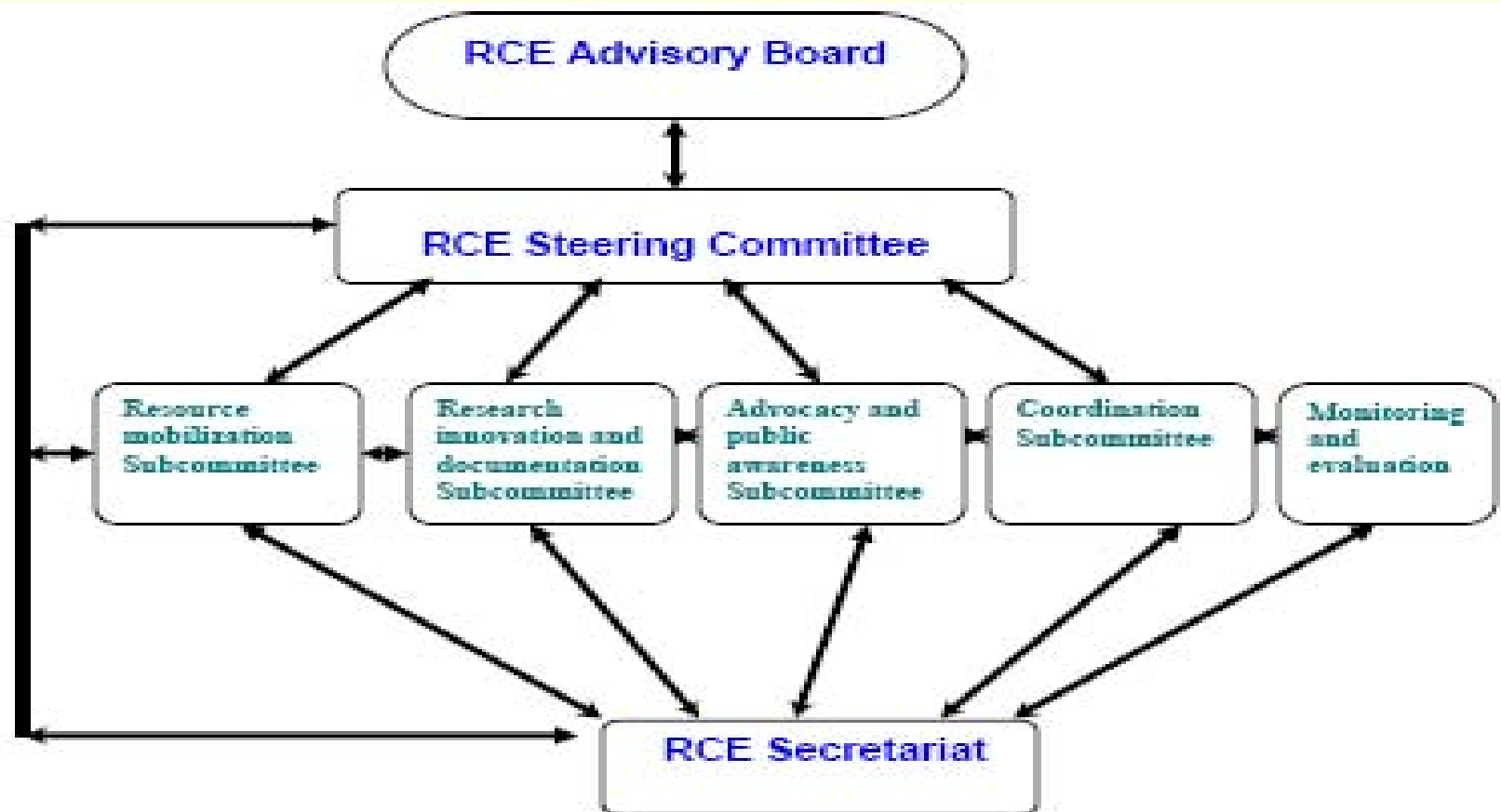
| <b>Programme Area</b>                    | <b>Actors</b>   |
|--|---|
| <b>1. Coordination</b>                   | <b>Coordination Committee, National Environment Management Authority (NEMA), KOEE, UNESCO</b>   |
| <b>2. Resource mobilization</b>          | <b>Resource Mobilization Committee Department of Adult Education, KOEE ,UNESCO providing technical support</b>  |
| <b>3. Research and Innovation</b>        | <b>Research, innovation and documentation subcommittee, KOEE, NEMA, Kenyatta University, University of Nairobi</b>  |
| <b>4. Capacity building and training</b> | <b>Civil society organizations (KOEE,AFEW), institutions of higher learning (KU, UON), Government departments, (NEMA, KIE, City Council of Nairobi) , Department of Adult Education, private sector, Chamber of Commerce, (KAM)</b> |

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|   |   |
|---|---|
| <b>5. Resource material development</b>             | <b>Resource material development sub-committee, Kenya Institute of Education (KIE)</b>  |
| <b>6. Curriculum orientation/review towards ESD</b> | <b>Kenya Institute of Education (KIE), MOE, institutions of higher learning (KU, UON, Kenya polytechnic), Department of Adult Education, Civil Society Organizations (KOEE,WCK,AFEW, Nature Kenya</b> |
| <b>7. Monitoring and evaluation</b>                 | <b>Monitoring and Evaluation committee<br/>DAE, MOE, NEMA, KOEE, Private Sector</b>   |

# Universities & RCE Greater Nairobi Governance

## ■ RCE Greater Nairobi Organogram



# Universities & RCE Greater Nairobi cont.....

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## **Kenyatta University (KU)**

**KU has already integrated its teacher preparation skills to work with communities including tools for linking schools with local communities**

## **Kenya Science Teachers College (KSTC)**

**RCE for Greater Nairobi works with KSTC and, in particular, the JICA/Government of Kenya/SMASSE Initiative on science education for sustainable development.**

## **University of Nairobi (UON)**

**Is undertaking a community development and outreach programme in collaboration with the RCEGN this is geared to improve the public health of slum dwellers especially on HIV and AIDS.**

## **Catholic University of East Africa (CUEA)**

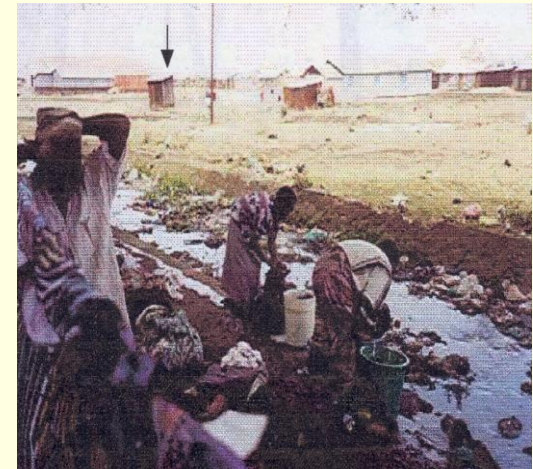
**active in the area of peace and mutual understanding and sustainability. In collaboration with the RCE, it is engaged in training and community development in poor communities with focus on human security and living together peacefully**

## **Daystar University:**

**Has initiated coursework in the area of ESD journalism. This university works closely with the RCEGN on public information and advocacy.**

# Planned Issue-Based ESD Interventions for the Greater Nairobi Region include:

- Poor solid waste management
- Inadequate water supply and poor sanitation
- Poor health, HIV/AIDS, malaria, TB, waterborne diseases, Malnutrition Insecurity and violence
- Poor governance and corruption
- Unaffordable and unsustainable
- Energy resources
- Unsustainable urban agriculture
- Environmental degradation
- Lack of appropriate entrepreneurship skills



# Achievements of RCE Greater Nairobi

- **Carrying out and documenting fact finding/ needs assessment for ESD in Greater Nairobi,**
- **Mobilizing stakeholders and fostering partnership-building in all areas of interventions, i.e.**
  1. **Chanuka Express which is an ESD mobile outreach programme for young people.**
  2. **Higher Learning institution individuals partnerships i.e. new individuals and Experts from Kenyatta University have been brought on board. One of the individuals who is an expert in the field of Health Dr. Afullo, participated in the ESD/Health conference in Malaysia in May.**
- **Identifying, promoting and initiating examples of good practices in ESD including; inter-faculty course on sustainable solutions for Africa through Intercultural Virtual Seminar between catholic University and Delft university of Technology in Netherlands;**
- **Domestication of the ESD media training Kit developed by UNESCO and the training of media on ESD reporting;**

# Achievements Continued.....

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- **Promotion of ESD through eco-schools program by Kenya Organization for Environmental Education (KOEE) and Umande trust;**
- **Outcome Mapping workshop as a tool for Monitoring and Evaluating ESD through NEMA, UNESCO and other partner Organizations**
- **ESD sensitization meetings with key government ministries, private sector and CSOs so that they can embrace ESD and its components in their departments and to enhance their participation in ESD processes and**
- **leadership-Leanership training workshop, a forthcoming event**

# Leadership-Leadership Training Programme; Education for Sustainable Development

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## Goal

- The overall goal of the Leadership-Leadership training seminar is to develop a cadre of leaders who will promote and apply sustainable urban development in greater Nairobi and its environs.

## Objectives

- Enable participants to assess existing Leadership Skills and apply them to Sustainable Development
- To provide necessary knowledge, skills and tools to assist leaders in better defining and executing mission and strategy for Sustainable development in their respective work context.
- Develop effective approaches to current practices within the ESD model.
- To provide necessary skills, knowledge and techniques for Environmental Management

## Outputs

- SD leadership skills identified, participants receive detailed documentation of their results.
- Capacity for visionary leadership developed
- Knowledge, skills and tools for SD developed
- ESD leadership model (s) developed

# RCEGN & The Nairobi River Project

- The ministry of Environment and Mineral resources who is a partner of RCEGN has established a Programme of Action for the Rehabilitation and Restoration of the Nairobi River basin.
- About 56% of city residents who live in slum settlements encroach on the river reserve and have no sanitary facilities causing considerable pollution

## **The overall Programme objective:**

To rehabilitate, restore and manage the Nairobi River system in order to provide improved livelihoods, especially for the poor, enhance environmental quality and values through well regulated economic and recreational ventures

The RCEGN through NEMA a key partner in the project and who is also the country ESD co-ordinator will participate. The Universities in particular have been earmarked to carry out research on water quality and monitoring.

# Challenges facing RCE GN and ESD innovations

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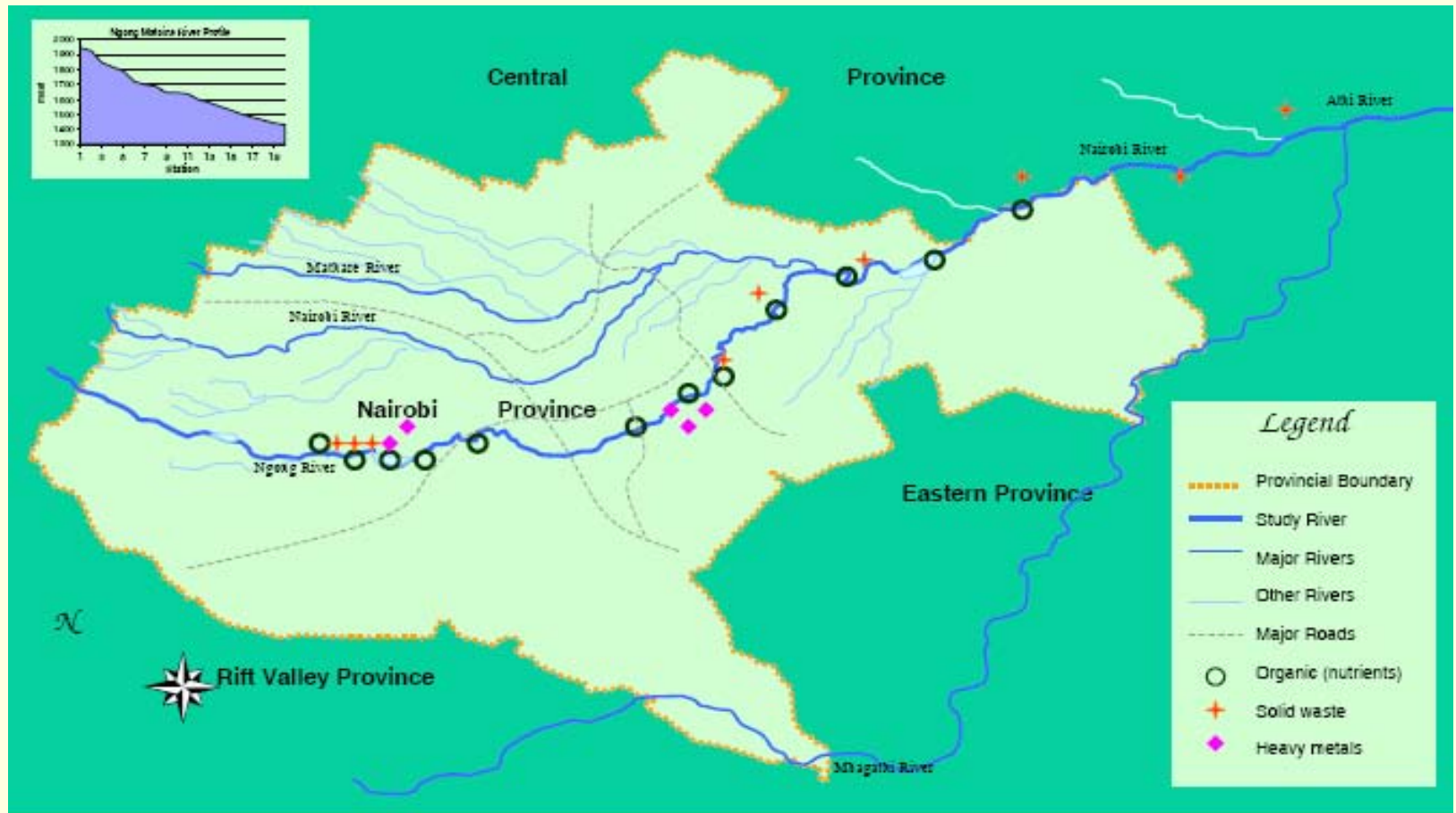
- **Shortage of Financial resources; i.e. RCE's Limited capacity;**
- **Human resource and institutional capacity**
- **Inadequate effective partnerships;**
- **Limited technology i.e. ICT**

# Continued.....

■ Nairobi city generates about 2,400 metric tons of solid waste every day and only half is collected and transported to the designated Dandora Waste disposal site while the rest remains as illegal “Dumps” haphazardly spread in the city. Most of the waste from these illegal dumpsites is swept into the Nairobi rivers during rainstorms. In addition, many factories indiscriminately discharge their effluent into the rivers without any regard to existing legislation and their impact to health and the environment.



# Overall River Pollution hotspots



# Nairobi River picture

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# RCEGN & Nairobi River Basin Programme of Action

| Intervention  | Actor  |
|---|--|
| <p><b>Creating awareness and assessing social impacts</b></p> <ul style="list-style-type: none"> <li>■ <b>Conduct a social impact assessment</b></li> <li><b>Awareness campaign targeting general public and special localities along Nairobi River</b></li> <li>■ <b>Use media and other publicity avenues to reach various target groups</b></li> <li>■ <b>Develop and implement an effective communication strategy</b></li> </ul> | <p><b>NEMA-RCEGN and universities</b></p>                                    |
| <p><b>Surveys and delineation of riparian reserve</b></p>   | <p><b>Universities would conduct household and institutional surveys</b></p> |

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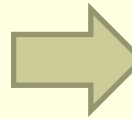
|   |   |
|---|---|
| <b>Relocating displaced economic activities and informal settlements</b>          | <b>Ministry of Environment, NEMA.</b>   |
| <b>Developing &amp; implementing integrated solid waste management system</b>     | <b>Universities by designing Integrated waste management systems</b>                  |
| <b>Rehabilitating Nairobi Dam</b>   | <b>Universities through clean ups and rehabilitation programmes</b>                   |
| <b>Developing master Plan for economic/aesthetic utilisation of riparian zone</b> | <b>Development of Plans for economic utilization of Riparian Zone by Universities</b> |
| <b>Landscaping and beautification of riparian zone</b>                            | <b>NEMA, MENR, RCE GN</b>   |
| <b>Programme co-ordination</b>  | <b>NEMA, RCEGN and Universities.</b>  |

# Professional growth and leadership in community Transformation

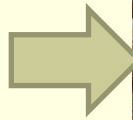
Teaching: Environmental Studies and Community Development at  
Kenyatta University

Founder: Kenya Organization for Environmental Education

- Practicing ESD through eco schools programme



- Environmental Sustainability Monitoring (SUSWATCH)



# Continued.....

- **Sustainable Environment and Community Development (SECODE)**



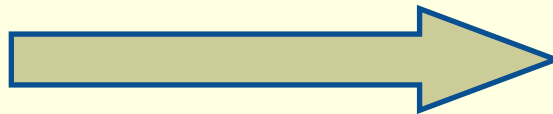
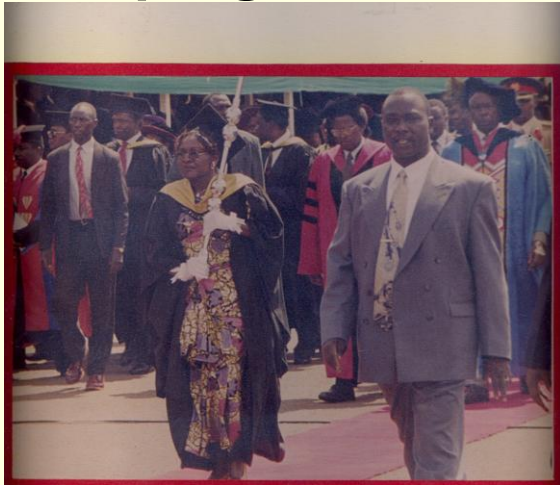
- Proposed Tunza Mazingira Foundation Borne out of my encounters with Business/Industrial Development - Establish Environmental Laboratory services and  
**Chairperson: National Environment Authority**
- Enforcement and Compliance of environmental regulations

**Rotary: Country Environment Chair**



# A journey of Individual professional growth and Participation in Local community Transformations

- Government learning institutions – the eco-schools programme borne out of my PHD studies



# Continued.....

- **Civil Society – Borne out of my Teaching at the University, Department of Environmental studies and Community development-Environmental Sustainability Monitoring, Sustainable Environment and Community Development**



# Continued.....

- **Private sector- Borne out of my encounters with Business/Industrial Development Challenges - Establish Environmental Laboratory services and Training**



# Conclusion and Way forward

- All over the world universities are expected to use their core functions of research, education and training to provide intellectual guidance towards global, national and local sustainable development agendas.
- They are expected to produce skilled and professional graduates who can address real societal needs and challenges of Sustainable Development.
- Universities should in this regard identify and connect the requirements for Sustainable development in the communities to the training that is provided to the students so that they can return to their local communities with new and relevant skills.
- In most cases current university programmes lack the relevancy to key sustainable development issues of focus.
- Environment is a key development challenge facing many countries, environmental issues are connected to risk and vulnerability, and are inseparable from people's individual, social and economic well being. It is therefore important to mainstream environment in all development strategies.
- Universities should actively participate in providing practical tools for integrating environment into sector strategies and plans. They have a role to demonstrate the linkages between environment and development, how environmental actions affect economic growth and the multiple dimensions of poverty and well-being. Ecological and socio-economic assessment of industries needs to be carried out, for instance to provide strategies and action plans that support cleaner industrial development.

# Thank You All.

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