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Dear colleagues, ladies and gentlemen,

I am very pleased to be here today to share my thoughts with you on the issue of open data for science and sustainability in developing countries. I note your indication that the workshop provides a special opportunity to present the accomplishments in improving access to and use of research data and in reducing the digital divide since the World Summit on Information Society (WSIS), held in Geneva 2003 and Tunis 2005, and the recently held WSIS+10 held in Geneva, as well as the programs of each of your partners.

The WSIS processes aim at bridging the digital, technology and knowledge divides and creating a people-centric, inclusive, open and development-oriented information society where everyone can create, access, utilize and share information and knowledge: goals which are relevant to our meeting here.

Ladies and gentlemen,

This is the Big Data age where new types of science and engineering facilities and sensors are generating streams of digital data from telescopes, video cameras, traffic monitors, magnetic resonance imaging machines, and biological and chemical sensors monitoring the environment. It therefore, presents many exciting opportunities to make scientific research more productive, to accelerate discovery and innovation, and thereby to address key environmental, developmental and societal challenges.

There is need, therefore, to develop policies, both at the international and national levels, that deal with development and implementation of data and information, including issues around Open Access, Access to Information and Data protection legislation, and on charging and reuse of public sector information.

In addition, we must make deliberate efforts towards reducing the digital divide with the aim of making critical scientific data and associated tools and resources related to sustainable development widely accessible, especially in developing countries. We would like to see CODATA become more visible in education and capacity-building by developing science and educational programs and activities that focus on data and information. I am certain this meeting is one such effort to address the concerns I have raised above. In this regard, we look forward to CODATA developing an action plan that will eventually optimize the flow of information, especially government generated information, research, and content for the

benefit of users (including private sector re-sellers of information). I would like to suggest that specific strategies for ensuring scientific knowledge is placed in machine searchable repositories be developed and implemented by public agencies and universities as drivers. Furthermore, information, research and content funded by governments should be made freely available over the internet as part of the global public commons, to the maximum extent possible.

Ladies and Gentlemen,

We all know that scientists and other researchers encounter barriers in gaining access to data relevant to their research. These barriers, both technical and non-technical, are of concern to those of us in the governments. Therefore, integration of multidisciplinary data on an international basis to address problems such as global environmental degradation or disease epidemics is of great importance. This calls for the need to improve access to scientific data and services internationally with the primary focus being on data in electronic forms.

We need to review and address the legal, economic, policy, cultural, and technical factors and trends that have an influence-favorably or negatively-on access to data by the scientific community. The ultimate aim is to identify and analyze the barriers to international access to scientific data that may be expected to have the most adverse impact in the natural sciences, with emphasis on factors common to all the disciplines. Recommendations can then be made to governments and the scientific community on strategies on how to overcome barriers to access internationally.

Ladies and gentlemen,

On July 8 2011, Kenya launched the Kenya Open Data Initiative, making key government data freely available to the public through a single online portal. The National Census, National and County governments' expenditure and information on key public services are some of the datasets that have been released on opendata.go.ke. website which allows for visualizations and downloads of the data and easy access.

The initiative has been widely acclaimed globally as one of the most significant steps Kenya has made to improve governance and implement the new Constitution's provisions on access to information. There has been an upsurge in requests from the public for new datasets, and there is a clear demand for more data to be made available.

The goal of opendata.go.ke is to make core government development, demographic, statistical and expenditure data available in a useful digital format for researchers, policymakers, ICT developers and the general public.

Ladies and gentlemen,

Making public data open represents a significant cultural shift away from print publication, and requires long-term financial and policy commitments on the part of the government. Among the challenges we foresee are how to protect privacy, confidentiality, and genuine commercial advantage, and how to accommodate alternative models of openness.

With the recent emergence of electronic databases, more scientific researchers are storing their data on their computer networks. However, data protection is an issue for both paper- and computer-based data and this being a complex issue, employing a multifaceted security approach is the best way to ensure that data is protected.

In this regard, it is imperative to create secure IT infrastructure to address theft and hacking menaces which are of particular concern with electronic data. Many research projects involve the collection and maintenance of human subjects' data and other confidential records that could become the target of hackers. The costs of reproducing, restoring, or replacing stolen data and the length of recovery time in the event of a theft highlight the need for protecting the computer system and the integrity of the data.

You will be pleased to note that the government of Kenya will soon present draft legislation on Access to Information and Data Protection to the National Assembly. This is in fulfilment of the requirements of the Constitution which at Article 35 gives every citizen the right of access to information held by the State; and information held by another person and required for the exercise or protection of any right or fundamental freedom. We also expect the legislation to help in setting frameworks for collecting and managing of information.

Finally, when the decision has been made to end data storage, data should be thoroughly and completely destroyed. Effective data destruction ensures that information cannot be extracted or reconstructed.