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[*on the report of the Second Committee (A/72/422/Add.2)*]

72/228. Science, technology and innovation for development

The General Assembly,

Recalling its resolutions 58/200 of 23 December 2003, 59/220 of 22 December 2004, 60/205 of 22 December 2005, 61/207 of 20 December 2006, 62/201 of 19 December 2007, 64/212 of 21 December 2009, 66/211 of 22 December 2011, 68/220 of 20 December 2013 and 70/213 of 22 December 2015,

Taking note of Economic and Social Council resolutions 2006/46 of 28 July 2006, 2009/8 of 24 July 2009, 2010/3 of 19 July 2010, 2011/17 of 26 July 2011, 2012/6 of 24 July 2012, 2013/10 of 22 July 2013, 2014/28 of 16 July 2014, 2015/27 of 22 July 2015, 2016/23 of 27 July 2016 and 2017/22 of 6 July 2017,

Recalling the 2005 World Summit Outcome,[1] as well as the outcomes of the World Summit on the Information Society[2] and the outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society,[3] as well as other relevant intergovernmental outcomes,

Recalling also the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want",[4]

Reaffirming its resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", in which it adopted a comprehensive, far-reaching and people-centred set of universal and transformative Sustainable Development Goals and targets, its commitment to working tirelessly for the full implementation of the Agenda by 2030, its recognition that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest

[1] Resolution 60/1.
[2] See A/C.2/59/3 and A/60/687.
[3] Resolution 70/125.
[4] Resolution 66/288, annex.

global challenge and an indispensable requirement for sustainable development, its commitment to achieving sustainable development in its three dimensions — economic, social and environmental — in a balanced and integrated manner, and to building upon the achievements of the Millennium Development Goals and seeking to address their unfinished business,

Reaffirming also its resolution 69/313 of 27 July 2015 on the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, which is an integral part of the 2030 Agenda for Sustainable Development, supports and complements it, helps to contextualize its means of implementation targets with concrete policies and actions, and reaffirms the strong political commitment to address the challenge of financing and creating an enabling environment at all levels for sustainable development in the spirit of global partnership and solidarity,

Recognizing the importance of technology as one of the key means of implementation in the pursuit of sustainable development, along with finance, capacity-building, an institutional framework and trade,

Taking note of the reports of the Commission on Science and Technology for Development on its fourteenth to twentieth sessions,[5]

Recognizing the central role that the Commission on Science and Technology for Development plays, as the United Nations focal point for science, technology and innovation for development, in analysing how science, technology and innovation, including information and communications technologies, serve as enablers of the 2030 Agenda by acting as a forum for strategic planning, sharing lessons learned and best practices, providing foresight about critical trends in science, technology and innovation in key sectors of the economy, the environment and society, and drawing attention to emerging and disruptive technologies,

Recalling its resolutions 64/208 of 21 December 2009, 65/280 of 17 June 2011, 66/212 of 22 December 2011, 68/222 of 20 December 2013, 70/215 of 22 December 2015 and 70/294 of 25 July 2016,

Recognizing the importance of the creation of a conducive environment that attracts and supports private investment, entrepreneurship and corporate social responsibility, including an efficient, adequate, balanced and effective intellectual property framework, while encouraging access to science and technology by developing countries,

Recognizing also the vital role that science, technology and innovation, including environmentally sound technologies, can play in development and in facilitating efforts to address global challenges, such as efforts to eradicate poverty, achieve food security and nutrition, enhance access to energy and increase energy efficiency, fight diseases, improve education, protect the environment, accelerate the pace of economic diversification and transformation, improve productivity and competitiveness and ultimately support sustainable development,

Recognizing further innovation, such as pro-poor, inclusive, grass-roots and social innovation, that seeks to solve problems generally not addressed by markets,

Recognizing that realizing gender equality and the empowerment of women and girls will make a crucial contribution to progress across all of the Sustainable Development Goals and targets, and recognizing also that there is a need to target

[5] *Official Records of the Economic and Social Council, 2011, Supplement No. 11* (E/2011/31); ibid., *2012, Supplement No. 11* and corrigendum (E/2012/31 and E/2012/31/Corr.1); ibid., *2013, Supplement No. 11* and corrigendum (E/2013/31 and E/2013/31/Corr.1); ibid., *2014, Supplement No. 11* (E/2014/31); ibid., *2015, Supplement No. 11* (E/2015/31); ibid., *2016, Supplement No. 11* (E/2016/31); and ibid., *2017, Supplement No. 11* (E/2017/31).

science, technology and innovation strategies to address women's empowerment and inequalities, including the gender digital divide,

Recalling the agreed conclusions of the Commission on the Status of Women on women's economic empowerment in the changing world of work, adopted at its sixty-first session,[6] which, inter alia, highlighted the need for managing technological and digital change for women's economic empowerment, particularly to strengthen the capacities of developing countries, so as to enable women to leverage science and technology for entrepreneurship and economic empowerment in the changing world of work and to support women's access, throughout their life cycle, to skills development and decent work in new and emerging fields by expanding the scope of education and training opportunities in, inter alia, science, technology, engineering and mathematics, information and communications technology and digital fluency, and to enhance women's and, as appropriate, girls' participation as users, content creators, employees, entrepreneurs, innovators and leaders,

Recognizing that science, technology and innovation cooperation and collaboration with, as well as foreign direct investment in and trade with and among, developing countries is fundamental to enhancing their ability to produce, access, comprehend, select, adapt and use science, technology and innovation knowledge,

Recognizing also the importance of supporting the policies and activities of developing countries in the fields of science and technology through North-South cooperation, and South-South cooperation, which is not a substitute for but rather a complement to North-South cooperation, and triangular cooperation by encouraging financial and technical assistance, capacity-building and technology transfer on mutually agreed terms and conditions, including technical programmes,

Recognizing further the need to mobilize and scale up financing for innovation, especially in developing countries, in support of the Sustainable Development Goals,

Concerned that many developing countries lack affordable access to information and communications technologies and that, for the poor, the promise of science, technology and innovation remains unfulfilled, and emphasizing the need to effectively harness technology to bridge the digital divide within countries and between developed and developing countries,

Recognizing that international support can help developing countries to benefit from technological advances and enhance their productive capacity to build, support and nurture innovation capacity to enable the development, adoption and dissemination of technology,

Reaffirming the need to enhance the science, technology and innovation programmes of the relevant entities of the United Nations system, and in this regard recalling the mandate of the United Nations inter-agency task team, as part of the Technology Facilitation Mechanism, on science, technology and innovation for the achievement of the Sustainable Development Goals to promote coordination, coherence and cooperation within the United Nations system,

Noting with appreciation the collaboration between the Commission on Science and Technology for Development and the United Nations Conference on Trade and Development in designing and carrying out science, technology and innovation policy reviews,

Recalling paragraph 114 of the Addis Ababa Action Agenda, in which it was noted that the creation, development and diffusion of new innovations and

[6] *Official Records of the Economic and Social Council, 2017, Supplement No. 7* (E/2017/27), chap. I, sect. A.

technologies and associated know-how, including the transfer of technology on mutually agreed terms, are powerful drivers of economic growth and sustainable development,

Recognizing the importance of an enabling environment at all levels, including enabling regulatory and governance frameworks, in nurturing science, innovation, the dissemination of technologies, particularly to micro-, small and medium-sized enterprises, as well as industrial diversification and value added to commodities,

Taking note of the launch of the United Nations World Data Forum, which sets out to improve the use of data for sustainable development, noting that the first Forum was hosted in Cape Town, South Africa, from 15 to 18 January 2017, and looking forward to the convening of the second, to be held in Dubai, United Arab Emirates, in October 2018,

Noting the ongoing efforts by the World Intellectual Property Organization, under its existing mandate, to establish technology and innovation support centres in over 60 countries, providing access to technological information through patent databases and access to scientific literature through the Access to Research for Development and Innovation programme, the Access to Specialized Patent Information programme and the development of national intellectual property and innovation strategies,

Reaffirming the importance of supporting the African Union's Agenda 2063, as well as its 10-year plan of action, as a strategic framework for ensuring a positive socioeconomic transformation in Africa within the next 50 years, and its continental programme embedded in the resolutions of the General Assembly on the New Partnership for Africa's Development and regional initiatives,

Reiterating the pledge that no one will be left behind, reaffirming the recognition that the dignity of the human person is fundamental, and the wish to see the Goals and targets met for all nations and peoples and for all segments of society, and recommitting to endeavour to reach the furthest behind first,

Recommitting to ensuring that no country or person is left behind and to focusing our effort where the challenges are greatest, including by ensuring the inclusion and participation of those who are furthest behind,

Taking note of the reports of the Secretary-General,[7]

1. *Reaffirms its commitment*:

(a) To support better coordination and coherence, including the application of best practices in coordination and the sharing of lessons learned among United Nations agencies and international organizations providing technical assistance and capacity-building in the field of science, technology and innovation directed towards development priorities and needs;

(b) To promote and support greater efforts to develop renewable sources of energy, including appropriate technology;

(c) To support the efforts of developing countries, individually and collectively, to harness new agricultural technologies in order to increase agricultural productivity through environmentally sustainable means;

(d) To the actions agreed upon by the least developed countries and development partners on science, technology and innovation, as outlined in paragraphs 52 and 53 of the Programme of Action for the Least Developed Countries

[7] A/66/208, A/68/227, A/70/276 and A/72/257.

for the Decade 2011–2020, adopted at the Fourth United Nations Conference on the Least Developed Countries;[8]

2. *Also reaffirms* the commitments that the Addis Ababa Action Agenda of the Third International Conference of Financing for Development[9] has made in, inter alia, science, technology and innovation, as an important action area for sustainable development;

3. *Further reaffirms* the central role of Governments, with active contributions from stakeholders from the public and private sectors, civil society and research institutions, in creating and supporting an enabling environment for innovation and entrepreneurship and the advancement of science, technology and engineering, in accordance with national priorities;

4. *Recognizes* the current role of the United Nations Conference on Trade and Development and other relevant United Nations entities, as well as other relevant organizations, in helping Governments, upon request, to ensure that science, technology and innovation policies are integrated into and are supportive of national development strategies and sustainable development in their countries and that their science, technology and innovation policies and programmes support national development agendas;

5. *Also recognizes* that science, technology and innovation, including information and communications technologies, are essential enablers and drivers of the achievement of the internationally agreed development goals, including the 2030 Agenda for Sustainable Development,[10] and of the full participation of developing countries in the global economy;

6. *Underscores* the need to adopt science, technology and innovation strategies as integral elements of national sustainable development strategies that help to strengthen knowledge-sharing and collaboration and scale up investment in science, technology, engineering and mathematics education, and enhance technical, vocational and tertiary education and training;

7. *Recognizes* that full and equal access to and participation in science, technology and innovation for women of all ages is imperative for achieving gender equality and the empowerment of women, and underlines that addressing barriers to equal access for women and girls to science, technology and innovation requires a systematic, comprehensive, integrated, sustainable, multidisciplinary and multisectoral approach, and in this regard urges Governments to mainstream a gender perspective in legislation, policies and programmes and encourages efforts to mentor, attract and retain women and girls in science, technology, engineering and mathematics education and research;

8. *Notes* the importance of facilitating access to and sharing accessible and assistive technologies, through the transfer of technology on mutually agreed terms and other actions, to advance disability-inclusive development, ensure accessibility for persons with disabilities and promote their empowerment, recognizing that persons with disabilities make up an estimated 15 per cent of the world's population;

9. *Requests* the Commission on Science and Technology for Development to continue to assist the Economic and Social Council as the focal point in the system-wide follow-up to the outcomes of the World Summit on the Information Society[2] and

[8] *Report of the Fourth United Nations Conference on the Least Developed Countries, Istanbul, Turkey, 9–13 May 2011* (A/CONF.219/7), chap. II.

[9] Resolution 69/313, annex.

[10] Resolution 70/1.

to continue its science, technology and innovation activities, including by sharing best practices;

10. *Encourages* the United Nations Conference on Trade and Development, in collaboration with relevant partners, such as the World Intellectual Property Organization, the International Telecommunication Union, the United Nations Educational, Scientific and Cultural Organization and the United Nations University, to continue to undertake science, technology and innovation policy reviews, with a view to assisting developing countries in identifying the measures that are needed to integrate science, technology and innovation policies into their national development strategies and ensuring that such policies and programmes are supportive of national development agendas, as appropriate, and in this regard looks forward to the broadened framework being developed by the Conference for national science, technology and innovation policy reviews in order to integrate the Sustainable Development Goals, as appropriate;

11. *Encourages* the World Intellectual Property Organization to continue to undertake technical support activities, including helping countries to design, develop and implement national intellectual property and innovation strategies aligned with their development strategies;

12. *Welcomes* the establishment and operationalization of the Technology Bank for the Least Developed Countries, takes note with appreciation of the contributions that Turkey has made and of the pledges that the least developed countries and other countries have made to the Technology Bank, and invites Member States and other stakeholders to provide voluntary funding to the trust fund for the Technology Bank so that it can pursue its objectives in the area of science, technology and innovation for the least developed countries;

13. *Recognizes* the importance of ensuring that the Technology Bank for the Least Developed Countries works in close coordination with the various institutions working in the field of science, technology and innovation to foster synergies and avoid duplication of efforts, including, and in particular, working in close cooperation with the Technology Facilitation Mechanism, and vice versa;

14. *Encourages* Governments to strengthen and foster investment in research and development for environmentally sound technologies and to promote the involvement of the business and financial sectors in the development of those technologies, and invites the international community to support those efforts;

15. *Encourages* efforts to increase the availability of data to support the measurement of national innovation systems (such as the existing global innovation indices) and empirical research on innovation and development to assist policymakers in designing and implementing innovation strategies in order to measure the impact of digital technologies for sustainable development;

16. *Also encourages* enhanced capacity-building support for developing countries, including for African countries, the least developed countries, small island developing States, landlocked developing countries and middle-income countries, in order to generate the use of high-quality, timely and reliable data disaggregated by sex, age, geography, income, race, ethnicity, migratory status, disability and other characteristics relevant in national contexts, and further encourages international cooperation, including through technical and financial support, to strengthen the capacity of national statistical authorities and bureaux;

17. *Further encourages* existing arrangements and the further promotion of international, regional, subregional and interregional joint multi-stakeholder research and development projects, as well as training programmes and university-to-

university collaborations where feasible, by mobilizing scientific and research development resources, facilities and equipment;

18. *Emphasizes* that science, technology and innovation are critical for achieving the Sustainable Development Goals, and that many developing countries are facing serious challenges in building their national science, technology and innovation base;

19. *Encourages* Member States to explore ways and means of conducting national, regional and international technology assessment and foresight exercises on existing, new and emerging technologies to help to evaluate their development potential and mitigate potential negative effects and risk;

20. *Underscores* the potential societal impact, including the opportunities and challenges, presented by rapid technological change, including biotechnology, automation technology, robotics and artificial intelligence, acknowledges their potential to transform the labour market, and in this respect emphasizes the need to promote full and productive employment and decent work for all;

21. *Encourages* the Commission on Science and Technology for Development to promote, in the spirit of the 2030 Agenda and the Addis Ababa Action Agenda, international cooperation in the field of science and technology for development;

22. *Also encourages* the Commission on Science and Technology for Development to discuss and explore innovative financing models, such as impact investment, as a means of attracting new stakeholders, innovators and sources of investment capital for science, technology, engineering and innovation-based solutions, in collaboration with other organizations, where appropriate;

23. *Encourages* Governments, individually and collectively, to support policies that increase financial inclusion and deepen the sources of financing and direct investments towards innovations that address the Sustainable Development Goals;

24. *Calls upon* Member States and the United Nations development system, and encourages other stakeholders, as appropriate, to continue to initiate, implement and support measures to improve the level of participation of scientists and engineers from developing countries in international collaborative research, science, technology and innovation projects;

25. *Also calls upon* Member States and the United Nations development system, and encourages other stakeholders, as appropriate, to continue to strengthen their support for the different science, technology and innovation partnerships with developing countries in primary, secondary and higher education, vocational education and continuing education, business opportunities for the private sector, science, technology and innovation infrastructure and science, technology and innovation advice for developing countries;

26. *Welcomes* the launch of the Technology Facilitation Mechanism at the United Nations summit for the adoption of the post-2015 development agenda, and in this regard also welcomes the convening of the first and second annual multi-stakeholder forums on science, technology and innovation for the Sustainable Development Goals, held at United Nations Headquarters in New York on 6 and 7 June 2016 and on 15 and 16 May 2017, as well as the mapping exercise carried out by the United Nations inter-agency task team on science, technology and innovation for the Sustainable Development Goals, and calls for voluntary contributions for resources to support the full operationalization of all components of the Mechanism;

27. *Encourages* the United Nations inter-agency task team on science, technology and innovation for the Sustainable Development Goals to further refine

and update its mapping of science, technology and innovation activities in the United Nations system to:

(a) Guide further efforts at collaboration and capacity-building;

(b) Formulate coherent advice for Member States on aligning national science, technology and innovation frameworks with the 2030 Agenda;

28. *Encourages* the United Nations system to take an active role in forging a closer link with national science advisory bodies to optimally leverage science, technology and innovation for the Sustainable Development Goals;

29. *Calls upon* the United Nations funds and programmes and the specialized agencies, at the request of national Governments, to support, as appropriate, technical and scientific cooperation and North-South, South-South, triangular, regional and international cooperation on and access to science, technology, innovation and knowledge-sharing, on mutually agreed terms, including through improved coordination among existing mechanisms, including the Technology Facilitation Mechanism;

30. *Reiterates its call for* continued collaboration between United Nations entities and other international organizations, civil society and the private sector in implementing the outcomes of the World Summit on the Information Society, with a view to putting the potential of information and communications technologies at the service of development through policy research on the digital divide and on new challenges of the information society, as well as technical assistance activities, involving multi-stakeholder partnerships;

31. *Proclaims* the year beginning on 1 January 2019 the International Year of the Periodic Table of Chemical Elements to enhance global awareness of, and to increase education in, the basic sciences, with special attention to the countries of the developing world, to improving the quality of everyday life and, inter alia, for future advances in research and development, and invites the United Nations Educational, Scientific and Cultural Organization to serve as the lead agency for the International Year, in collaboration with other relevant agencies, within existing resources;

32. *Calls upon* the relevant organizations of the United Nations system, within their respective mandates and resources, to ensure that no one is left behind and no country is left behind in the implementation of the present resolution;

33. *Requests* the Secretary-General to submit to the General Assembly at its seventy-fourth session a report on the implementation of the present resolution and recommendations for future follow-up, including lessons learned in integrating science, technology and innovation policies into national development strategies as well as in supporting the implementation of the 2030 Agenda, and decides to include in the provisional agenda of its seventy-fourth session, under the item entitled “Globalization and interdependence”, a sub-item entitled “Science, technology and innovation for sustainable development”.

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