

The UN Decade of Education for Sustainable Development

Action for a sustainable future – the role of African Universities



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What is Sustainability?

- “Sustainability is essentially about maintaining Earth's ecological and other biophysical life-support systems. If these systems decline, human population, well being and health will be jeopardized, Technology can buy time, but nature's bottom line accounting cannot be evaded. We must live within Earth's limits. The state of human population health is thus a central consideration in the transition towards sustainability”. McMichael AJ et al.(2000)



What is Sustainability?

- Many concepts
 - Brundtland Commission definition of Sustainable Development – “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (1987)
 - Essentially a vision for developing society in a more sustainable and just manner
 - Sustainability has also been defined in terms of environment, society and economy



Environment

- An awareness of the resources and the fragility of the physical environment and the effects on it of human activity and decisions, with a commitment to factoring environmental concerns into social and economic development.



Society

- An understanding of social institutions and their role in change and development, as well as the democratic and participatory systems which give opportunity for the expression of opinion, the selection of governments, the forging of consensus and the resolution of differences.



Economy

- A sensitivity to the limits and potential of economic growth and their impact on society and the environment, with a commitment to assess personal and societal levels of consumption out of concern for the environment and for social justice.



Why has sustainability become an issue?

- Climate Change is real
- Loss of ecosystem services
- Threats to food security, water etc
- Deforestation
- Loss of Biodiversity
- Land and water degradation etc



Some Data

- Everyday 50 plant species become extinct. Plants hold the key to finding cures for many diseases. Therefore each lost species not only causes irreparable damage to the ecosystem, but is also a lost opportunity for our future development. (Youth Xchange 2002)
- It is estimated that if the world were to consume like the developed world, we would need the equivalent of 4 extra earths (Youth Xchange 2002)



Data

- At the moment, estimates show that our planet is losing an area of fertile land about the size of Ireland every year as a result of overgrazing and deforestation. (Youth Xchange 2002)
- The world's 20% richest people consume nearly 75% of the planets natural resources.



UNEP Africa Atlas 2008

- Deforestation rate in Africa is higher than in any continent reducing the estimated forested area (over one-fifth of Africa's 30million kilometers of land).

Africa

- Africa is vulnerable to climate change and computer models project major changes in precipitation patterns on the continent. This could lead to food shortages and increased desert. Climate change is emerging as a driving force behind many of these problems and is likely to intensify the already dramatic transformations taking place across the Africa.



Africa

- Although Africa produces only four per cent of the world's total carbon dioxide emissions, its inhabitants are poised to suffer disproportionately from the consequences of global climate change. Africa's capacity to adapt to climate change is relatively low, with projected costs estimated to reach at least 5-10 per cent of GDP.



WBR - 2008

- The report warns that developing countries stand to suffer the most from climate change and the degradation of natural resources.
- To build on hard-won gains, developing countries need support to address the links between growth, development and environmental sustainability.



The latest UNEP's Report on Africa

- Africa as a continent is currently facing many environmental problems; the key one's being: deforestation, land degradation, threats to biodiversity, over fishing/ coastal degradation, water scarcity, desertification, pollution, poaching and mining.



Africa's Report

- The New Partnership for Africa's Development (NEPAD) announced that, “Africa remains the poorest continent despite being one of the most richly endowed regions of the world” (NEPAD, 2001)



Calls for New Directions

- Silent springs – Rachel Carson
- UN conference on Human Environment – Stockholm, IMF, World Trade Organizations
- World Bank
- Our Common future - Brundtland Commission 1987
- Rio Earth Summit, MDG
- Principles of Environmental Justice
- Earth Charter, NGO Forum
- Caring for the earth
- World Summit on Sustainable Development



Sustainability is *Possible*



The Decade of Education for Sustainable Development

- In 2002, as a follow up to WSSD recommendation, the United Nations General Assembly adopted Resolution 57/254 designating the period 2005-2015 as the UN-DESD.
- The overall goal of the DESD is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning.



Main objective of DESD

- The overall goal of the DESD is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning.
 - facilitate networking, linkages, exchange and interaction among stakeholders
 - foster an increased quality of teaching and learning in ESD
 - help countries make progress towards and attain the millennium development goals
 - provide countries with new opportunities to incorporate ESD into education reform efforts.



Vision of DESD

- The basic vision of the DESD is a world where everyone has the opportunity to benefit from education and learn the values, behaviour and lifestyles required for a sustainable future and positive societal transformation.
- ESD is a life-wide and lifelong endeavour which challenges individuals, institutions and societies to view tomorrow as a day that belongs to all of us, or it will not belong to anyone . (UNESCO, DESD)

Underlying Values



- Respect for dignity and human rights of all people throughout the world and a commitment to social and economic justice for all;
- Respect for the human rights of future generations and a commitment to intergenerational responsibility;
- Respect and care for the greater community of life in all its diversity which involves the protection and restoration of Earth's ecosystems;
- Respect for cultural diversity and a commitment to build locally and globally a culture of tolerance, non-violence and peace



Opportunities

- These underlying values offers a global platform for dealing with fundamental issues of environmental degradation, excessive consumption and production, economic, political and social injustice, debt burden, market access, technology transfer, good governance health challenges i.e. HIV/Aids, malaria and others





Did you Know?

- Africa is a RICH continent and not poor
- Africa accounts for one-fifth of earth's total land area. It is regarded as the site where the human race originated. Over time Africa population has accelerated rapidly and in 2007 it was home for more than 965 million people.
- Africa is rich in natural resources i.e. complex minerals, oil and gas deposits, flora and fauna, unspoiled natural habitat, which provide the basis for mining, agriculture, tourism and industrial development.

Africa's wealth

- The rivers of Africa have high power potential (Congo River alone , 40,000MW)
- Africa has the highest potential for nature based tourism
- The most important resource in Africa - the people
- Undoubtedly Africa is the continent to look out for in this 21st century



The Good News is ...

- Universities have the opportunity through ESD to take use Africa's wealth to reduce these complex issues to simple attainable steps
- Universities in Africa have the opportunity to challenge themselves to targeted productivity – to bring the African countries out of the darkness of wars, corruption, dependency and stagnation



This Means a New Role for African Universities



- more environmentally, socially, and economically relevant and accountable
- re-defining the nature of teaching and community, govt and private sector engagement/outreach
- establishing themselves as knowledge generators and disseminators that address African realities and development needs
- Inspiration and support for students ideas and innovation
- develop new knowledge in response to contemporary and future challenges in society



University programmes will have to be targeted to addressing Africa's needs

- Poverty alleviation , environment and sustainable development
- Mainstreaming of gender issues
- Strengthening the use of ICTs in universities
- Adding value to our resources
- Achieving the Science and Technology enhancement goals of the African Union's renewal programme for Higher Education in Africa, and the goals of building professional capacity in universities
- contributing to the plan of action for the 2nd Decade on Education in Africa, NEPAD etc



Why

- Graduates from higher education institutions (HEI) provide major workforce for primary/secondary schools, government departments, industry etc
- They are also vital in influencing, formulating, and implementing policies, guidelines, and management strategies in all fields.
- Therefore HEI are key players in growing the kind of populace that will move Africa towards sustainable development.
- It is cheaper to train for sustainability than to remediate unsustainability

The need for sustainability education in Africa



- *[i]t is doubtful that any developing country could make significant progress toward achieving the Millennium Development Goals (MDGs) without a strong tertiary education system ... Improved tertiary education is necessary for sustainable progress in basic education (and for sustainable development) (World Bank, 2002, pp. xx & xxii).*

African Universities must reinvent themselves

- *A people's progress, values, lifestyles, environment and governance structure is as good as their education!*
- *We choose the world that we live in...we create it (M.Ward)*



Kenya's situation (an example)

The founding fathers had a vision for the nation:

O God of all creation,
Bless this our land and nation,
Justice be our shield and defender,
May we dwell in unity,
Peace and liberty,
Plenty be found within our borders.

National Anthem, 1st Stanza



To build the nation, the national anthem reflects principles they set:

- | | | |
|--|--------------------|--|
| <ul style="list-style-type: none">• Justice• Unity• Peace• Liberty• Service• Labour | AND
NOT | <ul style="list-style-type: none">• injustice• disunity• War• suppression• disservice• idleness |
|--|--------------------|--|

- The fathers recognised God's creation (nature, our environment),
- and prayed for **plenty** and **equity for all**.



Action for a sustainable future

Set foundations for Kenya's Vision 2030:

- macroeconomic stability;
- continuity in governance reforms;
- enhanced equity and wealth creation opportunities for the poor;
- infrastructure;
- energy;
- science, technology and innovation;
- land reform;
- human resources development;
- security;
- public sector reforms





- How much of these values do we see today?
- How prepared are we to respond to the environmental challenges of our time in particular Climate change?



Concrete action we can take

- A long term vision and action plan
- Political Will
- Learning to serve and learning to lead only thorough service
- Making the right choices based on true reverence & respect for human life and our environment



As Educators

- adequately prepare the population to cope with challenges brought on by globalization.
- promote good governance and a well articulated national philosophy/ideology and strategy
- empower students to become critical/reflective citizens with the ability to evaluate situations and make informed decisions divorced from tribal/religious/political influences



As Educators

- Schools should become good examples of healthy environments, participatory and action learning
- Address issues of cultural values and indigenous knowledge.
- Education of the girl child should be promoted but the male should not be neglected.
- Deliver training programmes for all levels of society as well as develop methodologies and learning materials.



Action

- Explore opportunities to develop ESD programmes ie e-learning, ICT infrastructure and training
- Research to generate and circulate new knowledge and methods to promote sustainable development.
- Addressing environment and sustainability concerns will require multi-disciplinary, interdisciplinary, cross-disciplinary, trans-disciplinary and integrated responses

Individual practical steps...

Use Compact Fluorescent Bulbs

Replace 3 frequently used light bulbs with compact fluorescent bulbs. Save 300 lbs. of carbon dioxide and \$60 per year.



Inflate Your Tires

Keep the tires on your car adequately inflated. Check them monthly. Save 250 lbs. of carbon dioxide and \$840 per year.



Use Recycled Paper

Make sure your printer paper is 100% post consumer recycled paper. Save 5 lbs. of carbon dioxide per ream of paper.



Check Your Water heater

Keep your water heater thermostat no higher than 120°F. Save 550 lbs. of carbon dioxide and \$30 per year.



Individual practical steps...



Take Shorter Showers

Showers account for 2/3 of all water heating costs. Save 350 lbs. of carbon dioxide and \$99 per year.



Be a Meat Reducer

Eliminating meat and dairy intake one day a week can make a big difference.

Buy Products Locally

Buy locally and reduce the amount of energy required to drive your products to your store.



Buy Minimally Packaged Goods

Less packaging could reduce your garbage by about 10%. Save 1,200 pounds of carbon dioxide and \$1,000 per year.



Individual practical steps...



Buy a Fuel Efficient Car

Getting a few extra miles per gallon makes a big difference. Save thousands of lbs. of CO₂ and a lot of money per year.

Carpool When You Can

Own a big vehicle? Carpooling with friends and co-workers saves fuel. Save 790 lbs. of carbon dioxide and hundreds of dollars per year.

Don't Idle in Your Car

Idling wastes money and gas, and generates pollution and global warming causing emissions. Except when in traffic, turn your engine off if you must wait for more than 30 seconds.



Individual practical steps...



Buy Organic Food

The chemicals used in modern agriculture pollute the water supply, and require energy to produce



Bring Cloth Bags to the Market

Using your own cloth bag instead of plastic or paper bags reduces waste and requires no additional energy.



Turn off Your Computer

Shut off your computer when not in use, and save 200 lbs

of CO₂. Conserve energy by using your computer's "sleep mode" instead of a screensaver.



Ditch the Plastic

2.5 million individual plastic water bottles are thrown away every hour in the US. Start using a reusable water

bottle and just say no to plastic!



Individual practical steps



Reduce Garbage

Buy products with less packaging and recycle paper, plastic and glass. Save 1,000 lbs. of carbon dioxide



Plant a Tree

Trees suck up carbon dioxide and make clean air for us to breathe. Save 2,000 lbs. of carbon di



Put on a Sweater

Instead of turning up the heat in your home wear more clothes Save 1,000 lbs. of carbon dioxide and \$250 per year.



The Challenge



- Universities can indeed contribute to the transformation of Africa.
- Universities can indeed contribute to the achievement of the MDG's.
- Universities can indeed contribute to the creation of wealth in Africa.
- Universities can indeed contribute to agricultural growth, trade etc.
- Universities can indeed contribute to good governance and the eradication of corruption.



A Call for

- **1. Innovation in learning and research**
- **2. Skills development**
- **3. Pedagogical change**
- **4. Curriculum review**
- **5. Staff and infrastructural development**
- **6. Network development at national, sub-regional, regional and global level**
- **7. Change initiatives at every level**

UNEP's response

Through MESA, launch a participatory, deliberative process to re-orient education towards sustainability in African universities

MESA Objective



enhance the quality and policy relevance of university education in Africa in the context of sustainable development and achievement of the Millennium Development Goals



Achievement of this objective will contribute towards

- building capacity to build capacity to promote environmental governance and influence national policy (August Temu, 2008)
- reversing negative environmental trends
- maximizing sustainable development opportunities
- enhancing Africa's preparedness for climate change
- revitalizing the Higher Education system in Africa for the 21st Century



This is the possibility generation

- We have a chance to raise a generation of agents for positive change in our educational institutions.
- We have a chance to transform our learning and teaching techniques to be more action oriented.
- We have a chance to integrate value education into our learning processes.
- We have a chance to build educational institutions that speak, that breeds and demonstrates innovations and knowledge for the challenges faced by society

Challenges and Opportunities

- We have a chance to integrate a high sense of responsibility towards the results/outcomes of our actions.
- We have a chance to integrate the bigger picture into our educational processes so that people can make informed choices.
- Every action for the future must be accompanied by commitment and passion for change.



We can be the Possibility Generation ...

- Africa is an opportunity to end poverty for ever and ever.
- Africa is an opportunity to hold back the desert.
- Africa is an opportunity to have clean running streams.
- African is an opportunity for good governance.
- Africa is an opportunity for technological advancement, innovation and creativity.
- Project Africa is doable.



The Return to Freedom

- We know the truth
- It is right inside of us
- We see it in the face of the destitute and hungry children
- It is time we started talking to ourselves,
- In our schools, universities, work places and leadership circles
- That Africa is what it is because of the decisions and choices we have made
- And that we could do and be better than this!



- It is time to rise up
- It is time to sharpen our understanding
- It is time to be creative and be innovative

When we loose ourselves, it takes ourselves to find what we are looking for

- Africa must stop and change direction
 - Education is meaningless without responsibility
 - Freedom is meaningless without responsibility
- for the way we **use** resources, for the future and for the way we treat and regard each other.

Achieving a sustainable future for Africa will involve moving ...

- From obscurity
- From Dependency
- From weakness
- From despair
- From powerlessness
- From a loser/victim
- From Debtor/borrower
- From Conflict
- From Poverty
- To prominence
- To Freedom
- To power
- To hope
- To might
- To a winner/victor
- To creditor/ lender
- To Peace
- To Wealth



- Through transformative learning processes, good and responsible governance *and* bold purposeful steps
- It is not about becoming “developed”
- Final test: Number of people brought out of poverty, lives improved, value generated in a climate-friendly way



Your Earth or Mine?

- Starting Point:

Equal access to
global/regional/national/community
environmental resources - the basis of
human equity

“Until now man has fought nature. From now
on he will fight his own nature. *Niels
Roling, 2002*



- The present times may look like Africa's darkest hours but then, our greatest growth and achievements usually occur in our darkest moments
- The journey to a sustainable future has already begun.....



Little Steps, Giant Steps

- For now it is many little steps and giant steps, by many little people and company of people in many little places and multiple of places
- But tomorrow.....
- it will all come together
- Because.....



We never fail...
until we take our eyes off the
vision

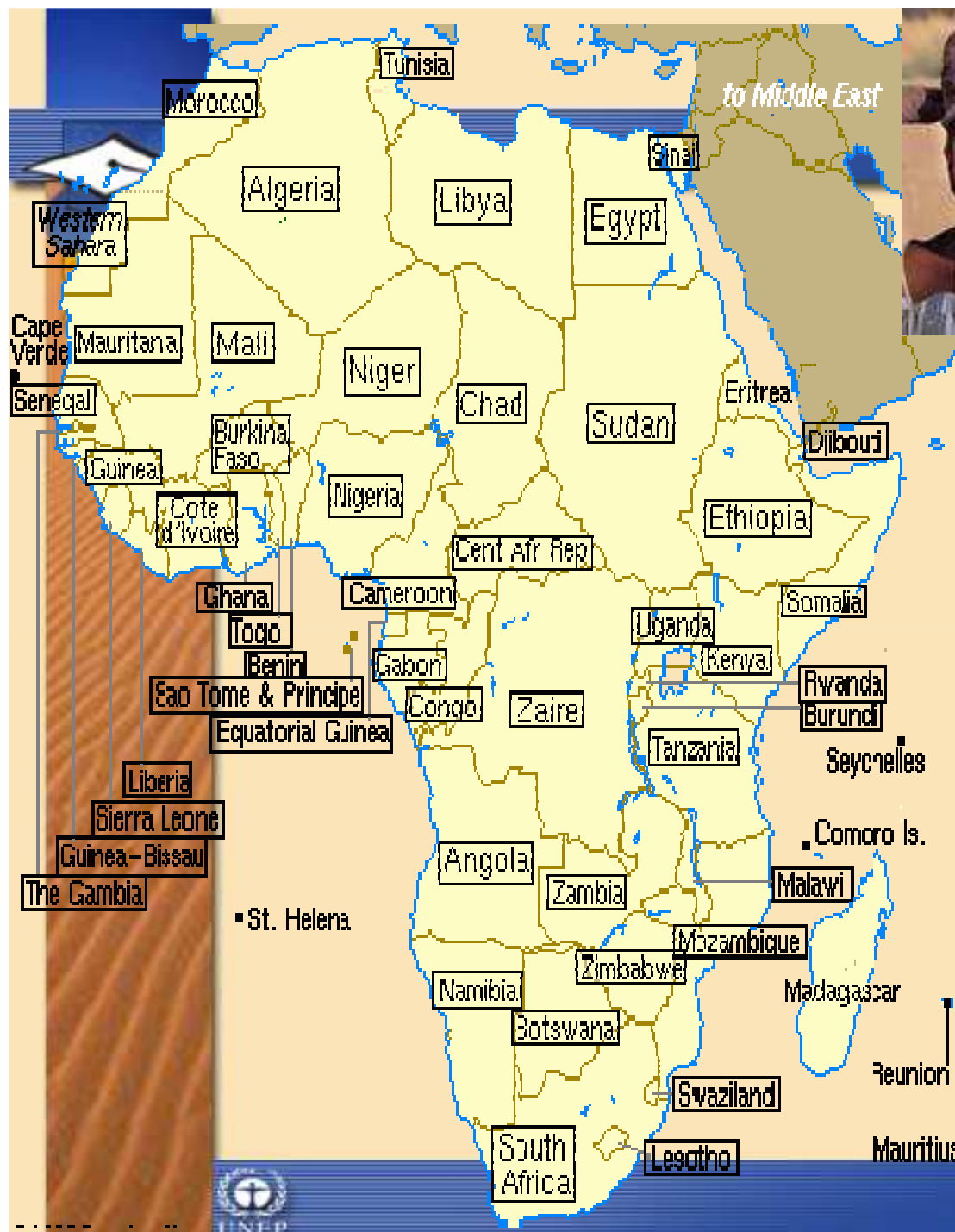
Vision of Strathmore University

Strathmore University shall be a centre of academic and professional excellence that provides all-round education in an atmosphere of freedom and responsibility.





- If every student of this university leaves this campus with professional excellence and that sense of responsibility towards the environment, people, the present and future we would be on our way to a sustainable future for Kenya, Africa and the rest of the world because



You are
Africa.....

The People
Whose Time
Has Come



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Thank You !

