

# Conference on Climate Resilience and Waste Management for Sustainable Development

(CReWAS 2019)

October 16-17, 2019

International House,  
University of Ghana, Legon



INSTITUTE FOR ENVIRONMENT  
AND SANITATION STUDIES (IESS)  
UNIVERSITY OF GHANA, LEGON

In collaboration with

WORLDWIDE UNIVERSITIES NETWORK (WUN)



Maastricht University



UNIVERSITY  
*of York*



**CONFERENCE ON CLIMATE RESILIENCE AND WASTE MANAGEMENT FOR  
SUSTAINABLE DEVELOPMENT (CReWAS) HELD ON 16<sup>TH</sup> - 17<sup>TH</sup> OCTOBER, 2019  
UNIVERSITY OF GHANA, LEGON.**

**1. Introduction**

A two-day conference was held on 16<sup>th</sup> and 17<sup>th</sup> October, 2019 and organized by the Institute for Environment and Sanitation Studies (IESS) in collaboration with Worldwide Universities Network (WUN).

A world with ever increasing population, consumption and waste necessitated the need to sustain all sectors of our environment by producing and consuming resources at a pace that does not threaten our very existence on earth. Moving forward, a team of experienced researchers, academia, policy makers, Non-Governmental Organizations (NGO's), students, government representatives and industry players were brought together to identify key environmental concerns, deliberate on them and find solutions that are economically sustainable. This spearheaded the CReWAS Conference. Participants represented were from Ghana, Cameroon, United States of America (USA), Uganda, Nigeria, South Africa, India and Germany.

There were panel discussions, oral presentations and symposium by various stakeholders and an exhibition to demonstrate the importance of a circular economy.

**1.1 Summary of Day 1**

The Conference began at exactly 9:00 am with the introduction of the Master of Program and a Senior Research Fellow at IEISS, Dr. Benjamin Ofori. The opening remarks was given by the Director of IEISS, Professor Kwasi Appeaning Addo who stressed the need for addressing environmental challenges and waste management in our world today and especially in Africa and Ghana. Dr. Daniel Nukpezah, Chairman of the Organizing and Planning Committee proceeded to give a brief overview of the Conference. He also gave an outline and the format the Conference would take. In all, several presentations including a panel discussion were made. The following are examples:

- The Climate- Sanitation Challenge: Is the Circular Economy a panacea for sustainable development?
- Managing Accra's waste through composting and recycling
- Seasonal rainfall variability and arable farming within the dry equatorial and REDD+ Implementation in Ghana and Cameroon.



Dr. Nukpezah giving an overview of the Conference

Professor Daniel Asiedu, the Provost of College of Basic and Applied Sciences also gave his remarks and the key note Address on the future of Waste Management in Ghana given by Honourable Dr. Emmanuel Lamptey. Dr. Lamptey emphasized proper waste collection and recovery and a smart waste management scheme. He also asserted that waste is a raw material for further production and should be treated as such.

## 1.2 Panel Discussion



Mr. Venan Sondo on the extreme left, Ing. Nartey-Tokoli, Dr. Nikiema and then Professor Gordon on the extreme right

The topic for discussion was “The Climate-Sanitation Challenge: Is the Circular economy a panacea for Sustainable Development?” The moderator was Mr. Venon Sondo who introduced the panelists. The Panelists, with in-depth knowledge and experience on Environmental Management were Professor Chris Gordon, a Climate Expert, Dr. Josiane Nikiema, Waste Management and Circular Economy and Ing. Nartey-Tokoli, a Sustainability Entrepreneur.

Professor Gordon set the pace by explaining the concept of a Circular Economy. He discussed the water, food, energy and waste nexus and described waste as materials in transition. He revealed a majority of waste in the country as organic and indicated the poor conditions of landfill sites in the country. The basis for his submission was Sustainable Development Goal (SDG) 12 which is sustainable consumption and production. He ended by encouraging citizens to leave a legacy for the next generation.

Dr. Nikiema further explained that what one person sees as waste, to another person is actually not waste. She said energy and materials needed could be extracted and reused to their full

potential before disposing (zero waste) unlike the linear economy traditionally practiced by some countries. For example, sludge can produce energy in the form of biogas, serve as nutrients for agriculture and water can be treated for other household uses aside drinking to reduce water shortages in our urban communities. She stated some of the bottlenecks of managing a circular economy as cost recovery, lack of institutional capacities with regards to policy, challenges with managing production on a larger scale and technological limitations.

Mr. Sondo interrupted by telling a short tale from the history of using plastic waste many years ago to the current situation and urged participants to carry along a water bottle each day.

Engineer Nartey-Tokoli, the Managing Director of Jekora Ventures, a privately owned waste collection company in Ghana gave a brief overview and the main objective of the company and asserted that segregation at source is fundamental. He also spoke shortly about *Fortiver*, a fertilizer from organic waste, comparatively cheaper and competes internationally in the world market. As an engineer and a business owner, he established the link between businesses or industries and circular economies and emphasized the need to accurately develop models in every situation to reduce waste.

At this juncture, the floor was open for questions from the participants. Some concerns were the element of culture in changing behavioral patterns of citizens on waste management. Typical examples cited were Japan and Korea where, in spite of increasing development, their cultural values are still held in high esteem by both citizens and tourists. Another question posed was on closing the gap between policy and implementation and the use of foreign standards as scales of measurement and government sector views on political interest.

Again, concerns about the impacts of waste on public health was raised. It was revealed that one other way of creating awareness on the circular economy is by proliferating the cost of not recovering and recycling our waste which has been relegated to the background for so long.

Moving forward, Dr. Nikiema said lack of harmonization of policies was an underlying factor for mismanagement of environmental resources.



Reactions from Participants

### **1.3 Breaking into Groups and Sub-sessions**

After the Panel Discussion presentations of research papers were made in parallel sessions.

### **1.4 Oral Presentations**

Oral presentations were held in two different Halls (Hall A and Hall B). Discussions held in Hall A was chaired by Dr. Opoku Pabi and Dieudonne Alemagi and in Hall B, Dr. Senyo Koranteng and Professor J.O Olowoyo. In all, nine (9) presentations were made hinged on Climate Resilience and Waste Management for Sustainable Development. For each presentation, key highlights and objectives were noted.

The participants made some general contributions, comments, critique and recommendations on the presentations.

Day one ended at 16:45 with a general wrap up by session chairs and a preview of day two.

## 2.0 Overview of Day 2

Day 2 of the Conference began at 9:00 and continued with the presentation of papers in three (3) separate Halls this time round (Halls A, B and C). The presentations cut across combating deforestation, coastal erosion, ecosystem services and translating waste into market-based assets. Day two also had session chairs. In hall C, the theme was “Transitions towards a Circular Economy: A Cross-National Study of Urban Solid Waste Management”. Two panel discussions were held in hall C. The first was on gaining perspectives on waste management from Ghana, Uganda and South Africa: challenges, opportunities and the way forward. The last panel discussion was centered on Circular economy practices and sustainable social entrepreneurship. The closing remarks was given by Prof. Shyama Ramani.

Before the plenary session, fascinating was an exhibition on expired tyres being used as furniture, waste bins, mirror covers and flower pots to encourage others to truly see waste as materials in transition and to create job opportunities for the teeming youth.



Panelists of Circular Economy ; Professor Ramani (the moderator) on the extreme left, Blake Robinson (ICLEI Africa), Ashabrick Bumutaze (Ministry of Water and Environment, Uganda), Mrs. Bertha Darteh (WASH Consultant, Ghana) and Dr. Yirenya-Tawiah (IESS, University of Ghana) on the extreme right.



Some presentations during the Conference



Participants enjoying products made from expired car tyres.

## 2.1 Plenary Session

The plenary session proceeded with a brief discussion of key highlights and reactions from participants. This session was moderated by Dr. Adelina Mensah, a Senior Research Fellow at IEES.



Dr. Adelina Mensah (extreme left) moderating discussions during the plenary session

## 2.2 Key Highlights

- Waste is a resource for further development, materials in transition and must be utilized as such.
- Only materials segregated from source qualify to be termed as organic against the view of pollutants of emerging concerns after harvesting produce from “organic” sources.
- Generally, tap water is of better quality than the “pure” water consumed by the general public. Contamination of tap water occurs rather across lines of handling before reaching the final consumer.
- Attitudes, rather than behavior of people should be the main concern for change
- Policy can catch up with directives implemented by the populace in time and after producing commendable results instead of always waiting for policies to be put in place before acting. That way, there can be local solutions for local problems.
- Co-design is important for all stakeholders.

- There must be legislative mechanisms to make waste management lucrative.
- Recommendations should be taken up by policy makers and not just remain on shelves of university campuses.

### **2.3 End of Conference and Remarks**

Professor Appeaning Addo at 17:00 gave a concluding statement to end the conference.

Dr. Dzidzor Yirenya-Tawia, a Senior Research Fellow at IESS gave the vote of thanks. She expressed her profound gratitude to all for coming and thanked all the organizers and sponsors for their timely support of the conference.

Participants generally networked, took photographs and expressed satisfaction for the conference.

On the whole, the conference was very successful. The discussions were very insightful and educative. It served as a reminder for us to safeguard our environment.



A group picture of enthused participants

## Supplementary Pictures



Participants networking during coffee break



Professor George Wiafe on the extreme left (Associate Professor of Fisheries), Professor Daniel Asiedu (Provost of Basic and Applied Sciences) and Professor Kwasi Appeaning Addo (Director, IESS) on the extreme right.