

# SUSTAINABILITY COMPLIANCE IN HIGER EDUCATION IN NIGERIA

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# **SUSTAINABILITY COMPLIANCE IN HIGER EDUCATION IN NIGERIA**

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## **ABSTRACT**

Education for Sustainable Development (ESD) simply described, is the provision of education at all levels from a sustainability standpoint. Sustainable development (SD) has been defined severally to include concern for the environment; acknowledgement of climate change and its implications; equity and justice; poverty reduction; pro-poor land tenure systems; gender inequality and other topical issues. Agenda 21 recognizes education in all its forms (including public awareness and training) as an essential means for achieving progress towards sustainable development which will foster the implementation of all chapters of the Agenda. Education is no longer seen as an end in itself but rather as a key instrument for bringing about the changes in knowledge, values, behaviour and lifestyles required to achieve sustainability. One area of growing concern in the higher education sector in Nigeria, and in the Rivers State University of Science and Technology in particular, is the question of how to deliver SD compliant education to a teeming student population in over 30 disciplines, before the end of the decade on sustainable development (DESD) 2005 - 2014. The paper outlines a series of SD compliant activities in RSUST; the progress to date and our long-term goals for achieving total SD compliance in curriculum, instruction and campus management.

## **1. INTRODUCTION**

This paper describes RSUST activities in education for sustainable development (ESD). It sets out RSUST initiatives in the reform of formal education and workforce development. ESD is recognised internationally as an important contributor to a more equitable and sustainable society. Based on the Plan of Implementation agreed on at the World Summit on Sustainable Development held in Johannesburg 2002, the United Nations has declared the period 2005– 2014 as the Decade of Education for Sustainable Development. African Universities now have a collective responsibility to lead education reforms where the links between environmental, social and economic dimensions of life are given special attention and where democracy and equity are mainstreamed throughout the education system. With the many sustainable development issues facing countries today, formal education systems need to respond by including these issues into policy, strategy, curricula, teacher training and materials development. There is a widening understanding that sustainable development is about much more than concern for the environment. What is needed is for connections to be made between learning and regeneration initiatives, and the total integration of the understanding and knowledge that will lead to sustainable development. A number of initiatives around the world are supporting the integration of sustainability issues into the teaching, research, community engagement and management programmes of Universities internationally.

### **1.1 RSUST Profile**

The Rivers State University of Science and Technology, Port Harcourt, the first Technological University in Nigeria was established in 1980 by the Government of Rivers

State from the then Rivers State College of Science and Technology which was established in 1972. The vision of the founders was to establish a world class, unique and uncommon university that will be structurally and philosophically oriented to solve the practical and peculiar challenging problems of the region. RSUST seeks to offer men and women a unique educational opportunity and experience for the pursuit of learning in the relevant branches of knowledge.

To this end, the institution seeks to:

- Encourage and promote excellence in original, creative and scholarly research (basic and applied) in fostering a learning process with problem solving content;
- Support and sustain the expansion of the frontiers of human knowledge in the various disciplines, responding especially to the contemporary scientific and technical demands and challenges of the society; and
- Improve the appreciation and development of the region's abundant physical, natural and social resources, as well as advancement of her rich cultural heritage through an approach and strategy anchored on excellence and creativity.

Its motto, Excellence and Creativity, is demonstrated through the seven Faculties, five Institutes, and a Post graduate school. The University has staff strength of 3,000 and a student population of approximately 20,000 people in both regular, part-time and sandwich programmes.

## **2. EDUCATION FOR SUSTAINABLE DEVELOPMENT**

The United Nations Decade on Education for Sustainable Development (UNDESD) 2005 to 2014 urges societies to re-orient their educational systems towards sustainability. The overall goal is to integrate the principles, values and practices of sustainable development into all aspects of learning which will encourage change in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability and a just society for present and future generations. (UNESCO, 2005).

ESD introduces a focus on values and ethics and opens new challenges for multi-disciplinary and interdisciplinary dialogue – teaching and research and African Ministers of Education have committed themselves to implementing the goals of ESD in national strategic action plans. The Rivers State Sustainable Development Agency (RSSDA) established in 2007, is a strategic initiative of the Rivers State government of Nigeria designed to coalesce and harmonize the efforts of supportive foreign Governments, international development agencies. It is an intervention programme that is designed to create opportunities for the rural communities with a view to improving the quality of life of Rivers State indigenes. However, ESD in higher institutions is not described as one RSSDA's key objectives thus creating a vacuum which RSUST is proposes to fill.

A recap of the millennium development goals sets the context of this paper.

## **3. MILLENIUM DEVELOPMENT GOALS (MDGs)**

In September 2000, at the United Nations (UN) Millennium Summit, world leaders agreed to a set of time bound and measurable goals and targets placed at the heart of the global agenda now called the Millennium Development Goals (MDGs). They are:

1. Eradicate Extreme Poverty and Hunger
2. Achieve Universal Primary Education
3. Promote Gender Equality and Empower Women
4. Reduce Child Mortality
5. Improve Maternal Health
6. Combat HIV/AIDS, Malaria and Other Diseases
7. Ensure Environmental Sustainability, and
8. Develop Global Partnership for Development

RSUST is currently focussing on important aspects of MDG 7 and MDG 8 in most of her ESD initiatives. A more detailed explanation of these two key goals and how RSUST is mainstreaming them forms the crux of this paper. Certain concrete examples and milestones are also outlined.

### **3.1 MDG 7 - Ensuring Environmental Sustainability:**

The main objectives of this goal are to:

1. Integrate the principles of sustainable development into country policies and programmes, reverse loss of environmental resources.
2. Reduce by half the proportion of people without sustainable access to safe drinking water
3. Achieve significant improvement in the lives of at least 100 million slum dwellers by 2020.

In a collaborative partnership with the United Nations Environment Programme - Global Programme of Action for the Protection of the Marine Environment from Land-based Activities UNEP-GPA, RSUST is involved in capacity building on Improving Municipal Wastewater Management in Coastal cities in Nigeria. This course specifically addresses issues of environmental degradation and access to safe drinking water. It is described in more detail in section 4.4. Also, an innovative campus greening project is currently being undertaken involving staff and students and which in addition, provides part-time employment for students, is discussed further in section 7 below.

### **3.2 MDG 8 - Development of Global partnerships for Development**

According to MDG 8, there is an urgent need to develop global partnerships in a number of specific issues such as to:

1. Develop further an open trading and financial system that is rule-based, predictable and non-discriminatory. Includes a commitment to good governance, development and poverty reduction – nationally and internationally
2. Address the least developed countries' special needs.
3. Address the special needs of landlocked and Small Island developing States.
4. Deal comprehensively with developing countries' debt problems through national and international measures to make debt sustainable in the long term
5. In cooperation with the developing countries, develop decent and productive work for youth
6. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries
7. In cooperation with the private sector, make available the benefits of new technologies – especially information and communications technologies.

Under MDG 8, RSUST has established international partnerships with local agencies as well as renowned international agencies such currently on the path toward running a fully electronic based university – see section 5 below.

#### **4. RSUST CAPACITY BUILDING INITIATIVES IN ESD**

##### **4.1 International Training Programmes (ITP)**

In a collaborative venture involving The Swedish International Development Cooperation Agency (SIDA), Rambol Natura, UNEP, UNESCO, the Association of African Universities and other partners including Obafemi Awolowo University, Ife Nigeria, and RSUST staff participated in an Advanced International Training Programmes on Education for Sustainable Development in African Universities. The programme seeks to support creative thinking and the development of change projects in the field of ESD in higher education in Africa such as innovations in teaching, research, community engagement or university policy and management. It builds on and takes forward the work of the Mainstreaming Environment and Sustainable Development in African Universities (MESA) Partnership Project. The main objective of the training was to provide an opportunity to exchange knowledge and experiences in ESD in the higher education sector with an expected outcome of a deeper understanding of the environmental, social-cultural and economic dynamics of sustainable development. It was also, to enhance the teaching, learning, research, community involvement and management of higher education institutions with regard to ESD.

It was built around a change project conceptualised by each participant in consultation with his/her institution. Team work on establishing an ESD innovation was encouraged from the start. The purpose of the change project was to enable participants link the learning from the programme to their work context and institutional priorities. In the dialogue between the participants, their home institution and the programme coordinators, participants deepened their understanding of the different dimensions of ESD, learned to adapt experiences to the specific conditions in their university or higher education organisation. In order to ensure that the impact of the programme is sustained beyond the individual and beyond the training and exchange opportunity offered by the programme, the outcome of this project for RSUST was the need to develop a Lifelong Learning Centre for Sustainable Development.

##### **4.2 Proposed Lifelong Learning Centre for Sustainable Development**

A gap currently exists in the Government's long-term aims in Education for Sustainable Development, and in particular, for achieving the key objectives of the United Nations Decade of ESD which will run from 2005 to 2014. Universities have an important part to play, too, not only in creating research bases to inform future planning and skills development, but also as prestigious examples of sustainable development in practice and as major contributors to local strategic partnerships. RSUST is poised to fill in this gap in a number of areas. As a major stake holder, Nigeria's premier University of Science and Technology can fill in this gap through life-long learning initiatives targeted at teachers, lecturers; school leaders at all levels, professionals, civil servants and those being trained and prepared for leadership roles so that they are able to integrate sustainable development into all aspects of their training; leadership and management of schools and public infrastructure.

This lifelong learning initiative will also be extended to integrate sustainability competencies into the standards of various professional accreditation schemes and professional bodies will

be encouraged to integrate the development of sustainability competencies for existing as well as new registrants through their Continuing Professional Development. Such a centre would assess the learning needs of wider society (public and private sectors) in the area of sustainable development and design capacity building programmes which address these need and which are tailored to suit young and adult learners alike.

However, Current institutional priorities in terms of financial resources are focussed on the provision of high quality; world class and flexible learning options for undergraduate and postgraduate study for the teeming population of Rivers State and its educational catchment areas. There are currently no existing links to sustainable education and lifelong learning and there are challenges ranging from lack of dedicated infrastructure and the need for additional capacity building for those who would pilot this initiative. Lack of initial take-off funding is also a challenge but if provided, the programme should become self sustaining within a short while.

#### **4.3 Mainstreaming Environment and Sustainability Workshops**

As part of RSUST's commitment to ESD, an institutional ESD awareness workshop was held on the 3<sup>rd</sup> of April 2008, at the University Amphi-Theatre. The workshop formed part of the broader Swedish/Africa Capacity Building Programmes on ESD, the United Nations Environmental Programme - 'Education for Sustainable Development Innovations Programmes for Universities in Africa' and the UNEP initiative which aims provides resources for Mainstreaming Environment and Sustainability into African Universities.

RSUST is currently preparing to organize and sponsor a one-day institutional workshop on 'Mainstreaming Environment and Sustainability in Higher Education in Rivers State'. The workshop which is directed at Principal Officers, Deans, Directors of Institutes and Heads of Departments in higher institutions in Rivers State, is scheduled to take place on the 30<sup>th</sup> of April, 2009 in RSUST, Port Harcourt. During the workshop, the RSUST MESA implementation Strategy will be launched.

#### **4.4 Collaborative Capacity Building in Waste Water Management**

The United Nations Environment Programme Global Programme for Action for the Protection of the Marine Environment from Land-based Activities (UNEP/GPA), with its global mandate to reduce land-based sources of marine pollution is concentrating efforts to assist governments and municipalities to address pollution from untreated wastewater through capacity building. The UNESCO-IHE Institute for Water Education and the UNEP/GPA Coordination Office, jointly forming the Train-Sea-Coast GPA Centre, offers a 5-day intensive training course "Improving Municipal Wastewater Management in Coastal Cities" in African, Caribbean and Pacific (ACP) countries.

With support from the UNEP/GPA Co-ordination Office in Geneva, through funding from UNDP/GEF and the European Union (EU) Water Facility for African, Caribbean and Pacific Countries, RSUST has provided logistics support for the delivery of this course in four states in Nigeria. Six additional courses are planned before the end of 2009.

### **5. RSUST GLOBAL PARTNERSHIPS IN E-LEARNING**

In order to actualise its motto, the present Management has embarked on massive enhancement of the e-Capacity of the University through its Information Communication Technology (ICT) Master Plan launched 13 November 2008. The University now has a

campus-wide access to global information infrastructure, foremost e-library in the country and has computerised its key processes. RSUST has established a number of partnerships with local and foreign partners such as CISCO, Intel and Microsoft. RSUST is also certified to run both CISCO, Intel and Microsoft Academies and is currently the only School in Nigeria on Microsoft Live, giving provision for every staff and student to have mailing address with the domain extension as (@ust.edu.ng).

### **5.1 RSUST Information and Communications Technology (ICT) – Master Plan**

It is now mandatory that all students of the university must complete a compulsory ICT and Digital Lifestyle training course starting from the 2008/2009 academic session as part of the graduation requirements. By this provision, graduation from the university in any course of study requires this ICT Certification which is given by the university and endorsed by Microsoft. Enrolment for this training course has already commenced at the RSUST ICT Centre.

The RSUST ICT-plan is working successfully and all students can now check and download their results online. RSUST is also partnering with the banking industry and other agencies to promote ICT literacy. Recently, Oceanic Bank Plc partnered with the university aiding and Laptops were given to the best performing 2008 first year students in the 7 Faculties. This move was to challenge the incoming students to strive for mastery in their chosen career pathways.

## **6. RSUST MESA IMPLEMENTATION STRATEGY**

RSUST intends to achieve ESD compliance within the decade (DESD). With less than six years towards the end of the DESD a systematic strategy for mainstreaming ESD in curriculum and instruction as well as campus management is proposed which will take place in phases as outlined below.

**Phase 1 (2008-2009):** During this phase, the primary focus would be to create and intensify ESD awareness on campus through workshops, seminars and fliers. The introduction of an innovative campus greening project that is driven by staff and students and the formal launching of the RSUST ESD Strategy

**Phase 2 (2009-2010):** Curriculum review will occur across all departments with the intention of mainstreaming of SD and climate change concepts into existing subjects or by the introduction of new courses. The drive towards a sustainable campus management system that is eco-friendly and also one that seeks to address alleviate student poverty through the creation of part-time on-campus employment will also be pursued.

**Phase 3 (2010-2011):** Implementation of the goals set in phases 1 and 2 through formal and e-learning instruction.

Currently, teaching curricula in several departments are already undergoing mainstreaming of environment, climate change and sustainability. In the area of ICT, lecturers in the some departments have in a rather informal way applied up-to-date technology in the teaching of their subjects. For example, in the department of Estate management, certain subjects like valuation and investment appraisal are now taught through the use of computer software. In courses in like project management and property management, more emphasis is now given

to environmental degradation and climate change. Also, courses in land management and housing policy now address issues of gender equality, pro-poor approaches to land acquisition and poverty while courses in property maintenance courses now address global warming, climate change and the need for energy conservation. Thus updating the content of individual subjects in the light of the MDGs is an innovative approach which RSUST intends to g courses. These additions to existing subjects and in a way addressing various aspects of the MDGs and will indeed form part of the formal curriculum review when RSUST launches its ESD strategy.

## **7. RSUST ECO-CAMPUS PROJECT**

### **Campus Greening**

The University campus is currently going through a phase of major renovations and construction activity which will be followed by a major campus greening and beautification initiative. The goal is to further beautify the transformed university campus into an eco – friendly campus environment which would ultimately improve the well being of the entire university community and comply with the practical expectations of sustainable development. According to Kakulu (2008) with increased global awareness on the environment and national/international dialogue on climate change and sustainable development, there is an urgent need for a shift in paradigm within the field of environmental sciences. This shift would be based on an orientation that is fuelled by the tenets of environment, climate change and sustainable development. The implementation of this paradigm shift would result in curricula review in all core environmental sciences disciplines in order mainstream environment, climate change and sustainable development into teaching and research which requires capacity building at all levels.

A practical example in RSUST is where as part of the activities marking the Estate Management Students Association (EMSA) week; a mini-landscaping project was undertaken around the departmental premises. Flowers and ornamental trees were planted and tended voluntarily by students and interested academic and non-academic staff of the department. The students took ownership of this project, restraining each other from trespassing even during the heated spate of construction activities on campus in 2008, where workmen were restrained from causing any damage to the flowers. Today, the goal of beautification has been achieved and students of the department have made an entry for the Sustainability Generation Workshop to be held in Nairobi in April, 2009. The department of Estate Management proposes to extend this initiative to other departments and faculties and has the support of the management. RSUST proposes an innovative approach to achieving an eco-campus that would be undertaken through a staff/student collaboration driven by the university administration. This project commenced in December 2008 with a photographic mapping of the campus landscape and will be executed in a number of phases taking advantage of the seasons. The main implementers of this project will be RSUST students with under staff supervision and through funding from the University and other donor agencies.

## **8. CONCLUSION**

RSUST is committed to achieving sustainability compliance before the end of the DESD. In order to actualize this goal, RSUST will require collective effort on the part of all the stakeholders. The present management has an onerous task to create awareness and win the cooperation and support of the Government, donor agencies, the university community as a whole well as wider society. Their perceptions and understanding of the expectations of the

millennium development goals will have to be enriched through capacity building and lifelong learning initiatives.

According to Fakae (2008), University leaders ought to respond to the issues of climate change, environment and sustainable development as follows:

- Through active participation in the ongoing debate,
- By encouraging institutional research in the area
- Through implementation of virile sustainability policies.

Since most universities exist as communities of their own, one practical way of ensuring the full understanding of sustainability is to engage staff and students in critical sustainability agenda on campus within the context of their academic and professional calling. It is this on-campus involvement that may result in all students having knowledge, skills and values to lead society down a more sustainable path. Educating the leadership of our universities on environment and sustainability issues has become an imperative, because even if a government does not have a sustainable development action plan for education and skills as a policy for its institutions of higher learning, practitioners who operate within the community of higher education ought to bring to bear the concept of sustainability as a local content of their various curricula, if they have embraced the concept (Fakae, 2008).

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