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**High-level roundtable on “The role of STI in empowering people and in
ensuring inclusiveness and equality”**

Statement submitted by
The Republic of Botswana

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**THE 22ND UNITED NATIONS COMMISSION ON
SCIENCE AND TECHNOLOGY FOR DEVELOPMENT**

SPEECH FOR CONTRIBUTION TO ROUND TABLE 1

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THE ROLE OF SCIENCE, TECHNOLOGY AND INNOVATION IN EMPOWERING PEOPLE AND IN ENSURING INCLUSIVENESS AND EQUALITY

Excellencies,

Ladies and gentlemen,

It is my pleasure to be here today and contribute to this important meeting, our perspective on the role of science, technology and innovation in empowering people and ensuring inclusiveness and equality.

From the outset, Chairperson, allow me to congratulate you on your election and thank the Secretary General of UNCTAD and his staff for the hard work in preparing for this meeting.

Chairperson,

1. The subject of the role of science, technology and innovation in empowering people and ensuring inclusiveness and equality is appropriate as we are confronted with emerging and new technologies.

Science, Technology and Innovation have been used as powerful tools in transforming the world economy from time immemorial. Developing countries such as Botswana are pushing for achievement of sustainable development through the utilisation of Science, Technology and

Innovation (STI in short). The key aspects of such development are anchored on availability of requisite skills, infrastructure and funding.

My country has made major strides in economic growth from 1966 and acquired a middle-income status mainly through mining and beef industry stewardship. We are striving to achieve the innovation driven economic status, to focus on innovation and business sophistication factors, and become an active and competitive international trader. Whilst we celebrate this achievement, we are very much mindful of the myriad and complex issues that the country is still faced with.

2. Chairperson, STI in this age does empower people and plays a role in inclusivity and equality. To put these terms into perspective, **empowerment** refers to capacitating people and communities to increase their degree of autonomy and self-determination to facilitate their independence, demonstration of confidence and strength in making short- and long-term decisions and actions concerning their lives. **Inclusiveness** on the other hand suggests treating everyone equally and without exception. Closely associated is equality which denotes fairness, state of being equal, equivalence, uniformity, sameness, similarity.

3. It is imperative for policy makers to understand the new and unimaginable skills and possibilities required to succeed in the future. The paradigm shifts introduced by STI that allows people not only to work from home, but remotely across continents. Students no more

need to be in the classroom to learn. Technology has completely revolutionised the way of doing business. Even that of conducting home affairs where the social media is used to discuss family issues, including calling the family to the dinner table.

4. Policies must be designed to keep pace with the rapid technological changes where the practice of science and innovation is no more systematic and procedural but tends to be disruptive and chaotic. Mechanisms and instruments must be flexible to accommodate these behaviours of the STI, but also robust to contain it from backfiring. The rapid STI change requires leveraging expert scientific advice contributing to dialogue on technological issues at all levels lest opportunities are missed and the endeavours become too risky.
5. Through the revised RSTI Policy of 2011 Botswana is reforming her STI landscape to catalyse economic growth and foster diversification from the mineral-based economy by integrating science and technology into all of the economic sectors. The policy has initiated a revolution towards taking advantage of rapidly changing technological advancement.
6. The sustainable Development Goal 9 commits countries to "*Build resilient infrastructure, promote sustainable industrialization and foster innovation*". Thus, achievement of sustainable development and empowerment of communities require adequate investments in

infrastructure such as for education, transport, agriculture, energy, information and communication technology, which are crucial in many countries.

7. My Government has in the past years invested in infrastructure development and setting up of institutions where research and innovation take place. These include Botswana Institute for Technology Research and Innovation; Botswana International University of Science and Technology; Botswana University of Agriculture and Natural Resources; Botswana Open University; National Agricultural Research and Development Institute; Botswana Innovation Hub; the University of Botswana School of Medicine, and Botswana Geoscience Institute. These institutions, which are at various stages of development, have consulted various communities and stakeholder groupings in the process of developing their strategic plans.

8. It is important to make STI more participatory and inclusive for increased public engagement in the scientific and technological fronts. Of interest is the inclusion of women, young people, indigenous and rural communities. Hence, the notion of **citizen science**, which is a powerful tool to empower people whilst at the same time including them for equal participation through science, technology and development remain relevant. This is why indigenous or traditional knowledge become very important to our communities.

9. Inspiration and individual talent are necessary for science, technology and innovation, but to empower people requires structures, processes, programmes and initiatives for research at both national and regional level. Critical in the processes is to balance scientific and technological pursuit with public engagement. It is therefore of utmost importance to co-create with people so that they are convinced that the developments are the right things to do, for the right reasons and in the right way. These speak to ethical observations, social and cultural considerations, which when satisfied they build trust and confidence, whilst reducing all risk.

10. Factors to consider at strategy level for mobilising STI include national capability for science; regulatory, legal, and human rights to aid in protection of people and the environment; social issues; religion, culture, and morals; and ethics. It is essential to define and assess risk and benefit of STI especially the emerging technologies at national level. Community groupings which are directly affected by the technology, and the public at large need to be engaged.

11. Mr Chairman, Science, technology and innovation for our people in developing countries should and must focus in improving the lives of people as espoused in the SDGs. Providing clean and safe water, improved health facilities, good shelter, food security and all these in the advent of climate change whose impacts are more negative than positive.

12. Mr Chairman, Climate Change is negatively impacting agriculture, health, water resources and energy in Botswana. Citizen science is most appropriate for coming up with climate change solutions. In this regard projects and programmes are being implemented to develop decision support systems for dry land small scale arable farmers. The aim of this project is to reduce the impact of climate change on small holder arable farmers by strengthening their adaptive capacity for resilient building amid climate change. The communities in northern Botswana are working with scientists on Smart Agriculture in smallholder farming. In yet another initiative small and medium enterprises have been engaged to assess the economic impact of El Nino related drought on their operations.

13. STI is a driver of economic growth, but on the flipside it is the contributor to increasing economic and social inequalities which results in social and economic exclusion. The widely celebrated technologies that remove the human component in industrial productions lead to high unemployment rates for the youth, women and the old. Witnessing the supersonic speed at which technology is developing is frightening. It is rather disheartening that developing countries are still bogged down with the ever-evolving issues which are more inclined to developmental regressions.

14. Mr Chairman, It is scary to reflect on the complexity of crime associated with the STI. For developing countries to really survive

international collaboration is a must. We are in a global technological jungle, and solo manoeuvring a no-no! It is commendable that globally countries have arranged themselves based on geographical proximity to give each other support. We however need to crisscross the globe strategically.

15. Any form of assistance for development of the Science Technology and Innovation for national SDG Roadmap is crucial. I am hopeful that the STI for SDG roadmap initiative will assist us to identify challenges and to set priorities for achieving the SDGs, as well as to systematically establish mechanisms for implementing the SDGs by leveraging STIs. It is however necessary to coordinate initiatives and support offered by various players.

16. Mr Chairman, the CSTD Science, Technology and Innovation Policy Review programme is timely for developing economies. The UNESCO Global Observatory for Science Policy Instruments programme should be upheld and capacity built among Member States to extensively map-out their STI landscapes.

17. Countries need to be assisted to as accurately as possible determine the areas where they have competitive and comparative advantage to guide in defining their STI prioritisation. Coordinated regional prioritisation of STI is still a struggle, although it is necessary to leverage each other's strengths.

I thank you for your attention.