Session Title: Agriculture Data and Citizens in the African Open Research Data Space

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Session Description Globally experts, researchers, practitioners and policy-makers have turned their focus on providing added value data products and services from research data to citizens. Information and Communication Technologies (ICTs) has been in the forefront as a mechanism improving management and access of agricultural research data. Similarly, efforts to make agricultural research data open using ICTs has proved to be very useful. As a result, agriculturalists have been looking into ways on how to put the power of research data and analytics in the hands of citizen. These techniques include social innovations such as Short Message Services (SMS), mobile applications and web portals. Consistently, the role of agricultural research data has rapidly gained recognition among different stakeholders especially citizens thus leading to increased development of data management platforms, data discovery methodologies and diversities. However, current data products and services obtained from agricultural research datasets cannot sufficiently meet the aggregate demand for instantaneous results, predictive analytics and knowledge discovery from data. The growing demand for agricultural research data products and services provides evidence that agricultural research data is important in improving citizens' productivity and income from agriculture.

On the other hand, using ICTs to make agricultural research data open has power to provide value to citizens. Furthermore, emerging opportunities such as "Big Data", "Data Cubes" and "Citizen Science" underscore ICTs critical role in open data domain. The session will seek to address such questions as: There is a lot of focus on Agricultural Research Data to drive change, however will the rapid demand of agricultural research data address our current problems? What is the citizens' (general) understanding on the role of data analysts, data scientists and data engineers? What is the citizens' perspective on timely data analysis with regard to decision-making and innovation? Similarly, what is the state and future of data science in agricultural research field? While, there is increased pressure and demand for intelligent data products and services from agricultural research data, what is the role of citizens in data science in moving this debate forward?

Interestingly, a large of body of theoretical and empirical literature assert that ICT can help in provision of intelligent data products and services particularly, big data techniques and social innovation. Also, the research attention given to ICT in Agricultural Research for Development (AR4D) is a testament to its potential role and impact on improving agricultural productivity, economic growth and poverty reduction. In Africa, scientists' cynical perception on sharing of research data through ICTs is contributing to low impact of agricultural research findings. Although there are cases of application of ICT in the management of research data, the use of ICT remains limited. To date, a good proportion of agricultural research data is "unsystematic", and this has partly contributed to declining agricultural potential and food crises in many Africa countries.

The session will highlight important points in the design and delivery of agricultural research data products and services in a more relevant, cost-effective and usable format to enable citizen to make informed decisions. It will further demonstrate that citizens can benefits from these services and products. Through use cases prove that ICT innovations can help citizens realize full value from agricultural research data. Additionally, using practical examples show that use of data-driven evidence for decision making is better relying on opinions. Importantly, to underscores that the future of citizens wellbeing will largely depend on putting open data to work using emerging ICTs such as Big Data capabilities (for instance, Data Ingestion, Analytics, Simulation, modelling, Artificial intelligence, Machine learning and Data Mining).