

COMMUNIQUE OF THE 4TH INTERNATIONAL CONFERENCE ON SCIENCE AND SUSTAINABLE DEVELOPMENT (ICSSD2020)

The 4th International Conference on Science and Sustainable Development (ICSSD2020) attracted dignitaries from within and outside Nigeria. The dignitaries included: Professor Alison Bruce, Deputy Head, School of Computing, Engineering and Mathematics, University of Brighton, United Kingdom was the Keynote Speaker, Professor Lazarus Ojigi, Director, Mission Planning, Information Technology and Data Management, National Space Research and Development Agency (NASRDA) delivered the Lead Speech and reputable scientists within and outside the country. Over one hundred and thirty papers were presented in the six technical sessions (i.e. Science, Engineering, Energy, Data, Environment, and allied fields). Above 76% of the papers presented germane solutions to kick-start sustainable development in Africa while the remaining 24% papers are futuristic to sustain triggered projects. The papers presented at the conference addressed 70% of the seventeen sustainable development (SDG) goals. The following SDG goals were addressed from the presentations from Speakers and Participants at the conference: SDG 2 No hunger; SDG 3 Good health and well-being; SDG 4 Quality education; SDG 6 Clean water and sanitation; SDG 7 Affordable and Clean energy; SDG 12 Responsible consumption and production; SDG 13 Climate action; SDG 15 Life on land

- i. Green building construction was proffered for major cities in Africa. This is because the influence of climate change requires a cheap building option that is affordable and requires lower energy budget. More so, it was recommended that geophysical survey must be one of the building requirements before laying foundation, because this measure would prevent building collapse and deaths resulting from building collapse. It was also recommended that environmental sustainability could be achieved if there is a critical mass adoption of lean practices in the Nigerian building industry to achieve significant reduction of material waste in the building industry and thus promoting environmental sustainability. Also, the conversion of wastes and inedible plant seeds to clean and sustainable energy option was advocated. It was recommended that government should provide seed fund to activate this research.

- ii. The application of new chromatography technique was considered to determine the cause of a murder or arson; food analysis in the determination of contamination and adulteration; sports to apprehend dopers; environmental science to determine environmental contamination; the pharmaceutical industry to isolate pure samples of an ingredient, separate enantiomers or identify contamination in drugs; and in the medical industry for diagnosis, confirmatory tests, and in preparation of effective antibodies against a disease. It was recommended that institutions popularise the application of chromatography for students, researchers, governments and employees for greater speed and accuracy, and more life scientists, especially in Nigeria, will prioritise chromatographic techniques in diagnosis and research.

- iii. It was clearly shown that dumpsites located in some locations around Lagos metropolis have high radioactive signatures. It was recommended that waste dumpsite should be located far away from residential areas; builders should be discouraged from building houses near dumpsites. Waste to wealth approach should be incorporated by the government as well as carrying out regular investigations to monitor the level of radiation emission from dumpsites in the city to avoid high level of radiation emission outbreak in subsequent years. Efficient scientific techniques were proffered for groundwater exploration. Also, few geothermal energy locations were discovered in Nigeria.

- iv. ICT solutions were reported to be the main tool to solve myriads of issues plaguing Nigeria and Africa at large. Among the solutions were: the experimentation on the effect of a collection of ranking-based filter feature selection methods on a multi-class dataset for traffic classification; workflow mining algorithms that help organizations have a deep insight into their business processes; algorithm to curb the rate at which banks loses funds to loan default using machine learning; e-marketing and m-marketing as tool to activate small medium enterprise by customer behaviour prediction tool. The outcome is to improve on the accuracy and performance of the traffic classification process. Web content mining was proffered as a veritable tool by

government and private organization to obtain vital information for sustainable development.

- v. Air pollution in Nigeria and most parts of West Africa is at alarming state. It was reported that there is high concentrations of airborne polycyclic aromatic hydrocarbons (PAHs) in Nigeria. Aerosol loading over Nigeria and parts of West Africa were estimated to be at its peak. This event leads to high rate of diseases and death most especially among infants. This high aerosol content in the atmosphere was proven to affect infant and livestock alike. It was recommended that government within the West Africa states should embark on ground measurement of aerosols to ascertain the current and future hazards. Also, afforestation was suggested to be a natural way of reducing the effect of air pollution on life form.

- vi. One of the futuristic contributions in the conference was the adaptation robotic engineering. Also, several semiconductor and solid-state devices were discussed. This discussion is also important to spark-up electronic projects.

Generally, the conference revealed that the synergy between the private and government institutions and the active involvement of scientists is the way forward towards achieving sustainable development in Nigeria and Africa at large.