

**REPORT ON SUSTAINABILITY DIALOGUE: INTERNATIONAL CONFERENCE ON SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT HELD ON 15<sup>TH</sup> AND 16<sup>TH</sup> FEBRUARY 2017 AT THE UNIVERSITY OF GHANA, LEGON**

## **1. Introduction**

The report gives an overview of the proceedings at the Sustainability Dialogue Conference hosted by the Institute for Environment and Sanitation Studies (IESS) at the International House of University of Ghana. This conference brought together researchers and industry players to discuss and share research ideas and findings on key aspects of Sustainability and Environmental Management. Participants came from countries like Mozambique, Tanzania, USA, Benin Republic, Cameroon, Germany and the host country Ghana. The conference featured a Panel Discussion, presentation of key research papers and display of posters and industry exhibition. In all, the conference was very insightful, thoughtful and very educative.

### **1.1 Brief Background**

The Two-day International conference on Sustainability Dialogue was held from 15<sup>th</sup>-16<sup>th</sup> February 2017. It was organised by IESS in partnership with the Department of Computing Science, Carl Von Ossietzky University of Oldenburg, Germany. The idea of the conference emanated from a meeting of a Doctoral Network in Environmental Management Information System known as DEMIS in Oldenburg, Germany in 2016. This network comprises doctoral students and academic advisors, as well as, two coordinators each from Carl von Ossietzky Universität Oldenburg, Germany, University of Ghana, Ghana, Universidade Pedagógica, Mozambique and Nelson Mandela African Institute of Science and Technology in Arusha, Tanzania. The conference which was a maiden one was held on the theme “Sustainability and Environmental Management” which was based on the notion that environmental depletion and change as well as population growth have risen beyond appreciable levels. The need to maintain human existence in the height of global environmental issues such as climate change, species extinctions, unbridled consumptions of non-renewable energy, water pollution, and degraded agricultural lands was the determining factor in selecting the theme. In line with this background, the conference saw the gathering of young academicians and scholars from various fields including environmental scientists, technology specialists, electrical engineers, industrialists, business men, economists., policy experts, marketers, and students from Ghana, U.S.A, Benin Republic, Czech Republic, Germany , Tanzania , Mozambique, Tunisia, and Cameroun. The main objective of the conference was to provide the platform for scholars and next generation academics to network and present research work on relevant papers and findings. It therefore featured panel discussions and different oral presentations in parallel sessions. In all, over forty oral and poster presentations were presented.

## **2. Summary of Day One**

### **2.1 Opening Address**

The conference began at exactly 9:00am with opening addresses from Dr. Ted Annang representing the Director of IESS. Professor Daniel Kwadwo Asiedu, Provost of the College of Basic and Applied Sciences, University of Ghana also gave an opening remark of the conference. Professor Jorge Marx Gomez representing the University of Oldenburg also gave his brief opening address. They all indicated the need for a sustainable and friendly environment. They also brought to light new measures of using ICT to improve the sanitary conditions and to prevent the continuous degradation of the environment.

### **2.2 Conference Overview**

An overview of the conference was given by Dr. Daniel Nukpezah, Chairman of the Planning and Organizing Committee. He gave an outline and the format the conference would follow. He also gave some topics that would be treated at the conference which included;

- Sustainability concepts and practices
- Environmental resources management
- Renewable energy
- Climate change and adaptation etc.

### **2.3 Panel Discussion**

A discussion on the topic "Environmental Research and Sustainability Practices: Recent Development, advances, challenges and opportunities" was held. Members of the panel were; Dr.Dzidzo Yirenya-Tawiah, Mr. Ofori Boateng and Prof. Jorge Marx Gomez. The moderator for the panel discussion was Mr. Venan Sondo.

In summary Dr.Yirenya-Tawiah indicated the 3 P's in a sustainable environment which are the People, Planet and the Price. She stated that people have lost respect for the environment in recent times and this has led to an unfriendly planet. The price paid for this is the frequent outbreak of diseases such as cholera. In addition to that, she said the way forward is a committed government leadership that will drive and enforce a change in attitude of the people. She also indicated waste recycling as another important method of reducing waste. She used an IESS market waste and compost project in the Ga west Municipality as an example. She also stated that a ready and available market should be created for the recycled waste products. Finally Dr.Yirenya-Tawiah said the media should be highly involved in this campaigning and education process, environmentalist should also keep on making "noise" to alert stakeholders on the need for a clean environment.

Prof. Jorge Gomez on his part stated that the main cause of environmental challenges is the wide demographic change. He also stated that there is so much plastic waste which is not under proper control. He indicated the need for research and industry to work together.

Mr. Ofori Boateng representing Strategic Power Solutions also indicated that the main environmental challenge in Sub Saharan Africa was that people just do not want to do anything to make use of technology to enhance environmental sustainability. An example he cited was that people are ready to pay high sums of money for power but are not ready to pay the same amount and sometimes even less for solar energy. Another challenge he said was that people also do not want change. The solution according to Mr. Boateng was that "Charity begins at home", in that,

every household should have an environmental management system. Improvement of awareness of existing technologies should also be encouraged. He also proposed access to less costly capital for individuals who are into waste management and reduction of prices of by-products of waste.

Mr. VenanSondo concluded the panel discussion by saying that the way forward is to ensure collaboration between the Academia and Industry.

## **2.4 Break into Groups and Sub-sessions**

Next after the panel discussion came presentation of the research papers in parallel sessions.

## **2.5 Oral Presentations**

Key research papers and findings were presented by various individuals from different academic backgrounds all focusing on sustainability and environmental management. General contributions were made to some theoretical concepts, adaptations and usage. Suggestions were made by the audience to modify and improve concepts used. Day one ended with a general wrap up by sessional chairs and preview of day two.

## **3. Overview of Day Two**

Day two of the conference continued with the presentation of research papers in PowerPoint from different fields of academia. Papers presented in Halls A and B were organized in two sessions with four online presentations. Each session as usual was chaired and moderated by chairpersons and/or co-chairs. Papers ranged from effective parks management, behavioural and population ecology of Kobs in reserves management, agricultural biodiversity, geospatial analysis, developing a model for ecosystem stewardship education in coastal communities of Ghana, West Africa, Teaching ICT based sustainability reporting by using a research-oriented teaching concept, etc. The online presentations were done via Skype from Germany. Papers presented were on semantic approaches and mark-up languages of geographical content, sustainable ICT Lifecycle development and energy production using system dynamic approach. The session was brought to an end after questions from the audience to the presenters were responded to.

### **3.1 Final Panel Discussions and Concluding Remarks**

This session brought and reconvened the two groups from each of the Halls for a final panel discussion and summary from all sessional chairs. The panellist of the two main groups took turns on the panel to summarize their sessions. Major findings and discussions were:

- That marketing portfolio in the banks have poorly developed component on environmental sustainability.
- Green banking in Ghana was largely missing compared to elsewhere in the world
- Renewable energy must be scaled up by taking opportunities of new innovative ways of power generation. Example is the use of graphene cells for industry production of electronic ink for printers.
- Small holder communities and public schools should have efficient and affordable lighting energy technology for development and improved communities.
- Finding in companies and institutions to generate innovations and maintain experts knowledge be encouraged. This will improve patent laws and create and maintain businesses.
- Optimizations of decisions can be done through improve applications usage
- Practical ways be developed to improve and create water resources for rural communities.

- There is substantial proof that heavy metals affect many communities' source of water and that pragmatic and urgent steps are needed to curb the situation to avoid serious health concerns
- High noise have become a challenge in most residential areas with principal source being religious bodies
- Plastic waste has become a menace and requires concerted efforts to manage it.

### **3.2 Conclusions**

From the discussions, the following conclusions were drawn:

- That natural resources are being depleted and environmental quality degraded through plastics, noise, heavy metals and mining therefore concerted efforts are needed to prevent the situation from degenerating into crisis.
- That research should take the turn of identifying challenges and taking opportunities to create wealth and business.
- That the environment should be managed properly to tap from it for sustainable livelihoods yet being mindful not to destroy or deplete natural resources for sustainability purposes.

### **4. End of Conference and Remarks**

The conference ended with remarks from Prof. Jorge Marx Gomez. He expressed his satisfaction about the conference organisation and pledged his support for any such future conference. Representative from DAAD, Mr. Felix Barnes also gave his remarks and expressed his office's desire to support such initiatives. Miss Fredina Owusu, an Mphil Environmental Science student was given the opportunity to give the vote of thanks. She expressed her profound gratitude to all for coming and thanked all the organizers, sponsors and Prof Gomez for their timely support of the conference. Participants generally networked, took photos and expressed satisfaction for the conference. Many have pledged to participate in subsequent conferences if organized.