



SUMMARY OF THE WORLD STUDENT SUMMIT FOR SUSTAINABILITY 2012 (S3 - 2012)

held at Multimedia University College & University of Nairobi, Kenya from 12th - 17th November 2012.

Theme: Student Leadership and Innovation towards a Green Economy

The World Student Summit for Sustainability 2012 (S3 2012) was organized by the World Student Community for Sustainable Development (WSCSD) in partnership with the University of Nairobi, UNEP's Environmental Education and Training Unit and the Office of the Prime Minister through the Greening Kenya Initiative. The summit included parallel workshops on Energy, Waste, Water, Food and Transport; a special workshop on green entrepreneurship; field trip to Kibera slums; and visit to Nyakongo village in Nyando District, which is to be converted into a Sustainable Village through collaborations with students groups and other interested partners. The participants included over 140 students from 20 different nationalities and drawn from various academic backgrounds; government officials and experts from various fields and organizations.

Prior to the summit, the secretariat conceptualized and initiated the *Greening Universities Initiative (GreeningU)* creating avenues for advancing the Green Economy and general Sustainability discourse at the Kenyan university and individual student levels.

Key Statements

Informal Working Session

- **Mahesh Pradhan, Head, Environmental Education and Training Unit (EETU), UNEP.** Environmental education and training should be a continuous process of generating, synthesizing, disseminating and sharing relevant knowledge and the development of skills and technologies that promote positive attitudes, sustainable lifestyles and values.
- **Ms. Betty Nzioka, representing the Director General, National Environmental Management Authority (NEMA),** confirmed that NEMA is committed to working with all stakeholders in the implementation of Kenya's Education for Sustainable Development Policy as a contribution to ensuring a clean and safe environment for all.
- **Prof. Thomas Anderson.** He pointed out limited access to funding and lack of recognition of students as authentic partners for sustainable development as some of the key barriers to student engagement in sustainability projects. To counter this, he called on the summit partners to foster new partnerships, inspirational mindsets and environments that support innovation and entrepreneurship.
- **Nickson Otieno, President, WSCSD,** He emphasized the need for 'cross-border' collaboration on worth-while project activities between student communities and also to link students with education stakeholders.

Official Opening Ceremony

- **Hon. James Orengo, Minister for Lands, representing the Rt. Hon. Dr. Raila Amolo Odinga, the Prime Minister of the Republic of Kenya.**

He reiterated that, "*Green Institutions and Green Industries are the engines that will drive a Green Economy.*" Thus, institutions of higher education should be "*innovation ecosystems and sustainability laboratories where young leaders are equipped for a green future.*" He therefore affirmed the Government of Kenya's commitment to adopting a low-carbon development path in line with Vision 2030. Through Greening Kenya Initiative (GKI), the Kenyan government aims at providing green investment opportunities for the youth, increasing spending on education and research, stimulating investment in green industries, ultimately contributing to the creation of decent work and sustainable livelihood opportunities for all. He therefore pledged full support for WSCSD's Greening Universities Initiative.

In conclusion, he urged all present to not only talk about sustainable development but rather to ACT so as to transition to a Green Economy.

- **Hon. Chirau Ali Mwakwere, Minister of Environment and Natural Resources.**

He applauded the students for their proved zeal to spearhead sustainable development through the summit. He highlighted some of the ministry's efforts to sustainable development and Green Economy; namely, Development of an Education for Sustainable Development (ESD) Implementation Strategy for Kenya in 2008; finalization of the National ESD Policy of 2011; Signing an MOU in 2012 with UNEP aimed at addressing green economy, biodiversity and climate change; finalization of the National Action Plan for implementation of the National Climate Change Response Strategy and lastly, tabling of the Climate Change Bill in parliament for discussion and approval. The ministry, he said is committed to supporting fully the initiatives geared towards greening Kenyan universities so as to achieve its vision of a clean, secure and sustainably managed environment conducive for national prosperity.

- **Dr. M. K. Rugutt, the Deputy Council Secretary, National Council for Science and Technology** representing Prof. Margaret Kamar the Minister for Higher Education, Science and Technology, confirmed the ministry's commitment to strengthening appropriate linkages between the private sector, academia and financial institutions towards a green knowledge revolution. He however stressed that all the stakeholders including youths, academicians, researchers, industrialists and business community should take advantage of this shift and embrace the "*know it, transfer it, embed it and build on it*" mantra for the country's prosperity, security, health, environment, and quality of life.

- **Dr. Ibrahim Thiaw, the Director, Division of Environmental Policy Implementation (DEPI), UNEP**

He highlighted the division's responsibility of implementing environmental policies, with a view to cultivating sustainability at national, regional and global levels. The Global Universities Partnership on Environment and Sustainability (GUPES), Mainstreaming Environmental Education in Africa (MESA), Higher Education Sustainability Initiative, and support of such youth-led initiatives as some of the efforts towards this end. He reaffirmed UNEP's commitment towards rethinking higher education and re-orienting systems and practices towards sustainability. He emphasized the need for more investment in environmental education, training, awareness raising and communication to build the capacities of universities to adapt their programs to the demands of a green economy.

- **Prof Jacob T. Kaimenyi, the Deputy Vice-Chancellor, University of Nairobi (representing Prof. George Magoha, the Vice chancellor).**

He highlighted the university's efforts towards mainstreaming sustainability in its programs and facility management. The university will set-up an Office of Sustainability to coordinate future sustainability initiatives and projects, aimed at making University of Nairobi a Center of excellence in environmental sustainability.

Key Summit Components

1. Youth and Green Entrepreneurship Interactive Forum: Going green, means adjusting business models to pursue profit in a more sustainable way, making environmental and social benefits equally important. The forum challenged the participants to take active role in transforming the economy to a greener one through greening the existing enterprises, creating new green enterprises and continuously promote green jobs.

2. Thematic Global Challenges Forum: Mr. Mat Billot, Head of the Global Environmental Outlook gave a broad picture of the current global environmental status and was followed by specific scenarios given by experts from various fields. These were, Dr. Peggy Oti-Boateng, Senior Programme Specialist, Basic and Engineering Sciences, UNESCO (Food); Dr. Thomas Chiramba, Head, Freshwater Ecosystems Unit, UNEP (Water); Prof. Martin Kloti, University of Applied Sciences and Arts Northwestern Switzerland (Energy); Mr. Andre Dzikus, Coordinator, Urban Basic Services Branch, UN-HABITAT (Water); and Mr. Rob de Jong, Head, Transport Unit, Division of Technology Industry and Economics (Transport).

3. Environmental Governance and Green Economy Forum: This interactive forum was moderated by Prof. David Mungai, University of Nairobi and was graced by Mr. Tek Jung Mahat, International Center for Integrated Mountain Development (ICIMOD), Nepal and Ms. Grace Mwaura. The role of students and young professionals was also highlighted with the summit participants been called to participate fully in the development agenda of their respective countries.

4. Group work

There were five parallel group workshops aimed at broadening the participants' standpoints through interactions and working on case studies with students and experts from different countries and professions:

Group I - Role of water in a Green Economy: The workshop reviewed strategies for sustainable water resource management with a closer view at the trade-offs between the economic and ecological goals. Discussions also revolved around traditional drinking water uses in rural communities and the associated challenges towards sustainability with an emphasis on water purification, the need for rain water harvesting and borehole drilling projects. Lastly, the participants contributed ideas towards improving water supply in Nyakongo, a village in Nyando District that is to be transformed into a model sustainable village.

Group II - Waste as a resource: The workshop explored sustainable ways of turning waste into a resource that can subsequently act as a raw material. To tackle industrial waste, the group explored possibilities of launching a recycling program within local universities. With regard to electronic waste, the group partnerships explored partnerships with telecommunication companies to launch an E-waste recycling program at a local university where students will be engaged.

Group III - Green Mobility: Facilitated by *Myclimate*, one of the world leaders in voluntary carbon offsetting measures, the workshop was aimed at helping participants understand offsetting and calculating emissions from transport systems with a view to conceptualizing the most sustainable form of transport. The group therefore explored *Myclimate's* activities in the mobility area (flight offsetting, transport sector solutions in Switzerland); offsetting mechanism and sustainability of carbon offsetting projects in Kenya; calculation of travel emissions of all the conference participants and developed an understanding of carbon assessments for university campuses.

Group IV: Clean, Green Energy: This group held a Sustainable Energy Competition on *Low-Carbon Neighborhood Development*. The students undertook a feasibility study for design of the most energy efficient and sustainable (low/zero carbon) mixed-use neighborhood development possible. Three multidisciplinary teams of students from University of Nairobi, Multimedia University, Ethiopian Institute of Architecture, Building Construction and City Development and Center for Environmental Planning & Technology University (India), participated in this competition. These projects were judged by a panel of experts from RED Engineering and FHNW University. The key technologies emphasized by the groups were energy efficiency, waste handling and disposal, energy decentralization, waste water treatment and efficient building design (e.g. in multi-use and apartment buildings). The group also came up with the "*Fuel Kenya Initiative*" aimed at producing diesel from waste polythenes.

Group V: Food production and consumption: Facilitated by ETH Zurich students, the discussed key challenges in the food value chain i.e. production, processing, distribution and retailing marketing and consumption. The discussions were followed by a kitchen practical to showcase a simple mango preservation technology that can be used by mango farmers to reduce wastage, and adding value to the mangos produced.

5. Field Trip to Kibera Slums, Nairobi

A visit to *Umande Trust's* projects in Kibera, Nairobi and tour of the slum participants to understand the problems facing slum dwellers and appreciate some of the ongoing initiatives, aimed at addressing the challenges. Apart from providing a practical perspective and enriching the group presentations was an eye opener for the summit participants to come up with innovative solutions to address the slum problems. These will be implemented through student collaborations and partnerships in Kibera and other Kenyan slums, with a view to up-scaling the same model to other countries.

6. Closing Ceremony

Mr. Mahesh Pradhan (UNEP, EETU) urged the students to take up the challenge of pushing the green agenda forward in their respective universities. He also noted the need to incubate the practical ideas generated from the summit and their keen follow up to ensure implementation. Also in attendance was Prof. Dominic Konditi, of the Multimedia University. Prof. Martin Kloti from the University of Applied Sciences and Arts Northwestern Switzerland expressed his willingness to host the next Student Summit for Sustainability at his University. Prof. Thomas Anderson (IKED) called on all stakeholders to provide the necessary support to WSCSD to enable it spearhead students engagement in campus sustainability and outreach activities. Nickson Otieno, the president,

WSCSD thanked UNEP, the Office of the Prime Minister, the University of Nairobi and all partners for their indispensable support towards the summit. He confirmed WSCSD's commitment to partner and collaborate with all interested parties in pushing the campus sustainability agenda forward.

7. Green Entrepreneurship Workshop

A special one day workshop on Green Entrepreneurship was organized towards the end of the summit. This was co-organized by the International Organisation for Knowledge Economy and Enterprise Development (IKED) and International Entrepreneurship Academy (Intentac) and was moderated by Prof. Thomas Andersson, the Chairman of Intentac and IKED. This workshop allowed the summit participants to appreciate green entrepreneurship but also come up with their entrepreneurial ideas for mentorship. The ideas generated were presented to a mock group of investors who critiqued and questioned various aspects in a bid to strengthen them. At the end the workshop 19 entrepreneurial concepts were generated for follow up by WSCSD in collaboration with the participants. Notable among them was the '*Fuel Kenya Initiative*', a venture aimed at setting up a Combined Heat and Power (CHP) plant to generate electricity and heat from polythene bags hence curbing environmental pollution and generating income.

8. Tour and Visit to Nyakongo Village, Nyando District.

A group of 37 participants' toured Nyakongo Village, in Nyando district to assess the typical development challenges of a remote rural community and opportunities for addressing them. Diseases, poverty and effects of climate change are some challenges that need action. The students committed to transforming the village into a model sustainable village through campus - community collaborations.

Key Summit Outcomes:

Notable summit outputs and proposed initiatives for follow-up, which also form WSCSD's areas of future focus include;

- Formation of a network of students and student groups keen on sustainability and ready to provide solutions to the prevailing societal problems.
- Launch of the *Greening Universities Initiative* aimed at building the capacity of university students to green universities and communities around them.
- Launch of a *Sustainable Village Initiative* in Nyakongo (a remote village in western Kenya), aimed at converting the village into a model green village through student collaborations and campus outreach programs.
- *Water Campaign*: Initiate a campaign to conserve water in Kenyan universities (e.g. preventing leakages, recycling kitchen water) as well as providing 800 sand filters to Nyakongo Village. It also entails the launch of "Adopt a River" campaign spearheaded by Kenyan universities to conserve water ecosystems.
- *Fuel Kenya Initiative*: A collaborative research and technology transfer project aimed at producing diesel from polythene wastes currently littering Kenyan cities.
- *Formation of ENGAGE!*, an initiative between University of Applied Sciences and Arts Northwestern Switzerland (FHNW) and Kenyan university students geared towards implementing various sustainability projects in impoverished neighborhoods like Kibera slums.
- *UniChar* - A Briquette Making Project aimed at recycling waste paper and dry biomass in universities to make eco-friendly and cheap briquettes for low and middle-income Kenyans.
- *GreenBrick* - A project aimed at construction of school buildings in the slums and an administrative WSCSD's office at the University of Nairobi from recycled PET bottles.
- *FoodBank*: A project aimed at the recovery of food waste from Kenyan universities to support school feeding programs in the slums.
- Two thesis projects contributing to green curriculum and knowledge development; namely:
 - Design a cost effective renewable energy Micro grid: Final Project for BSc. Electrical and Electronic Engineering, University of Nairobi.
 - Evaluation of construction methods in slum upgrading projects in Nairobi, Master of Science Thesis in the Master's Program: Structural Engineering and Building Technology by David Kvarnström, Department of Civil and Environmental Engineering, Chalmers University of Technology.