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Socially just transition towards sustainable development: the role of digital technologies on social development and well-being of all

Report of the Secretary-General

Summary

In the present report, the Secretary-General addresses the need for a socially just transition towards more inclusive, equitable, resilient and sustainable development and provides an analysis of necessary policies to be adopted and actions to be taken. The role of digital technologies in promoting social development and well-being for all is highlighted, with particular attention given to disadvantaged, marginalized or vulnerable groups and communities. It also contains recommendations on how countries can make further progress on those issues.

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I. Introduction

1. The Economic and Social Council, in its decision 2020/212, decided that the priority theme for the fifty-ninth session of the Commission for Social Development would be “Socially just transition towards sustainable development: the role of digital technologies on social development and well-being of all”.

2. The year 2020 marks the seventy-fifth anniversary of the United Nations and the pledge of its Member States, as set out in the preamble of the Charter of the United Nations, “to promote social progress and better standards of life in larger freedom”. The year also marks the twenty-fifth anniversary of the World Summit for Social Development. In 1995, Summit participants advocated a paradigm shift towards people-centred, more inclusive and more equitable social and economic development. In its programme of action, emphasis was placed on the eradication of poverty; the promotion of full and productive employment; the fostering of social integration and inclusion; the attainment of universal and equitable access to quality education and primary health care; the reduction of inequalities; and the strengthening of cooperation in social development through the United Nations system.

3. The 2030 Agenda for Sustainable Development, adopted in 2015 by the General Assembly in its resolution 70/1, contains a comprehensive and universal set of Sustainable Development Goals, with the eradication of poverty at its core. In adopting the Agenda, Member States pledged to leave no one behind and to endeavour to reach the furthest behind first. Implementing that commitment requires pursuing a socially just transition that is people-centred and grounded in the principle of social justice and addressing the interlinkages between social, economic and environmental objectives, in a balanced and integrated manner.

4. With 10 years left to realize the objectives of the 2030 Agenda, the world is facing unprecedented and multifaceted challenges, including the coronavirus disease (COVID-19) pandemic. The economic and social fallouts of the pandemic are having a dramatic impact on social development and the well-being of people worldwide. The crisis has not only exposed pre-existing inequalities and the weakness of current systems, but also exacerbated them. It has the potential to reverse decades of progress in the fight against poverty and inequality, leaving many more people behind.

5. The COVID-19 crisis has also accelerated the pace of digital transformation. The digital revolution has already brought tremendous benefits to socioeconomic development and improved the quality of life of many. Nevertheless, it also risks widening the digital divide, further exacerbating existing inequalities and polarizing the labour market. There is an urgent need to promote a people-centred approach in order to maximize the benefits and minimize the risks brought by digital technologies.

6. Recovery from the COVID-19 crisis is an opportunity to reset socioeconomic policies in order to restart economic growth. This means sustainably improving the living standards and well-being of all people, as an integral part of efforts to promote the socially just transition to sustainable development envisioned in the 2030 Agenda. Digital technologies can facilitate that transition and create a more inclusive, equitable, resilient and sustainable society for all.

II. Socially just transition towards sustainable development within the context of the 2030 Agenda

A. Current patterns of development and its consequences

7. In adopting the 2030 Agenda, world leaders recognized that the current trajectory of economic development had led not to shared prosperity for all, but to high and rising inequalities in many countries, a climate crisis and unsustainable consumption and production patterns. Those consequences have taken a toll on social development and on people's well-being, especially among the most vulnerable.

8. Since the founding of the United Nations in 1945, considerable progress has been made in economic and social development. Many countries have enjoyed sustained periods of economic growth, which served to enhance living standards and lift people out of extreme poverty. However, between 1990 and 2016, income inequality[1] increased in 49 out of 119 countries for which data are available. Today, more than two thirds (71 per cent) of the global population resides in countries where inequality has grown.[2] Moreover, by the end of 2019, the top 1 per cent of wealth holders in a country typically owned 25 to 40 per cent of all wealth and the top 10 per cent of adults usually accounted for 55 to 75 per cent, while the bottom 54 per cent mustered less than 2 per cent of the total global wealth.[3] In member countries of the Organization for Economic Cooperation and Development (OECD), the top 10 per cent in the income distribution held almost half of the total wealth, while the bottom 40 per cent accounted for only 3 per cent. More than one in three people were considered economically vulnerable, lacking the liquid financial assets needed to maintain a standard of living above the poverty level for at least three months.[4] More than 55 per cent of the population lacked access to any social protection mechanism.[5] In many countries, inequalities in opportunity for and access to education, health care, safe drinking water and sanitation, safe, nutritious and sufficient food, social protection or digital technologies persists, and the gap has been widening.

9. Such disparities affect societies in multiple ways. Economically, high inequality is associated with lower productivity, reduced prosperity and negative impacts on poverty reduction.[6] Inequality also undermines sustained growth. A study by the International Monetary Fund showed that greater equality of income increased the duration of economic growth spells in countries more than free trade, low government corruption, foreign investment or low foreign debt.[7] Politically, high inequality undermines social and political stability, as it fuels discontent and distrust in public institutions, thus weakening the social contract and eroding democracy.

10. Socially, inequality fuels a wide range of problems, including violence and corruption and harm to physical and mental health, and erodes the quality of social relationships and social capital in populations, which are central determinants of an individual's happiness and life satisfaction.[8] Inequality further deepens the digital divide,

[1] Measured using the Gini coefficient.

[2] *World Social Report 2020: Inequality in a Rapidly Changing World* (United Nations publication, 2020).

[3] Anthony Shorrocks, James Davies and Rodrigo Lluberas, *Global wealth report 2020* (Credit Suisse Research Institute, October 2020).

[4] See www.oecd-ilibrary.org/sites/689afed1-en/index.html?itemId=/content/publication/689afed1-en.

[5] International Labour Organization (ILO), *World Social Protection Report 2017–19: Universal Social Protection to Achieve the Sustainable Development Goals* (Geneva, International Labour Office, 2017).

[6] See www.undp.org/content/undp/en/home/librarypage/poverty-reduction/inclusive_development/towards_human_resiliencesustainingmdgprogressinanageofeconomicun.html.

[7] See www.un.org/en/chronicle/article/goal-10-why-addressing-inequality-matters.

[8] Richard Wilkinson and Kate Pickett, *The Inner Level: How More Equal Societies Reduce Stress, Restore Sanity and Improve Everyone's Well-being* (New York, Penguin Press, 2019).

which, in turn, exacerbates the very inequality that fuelled it. Inequality also negatively affects poverty reduction. Since 2015, rising inequality had slowed the rate of global poverty reduction to less than half a percentage point annually, following a sustained decline between 1990 and 2013, when the poverty rate fell from 36 to 11 per cent.[9]

11. Inequality also lowers public support for environmental protection, as a result of social polarization and a lack of trust in public institutions. Furthermore, inequality is a major contributor to status competition, owing to intensified status anxiety that fuels consumerism, which, in turn, pushes planetary boundaries. Studies have demonstrated that people living in neighbourhoods with high rates of inequality tend to be greater consumers of status goods, such as designer clothes and expensive cars.[10] Another study indicated that consumption was the strongest determinant of global impacts, exceeding other socioeconomic and demographic factors, such as age, household size, qualification or dwelling structure.[11] It is estimated that 25 to 43 per cent of environmental impacts are caused by the world's richest 10 per cent, while the poorest 10 per cent is responsible for 3 to 5 per cent of environmental impacts.[12]

Unsustainable consumption and production patterns

12. Beyond consumer behaviour, today's mass production model is unsustainable. The $2.4 trillion apparel industry accounts for 8 to 10 per cent of the world's greenhouse gas emissions and 20 per cent of the world's industrial wastewater. According to the United Nations Alliance for Sustainable Fashion, $500 billion in value is lost every year as a result of clothing underutilization and insufficient recycling. Some 300 million tons of plastic and more than 50 million tons of electronics were thrown away in 2019 alone.[13] The lumber, paper and furniture industries are responsible for deforestation around the world. Although the rate of deforestation has slowed, the world has lost an estimated 420 million hectares of forest to other land uses since 1990, with an annual deforestation rate of about 10 million hectares over the past five years.[14]

13. How food is produced, processed and consumed determines the sustainability of ecosystems. Technological advances over the past five decades have enhanced productivity in food production and distribution, while globalization, income growth and falling food prices have enabled a growing number of people to consume more food and a greater diversity thereof.[15] In 2019, the world consumed 339 million tons of meat, compared with 324 million tons in 2015.[16] Livestock supply chains produce significant greenhouse gas emissions and consume large quantities of land, water, nutrients and energy.[17] More than 50 per cent of the world's food crops are used to feed farm animals and not people.[18] The rise in global fish consumption (by 122 per

[9] See http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx (accessed on 7 November 2020).

[10] Jesse Bricker, Rodney Ramcharan and Jacob Krimmel, "Signaling status: the impact of relative income on household consumption and financial decisions", Finance and Economics Discussion Series, working paper No. 2014-76 (Washington, D.C., Board of Governors of the Federal Reserve System, September 2014).

[11] Thomas Wiedmann and others, "Scientists' warning on affluence", *Nature Communications*, vol. 11, June 2020.

[12] Jordi J. Teixidó-Figueras and others, "International inequality of environmental pressures: decomposition and comparative analysis", *Ecological Indicators*, vol. 62, March 2016.

[13] See www.wri.org/blog/2020/08/how-to-circular-economy.

[14] Food and Agriculture Organization of the United Nations (FAO), *Global Forest Resources Assessment 2020: Main Report* (Rome, 2020).

[15] John Kearney, "Food consumption trends and drivers", *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 365, No. 1554 (September 2010).

[16] See www.fao.org/3/I9286EN/i9286en.pdf; and www.fao.org/3/ca8819en/CA8819EN.pdf.

[17] See www.fao.org/3/CA1201EN/ca1201en.pdf.

[18] See https://ourworld.unu.edu/en/agriculture-and-food-systems-unsustainable.

cent between 1990 and 2018) has contributed to a global rise in capture fisheries and aquaculture production (14 and 527 per cent, respectively, during the same period). As capture fisheries have plateaued since late 1980s, the gap in supply and demand is filled by aquaculture production, which has a much higher impact on the aquatic environment and now accounts for almost half the total fish production worldwide.[19]

Food production and its impact on the natural environment

Food production itself requires significant amounts of energy and resources, including land and fresh water. Today, food production accounts for about one quarter of global greenhouse gas emissions.[a] Half of the world's habitable land is used for agriculture.[b] However, 24 per cent of the world's productive lands are degraded, and 42 per cent of the world's poor depend on degraded lands for nutrition and income.[c] Achieving land-degradation neutrality is therefore crucial.[d] The growing demand for food production is also causing freshwater deficiencies in some regions: about 70 per cent of global freshwater withdrawals are used for agriculture, and 78 per cent of global ocean and freshwater eutrophication is caused by agriculture.[a]

Not only is the quantity of land and water deteriorating, but so is their quality. For example, waste disposals in water are increasing in both quantity and toxicity. Increased use of synthetic fertilizers and certain pesticides for industrial crop production has led to deteriorated quality of soils that had taken 100 to 1,000 years to form. Agriculture and aquaculture represent a threat for 24,000 of the 28,000 species risking extinction, according to the Red List of Threatened Species of the International Union for Conservation of Nature and Natural Resources. While new technologies have contributed to protecting the environment, including through smart energy provision, waste and water treatment systems, means of transportation and modern food production and distribution systems, they have also produced an increasing variety of agents and circumstances whose consequences are partly unknown, difficult to predict and capable of posing irreversible risks to human health and that of the ecosystem.[e]

[a] See https://ourworldindata.org/environmental-impacts-of-food.
[b] See https://ourworldindata.org/global-land-for-agriculture.
[c] See www.wfp.org/sustainable-livelihoods-and-ecosystems.
[d] See www.unccd.int/actions/achieving-land-degradation-neutrality.
[e] See www.euro.who.int/__data/assets/pdf_file/0003/91173/E83079.pdf.

14. Each year, one third of the food produced around the world is wasted, and an estimated 2 billion people do not have regular access to safe, nutritious and sufficient food. There were nearly 60 million more undernourished people in 2019 than there were in 2014, and COVID-19 has further worsened the situation. By 2030, the total number of undernourished people globally is projected to reach 840 million.[20] According to the Food and Agriculture Organization of the United Nations (FAO), global hunger could be ended if just one fourth of lost or wasted food were saved. In developing countries, 30 to 40 per cent of total food can be lost in the production chain, owing to a lack of proper post-harvest storage, processing or transportation facilities. In developed countries, food is wasted through consumption habits, overproduction and regulations that remove safe food from the market. The average monthly food waste per person in Europe and North America (10 kg) corresponds to the average annual food waste per person in sub-Saharan Africa and South and Southeast Asia.

[19] FAO, *The State of World Fisheries and Aquaculture: Sustainability in Action* (Rome, 2020).
[20] FAO and others, *The State of Food Security and Nutrition in the World 2020: Transforming Food Systems for Affordable Healthy Diets* (Rome, 2020).

15. Although tangible progress has been made in sustainable production practices, production efficiency and safety need to be improved, as there are physical limits to the capacity of natural resources and ecosystems to absorb waste and regenerate resources.[21] While the COVID-19 pandemic has reduced demand for many goods and services, such as clothing and travel, this is most likely a temporary halt. In post-pandemic recovery, consumption and production patterns should be changed by: (a) decoupling economic growth from environmental degradation; (b) increasing the sustainable management of resources and resource efficiency; and (c) promoting sustainable business practices and consumer behaviour.

B. A more inclusive, equitable and resilient path to achieving sustainable development

1. Integrating "sustainability" into socioeconomic policies

16. While growth is a necessary condition for sustained socioeconomic progress and improved well-being, current approaches to growth in the real economy, as measured by gross domestic product (GDP), are not sufficiently inclusive and lead to significant social and environmental costs, some of which are "invisible", as they are not accounted for in monetary terms. Once those costs become visible, through events (such as social unrest) or physical changes (such as air and water pollution or land and forest degradation) that reduce economic growth and people's well-being, there is typically little time left to prevent catastrophic consequences. Global megatrends indicate that humanity is at a crossroads and that collective action is needed to change the pattern of economic growth, so as to minimize social and environmental burdens and promote long-term sustainability. Such changes will bring benefits, but also entail adjustment costs. Under the premises of leaving no one behind and shared prosperity associated with the 2030 Agenda, the benefits of economic development and technological advances, as well as the aforementioned adjustment costs, must be equitably shared during the transition, with particular attention paid to the needs of those who are disadvantaged or in vulnerable situations. In other words, achieving a socially just transition[22] is necessary to realizing "the future we want".

17. A socially just transition towards sustainable development entails a rethinking of economic activity, not as an end in itself, but rather as a means for sustainably advancing human well-being and capabilities, while protecting the environment. It requires a change in mindset, from pursuing narrow short-term economic and material gains to rebalancing economic, social and environmental objectives, in order to build a common sustainable future for all.

18. By putting people at its centre, a socially just transition redirects policies, economic incentives and activities towards building a more inclusive, equitable, resilient and sustainable system, while protecting those who are negatively affected during the transition. Doing so will require: (a) achieving inclusive and equitable

[21] Florian Schaefer and others, "Ecological footprint and biocapacity: the world's ability to regenerate resources and absorb waste in a limited time period", Working Papers and Studies (Luxembourg, Office for Official Publications of the European Communities, 2006).

[22] The concept of a "socially just transition" amplifies the notion of the "just transition" initially introduced by the labour movement to mitigate the impact of job loss on workers and communities in the transition from fossil fuels to green industry. Over the years, that initial definition has been expanded to embrace a broader call for a more just and equitable transition that ensures not only environmental sustainability, but also decent work, social inclusion and poverty eradication. See ILO, "A just transition to a sustainable future: next steps for Europe", resource for a panel discussion at the European Parliament, Brussels, November 2017; and Samantha Smith, "Just transition: a report for the OECD", paper prepared for the Just Transition Centre and provided to the Organization for Economic Cooperation and Development (OECD), May 2017.

growth, which is central to eradicating poverty, reducing inequalities, promoting decent work, fostering social inclusion and advancing well-being; and (b) integrating sustainability into socioeconomic policymaking by endorsing broader understandings of climate change and environmental narratives that include people and their relationship to the planetary boundaries and that promote a more holistic understanding of people-centred development.

19. To enable a socially just transition, resilience, which is understood as the capacity of societies, communities and individuals to absorb and recover from shocks, such as economic crisis, natural disasters, social unrest or global pandemics, needs to be strengthened. Investing in human capacity is therefore critical, so that each and every person, as well as their communities, are empowered and equipped with the knowledge, capacity and resources needed to withstand shocks, learn lessons and be resilient. Social protection systems, and in particular social protection floors, play a key role in facilitating a just transition and in building the resilience of individuals and households to cope with shocks.

2. Alternative models of growth for sustainable development

20. That shift in thinking with regard to economic activity is behind the growing body of research on metrics related to well-being that go beyond GDP. Such studies include multiple dimensions of inequality and subjective well-being to measure national wealth, economic performance and social progress. That emerging paradigm shift is captured in the 2030 Agenda and in the recognition of the need for a socially just transition. In their report entitled *Beyond GDP: Measuring What Counts for Economic and Social Performance*, the Chairs of the High-Level Group on the Measurement of Economic Performance and Social Progress encouraged the use of new measures of well-being, as GDP is focused only on the production of goods and services, not on health, education and the environment.[23]

21. Specifically, the Commission proposed improving existing measures (such as measures of vertical inequalities in economic resources, horizontal inequalities in quality of life, sustainability and subjective well-being) and developing metrics in new fields (such as economic insecurity, inequality of opportunity and trust).[24] In 2011, OECD launched the Better Life Index, which contains a range of internationally comparable measures of well-being. Another well-being metric is represented by the Inclusive Wealth Index, which, as explained in the *Inclusive Wealth Report 2018* of the United Nations Environment Programme, measures a nation's wealth, taking into account human capital (education, skills, earning potential, life expectancy and population), natural capital (fossil fuels, minerals, forest resources and land) and produced capital (such as roads, railroad tracks, buildings, vehicles and machinery). For instance, the *Report* showed that, although GDP per capita had increased since 1998 in nearly all 140 countries in the sample examined in the study, almost one third (44) of those countries had experienced a decline in inclusive wealth per capita.[25]

22. Similarly, the concept of an inclusive green economy provides an approach to economic growth that takes into account safer and healthier environments and the socially inclusive and resource-efficient development of societies.[26] In 2019, United Nations entities and other stakeholders articulated five principles for an inclusive

[23] Joseph E. Stiglitz, Jean-Paul Fitoussi and Martine Durand, *Beyond GDP: Measuring What Counts for Economic and Social Performance* (Paris, OECD Publishing, 2018).

[24] See https://unstats.un.org/unsd/statcom/50th-session/side-events/documents/20190301-1M-HLEG_Report_Friday_Seminar.pdf.

[25] United Nations Environment Programme, *Inclusive Wealth Report 2018: Measuring Sustainability and Well-being* (Nairobi, 2018).

[26] See www.fao.org/3/a-al922e.pdf.

green economy: (a) well-being; (b) justice; (c) planetary boundaries; (d) efficiency and sufficiency; and (e) good governance.[27]

23. Managed well, transitions to environmentally and socially sustainable economies can become strong drivers of poverty eradication, social justice, job creation and job upgrading. An inclusive green economy can play a key role in the fight against poverty, since it is often the poorest who are the most dependent on ecosystem services and the most susceptible to environmental changes.[28] Such an economy must also be an integral part of the fight for global social justice.[29] The potential for job creation and income generation under a green economy outweighs the potential loses,[30] but strong social consensus is required with regard to the goal and on pathways to sustainability. Social dialogue with all relevant stakeholders must be an integral part of the institutional framework for policymaking and implementation at all levels.

24. Another alternative model of growth, aimed at finding a new balance between economic efficiency and social and environmental resilience, is the social and solidarity economy.[31] The social and solidarity economy refers to enterprises and organizations, in particular cooperatives, mutual benefit societies, associations, foundations and social enterprises, that pursue economic and social solidarity through the production of goods, services and knowledge.[32] By empowering individuals through greater control over decision-making processes and resources, the social and solidarity economy fosters economic dynamism, social and environmental protection and sociopolitical empowerment.[33]

25. The circular economy is an approach to sustainability in production and consumption that promotes the transition from an extract-manufacture-use-discard model to one that embraces the recycling, repair, reuse, remanufacture, rental and longer durability of goods.[34] While its benefit to the environment is clear, the circular economy also has the potential to revive professions and jobs related to the repair and reuse of goods that have disappeared in recent decades with the emergence of the convenience economy. However, specific policies are needed to incentivize change. In 2015, the European Union adopted a circular economy action plan. In 2018, the city of Toronto, Canada, put in place a circular economy procurement implementation plan and framework. The approach could also be adopted in the context of COVID-19 response and recovery efforts, to address the environmental impacts of hazardous waste, including disinfectants, personal protective and medical equipment.

26. An effective social protection system, designed to protect people from economic, social and environmental risks and shocks by ensuring job and income security over the life cycle, is crucial to facilitating socially just transition. Social protection has proved to be one of the most effective policy instruments for simultaneously reducing inequality and poverty, while also promoting inclusive

[27] See www.greeneconomycoalition.org/assets/reports/GEC-Reports/Principles-priorities-pathways-inclusive-green-economies-web.pdf.

[28] See www.fao.org/fileadmin/user_upload/suistainability/pdf/GreenEconomy-Full.pdf.

[29] See www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_554315.pdf.

[30] ILO, *World Employment and Social Outlook 2018: Greening with Jobs* (Geneva, International Labour Office, 2018).

[31] See https://unsse.org/wp-content/uploads/2014/08/Position-Paper_TFSSE_Eng1.pdf.

[32] See www.ilo.org/wcmsp5/groups/public/---africa/---ro-abidjan/documents/publication/wcms_166727.pdf.

[33] ILO, *Social Solidarity and South-South Cooperation: A Compilation of Short South-South Cooperation Articles for the "Academy of Social Solidarity Economy: Social Innovation in the World of Work" (Johannesburg, 2015)*, Anita Amorim, Andrew Dale and Charbel Fakhri-Kairouz, eds. (Geneva, International Labour Office, 2015).

[34] ILO, *Skills for a Greener Future: A Global View Based on 32 Country Studies* (Geneva, International Labour Office, 2019).

growth (see E/CN.5/2019/3). Many countries, while building progressively comprehensive social protection systems, are committed to establishing nationally defined social protection floors to ensure access to essential health care, child benefits to ensure nutrition and education and basic income security across the life cycle. The COVID-19 pandemic underscored the importance of social protection systems and exposed serious gaps in coverage.[35] Many countries introduced measures to extend coverage and improve benefits (1,518 measures in 208 countries),[36] yet most of them are short-term and temporary measures.

27. Moving forward, there is a need to strengthen social protection polices in order to extend coverage to workers in all forms of employment, including those working in the informal economy and those adversely affected by digital transformations or transitions towards green growth, through appropriate legal frameworks, sound administrative systems and sustainable and equitable financing mechanisms. That includes promoting a human-centred approach to the future of work in line with the International Labour Organization (ILO) Centenary Declaration for the Future of Work (A/73/918, annex), adopted by the International Labour Conference in 2019 and endorsed by the General Assembly in its resolution 73/342.

28. Changing population dynamics, the effects of climate change and fast-paced technological change and its impact on the world of work further enforce the importance of universal social protections to secure livelihoods and facilitate life and work transitions. In addition, as indicated in the Centenary Declaration, skills development, lifelong learning opportunities and on-the-job training should be provided to all workers to upgrade their skills, including digital skills, so as to ensure that workers are not left behind by the transition to sustainable development. These are essential policy measures for promoting a socially just transition to sustainable development.[37]

III. The role of digital technologies on social development and well-being of all

A. Benefits, opportunities and potential risks brought by digital technologies

1. Digital technologies that promote social development

29. Digital technologies offer new opportunities for achieving the three core objectives of social development, as set out at the Social Summit, namely, eradicating poverty, promoting full and productive employment and fostering social inclusion.

30. Digital technologies can enhance productivity in the world of work and expand the way individuals search for work, companies recruit talent and goods and services are produced and distributed.[38] They can enable workers to work remotely and promote improved work-life balance, while expanding income-generating opportunities.[39] For example, e-commerce has helped some rural communities move out of poverty,

[35] See www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_744612.pdf and www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_754731.pdf.

[36] ILO, “Social protection monitor: social protection responses to the COVID-19 crisis around the world”, 28 October 2020. Available at www.social-protection.org/gimi/RessourcePDF.action?id=56047.

[37] See www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf.

[38] OECD, *OECD Employment Outlook 2019: The Future of Work* (Paris, 2019).

[39] See www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_662410.pdf and www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_645337.pdf.

revitalizing rural villages through job creation and increased household incomes.[40] Many of the opportunities and benefits offered by new technologies in the world of work, however, are not certain or automatically occurring. Rather, they require a supportive legislative and regulatory framework to guarantee workers' rights and ensure decent work. Social protection systems need to be reinforced to adequately address evolving demands and new challenges, on the basis of the principles of risk pooling and equity in financing and benefits. Gaps in labour and social protection coverage in the gig or platform economy, for example, leave workers vulnerable to shocks, thereby exacerbating poverty and inequality and jeopardizing the social contract. Ensuring adequate social protection for workers in all forms of employment contributes not only to protecting workers and their families, but also to creating a more level playing field between actors in the "old" and "new" economy.[41]

31. Digital technologies can also help to reduce poverty and inequality by providing a more economically efficient means for meeting the most urgent and basic needs for food, clean water, shelter, education and health, which currently can cost as much as 80 per cent of household incomes in developing countries.

32. Digital technologies can foster social inclusion by facilitating the full participation of all people in society and by ensuring their access to quality education, health care, decent work, affordable housing and social protection. No one should be left behind in the digital revolution.

33. E-health is increasingly considered to be an essential component in the achievement of universal health coverage.[42] More than half of States members of the World Health Organization now have e-health strategies in place. Mobile health (m-health) supports the dissemination of information, including through targeted health campaigns. Tele-health offers the direct provision of health care through mobile devices, thereby overcoming infrastructure constraints and health-care worker shortages in remote populations and underserved communities.[43] Tele-health services have proved to be critical during COVID-19 lockdowns. In addition, e-learning facilitates the training of health workers; electronic health records can provide accurate and timely patient information, thus improving patient diagnosis and treatment; and artificial intelligence can provide valuable assistance in diagnosis.

34. The COVID-19 crisis is accelerating innovation globally to support learning continuity through distance learning. In many instances, classes moved online as schools closed. In regions with limited connectivity, countries have used more traditional distance learning channels, typically a mix of television, radio and print.[44] Digital technologies are at the heart of countries' efforts to improve and scale up their distance learning and to build more open, inclusive and flexible education systems, post-pandemic.

35. Digital technologies are also being used to improve the efficiency of agrifood systems, which is critical to food security. Mobile applications providing price information to farmers, such as the M-Farm application in Kenya,[45] can lessen market distortions and help them plan their production processes and adjust their cropping patterns. Technologies that provide timely weather-based agroadvisory messages can

[40] See www.worldbank.org/en/results/2019/11/22/stimulating-jobs-growth-entrepreneurship-income-in-rural-china-through-e-commerce.

[41] See www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_629864.pdf and https://onlinelibrary.wiley.com/doi/10.1111/issr.12212.

[42] World Health Assembly resolution 58.28.

[43] See www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/SDO2019_Preview_Booklet_Web.pdf.

[44] United Nations, "Education during COVID-19 and beyond", policy brief, August 2020.

[45] See www.mfarm.co.ke/.

help farmers to anticipate and respond to pest attacks, crop failures and climatic changes. The use of precision agriculture tools, such as Internet of Things, supports costs savings.

36. Access to financial services is an important factor to improve livelihood and income security. Digital innovation and advances in mobile technologies are opening new avenues for financial inclusion through mobile banking. Well-known examples of mobile money include M-Pesa, which originated in Kenya, and Alipay, which originated in China.

37. New technologies, such as 3D printing, can promote more environment friendly construction at a reduced cost, thus contributing to the fulfilment of Sustainable Development Goals on affordable housing and environmental protection. Some 1.6 billion people live in inadequate housing, of which almost 1 billion live in slums and informal settlements. Advances in housing-related technologies can help in securing decent housing. Innovation in materials technologies has increased the provision of prefabricated housing for displaced populations.

38. Digital technologies can empower women and girls, especially those living in rural areas with limited access to formal employment, education, health and other services. The Internet, digital platforms, mobile phones and digital financial services offer "leapfrog" opportunities and empower women and girls by building their confidence, increasing their economic power and independence and improving their access to knowledge. For instance, digital technologies can help to provide women with greater access to financial services, information on their legal entitlements concerning land and inheritance and economic and educational opportunities.

39. Digital technologies can empower marginalized or disadvantaged social groups and foster their social inclusion and participation. For persons with disabilities, who make up 15 per cent of the global population, and older persons, 46 per cent of whom also suffer from some form of disability, digital technologies can improve their quality of life, enhance their inclusion in the community and make independent living possible. For instance, online platforms enable persons with mobility difficulties to access both public services and jobs; e-learning materials adapted to the needs of students with cognitive disabilities remove barriers to learning; and digital devices and assistive technologies promote the inclusion, participation and engagement of older persons and persons with disabilities in their communities. Similarly, for indigenous peoples, information and communications technologies (ICTs) and the Internet can help them to preserve and share their culture and can provide a powerful platform for making their voices and interests known, while also helping them to overcome geographical remoteness and thereby ensure greater participation in all aspects of society.

40. A growing number of national, local and municipal governments are pursuing digital government strategies, with new tools to integrate online and offline multichannel delivery and provide a range of digital services such as the registration of businesses, the submission of taxes and the procurement of birth certificates and forms of identification. Such services are especially useful to populations in rural and remote areas. Governments are investing in the collection and use of data for policymaking and the innovative use of new technologies, such as artificial intelligence and blockchain, to make public services more accessible, accountable and efficient.[46] Information technologies are transforming the ways in which governments communicate and consult with citizens. Online platforms for public procurement, including sustainable procurement procedures based on the Sustainable Development Goals, can encourage greater transparency. Foundational digital identification (ID) systems can support fairer and more efficient distribution of social protection benefits.

[46] See www.un.org/development/desa/publications/publication/2020-united-nations-e-government-survey.

Digital government and digital services have immense potential to further promote social development, but this can only be achieved if the safeguarding of international human rights is designed into its institutional architecture (see A/74/493).

2. The digital divide

41. Given the potential of digital technology to promote social development and people's well-being, access to it is an important enabler for a socially just transition to sustainable development. Leaving no one behind means leaving no one offline. Significant digital divides, however, currently exist between regions and countries. A little more than half of the world's population uses the Internet (53.6 per cent); the other half (amounting to 3.6 billion people) does not.[47] Four fifths of the offline population are located in Africa and in the Asia-Pacific region.[48] In 2019, 87 per cent of individuals in developed countries were online, compared with 19 per cent in the least developed countries.[49]

42. Digital divides are also clearly marked within countries; already marginalized groups are overrepresented in the offline population, which is disproportionately made up of women, people in rural communities, people living in poverty and older persons, which has limited education and low literacy.[50]

43. In 2019, 48 per cent of women globally used the Internet, compared with 58 per cent of men; that gender gap ranged from 3 percentage points in developed countries to 43 percentage points in least developed countries. Between 2013 and 2019, the gender gap almost closed in the Americas and narrowed in the countries of the Commonwealth of Independent States and Europe, but grew in the Arab States, the Asia-Pacific region and Africa. Women are, on average, 26 per cent less likely than men to have a smartphone (70 per cent in South Asia and 34 per cent in Africa).[51] They are also more likely to be "sharing users" rather than owners of technological devices in certain situations; cultural norms in some regions may further restrict digital access for women.

44. A rural-urban digital divide is present across all regions. Approximately 60 per cent of the world's offline population lives in rural areas, of which a large proportion is in Africa and the Asia-Pacific region.[52] That geographical divide can be exacerbated by low population density, which makes it uneconomic for private operators to service rural and hard-to-reach areas. Moreover, affordable and reliable access to electricity is not always readily available. While the rate of new electricity connections has increased globally in recent years, electrification rates are failing to keep up in sub-Saharan Africa. By 2030, 89 per cent of people without access to modern energy will live in sub-Saharan Africa, mostly in rural areas.[53] Some 80 per cent of the world's poor live in rural areas, making affordability an additional barrier to their digital inclusion.[54] Rural populations have also lower levels of education and are less likely to possess the necessary digital skills. In the field of agriculture, smallholder farmers and others in rural areas are at risk of being left behind in the digitalization process.

[47] See www.itu.int/en/mediacentre/Pages/2019-PR19.aspx.

[48] International Telecommunication Union (ITU), "Connecting the unconnected: working together to achieve Connect 2020 Agenda targets", background paper to the special session of the Broadband Commission for Sustainable Development and the World Economic Forum at the annual meeting of the Forum in Davos-Klosters, Switzerland, January 2017.

[49] See www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf.

[50] World Bank Group, *World Development Report 2016: Digital Dividends* (Washington, D.C., 2016).

[51] OECD, *Bridging the Digital Gender Divide: Include, Upskill, Innovate* (2018).

[52] ITU, "Connecting the unconnected".

[53] International Energy Agency, *Energy Access Outlook 2017: From Poverty to Prosperity* (2017).

[54] See www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2019/04/DraftReport-EGM-Rural-Poverty2019.pdf.

45. Rapid technological change with little strategic directionality towards inclusive and sustainable development risks entrenching existing inequalities while introducing new ones. Given the high concentration of resources, skills and capacities needed to leverage digital transformations, further digitalization and data-driven development risk widening digital divides and income inequalities, rather than contributing to more inclusive and sustainable development.[55] Ironically, those on the wrong side of the digital divide are often the social groups whose well-being could be most improved by those technologies (see section III.A.1). For instance, older persons are often among those who do not benefit fully from the potential of ICTs. An OECD survey of adult skills showed that older workers remained poorly equipped to work effectively in a digital world, with one third of 55- to 65-year-old workers lacking any computer experience. Persons with disabilities also face inequalities in accessing the Internet, ICTs and assistive technology. Indigenous peoples face unique challenges in digital inclusion, including the lack of digital content in their native languages. The lack of access to mobile devices prevent those in vulnerable situations, notably women, from benefiting from advances in m-health and mobile banking. In the field of agriculture, smallholder farmers and others in rural areas are at risk of being left behind in the digitalization process. The COVID-19 crisis, which has affected almost 1.6 billion students globally, has also exacerbated disparities in learning opportunities because students from vulnerable groups lack access to remote learning during school closures.[56]

B. Managing digital transformation to advance social development and the well-being of all and facilitate a socially just transition

1. Closing the digital divide and ensuring the digital inclusion of marginalized groups

46. Factors behind the digital divide fall into four broad categories: access (poor infrastructure roll-out and a lack of an enabling regulatory environment and relevant policies); affordability (cost of connection); skills (digital literacy); and awareness and/or relevance (limited awareness of the benefits of being connected, absence of relevant content in local languages and existence of cultural barriers to Internet use). The relative importance of those factors varies across countries and regions. Realizing an inclusive digital economy and society requires a holistic approach and integrated policies tailored to the national and regional context.

47. To address the lack of efficient and affordable ICT infrastructure, especially in rural and remote areas, the private sector is an essential partner, as businesses play a leading role in ICT infrastructure finance and network deployment. In developing countries, the World Bank and other international financial institutions also provide support for ICT infrastructure projects. An enabling ICT regulatory environment is necessary in order to promote competition and equitable access for all. Regulatory tools, notably regulation on rights of way, access to network facilities and infrastructure-sharing, can drive broadband infrastructure deployment.[57] Both Bangladesh and Myanmar increased broadband coverage from less than 10 to more than 90 per cent of their populations in four years by opening up competition.[58] Universal service obligations and universal service funds, typically financed by mandatory contributions from telecommunication operators, can be used to develop

[55] United Nations Conference on Trade and Development (UNCTAD), *Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries* (2019).

[56] United Nations, “Education during COVID-19 and beyond”.

[57] See www.itu.int/net4/itu-d/irt/#/tracker-by-country/regulatory-tracker/2019 (accessed on 26 October 2020).

[58] ITU, *ICTs, LDCs and the SDGs: Achieving Universal and Affordable Internet in the Least Developed Countries* (Geneva, 2018).

ICTs in underserved and remote communities. In 2019, 164 countries are seeking to expand connectivity in rural areas by means of national broadband plans.[59] As highlighted by the Broadband Commission for Sustainable Development, established by the International Telecommunication Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), in its manifesto for universal connectivity, achieving universal access to broadband will require collective and collaborative efforts,[60] as bringing everyone online by 2030 will require an estimated $428 billion, of which $97 billion will be for sub-Saharan Africa alone.[61]

48. Affordability is another key obstacle to closing the digital divide, especially for marginalized groups and poor rural populations. Among those who are connected, many spend far more on ICT access and service than the affordability threshold of 5 per cent of gross national income per capita set by the Broadband Commission.[62] In Africa, the average price for fixed broadband is 64 per cent of the average income.[63] Regulation to ensure a more competitive market will spur infrastructure roll-out and help to align prices more closely with costs. In the United Republic of Tanzania, the entry of Viettel triggered a price war, ultimately lowering the cost of a 500 MB mobile Internet package by 70 per cent between 2015 and 2016.[64]

49. Governments can also expand affordable access to digital infrastructure by providing targeted subsidies or tax rebates to vulnerable groups. Colombia has put in place a subsidy programme for low-income households, through which it subsidizes fixed Internet access.[65] Similarly, Internet hubs for unconnected communities, set up in telecentres, community centres and public libraries, can provide free access to computers and other devices, as well as Internet connections. Rationalizing taxation can improve affordability; in 2014, handset taxes constituted, on average, 22.6 per cent of handset prices.[66]

50. The lack of digital skills is increasingly a leading barrier to digital inclusion. Urgent investment in education, literacy and digital skills is required. Schools are at the heart of such efforts, as the level of educational attainment is one of the strongest indicators of digital skills and proficiency. Promoting greater secondary school enrolment remains an important step in tackling the digital divide. Countries should develop national digital skills strategies that mainstream digital skills within national curricula, promote school connectivity and support lifelong digital learning. For instance, “Giga”, a global initiative of the United Nations Children’s Fund and ITU, is aimed at connecting every school to the Internet. Such measures can also address the skills mismatch that exists between young people’s education and the digital skills demanded by the labour market. The UNESCO Digital Literacy Global Framework can support the monitoring, assessment and further development of digital literacy across all age groups.[67] Schools that are connected to the Internet can serve as entry point to connect and empower entire local communities. Colombia has been working with the private sector to connect schools in rural areas using satellite.[68] Community centres and libraries are also important channels for promoting digital skills, especially for non-school-age populations.

[59] See https://broadbandcommission.org/Documents/SOBB-REPORT%20HIGHTLIGHTS-v3.pdf.
[60] See https://broadbandcommission.org/Documents/BroadbandCommission_manifesto.pdf.
[61] See www.itu.int/en/myitu/Publications/2020/08/31/08/38/Connecting-Humanity.
[62] ITU, “Connecting the unconnected”.
[63] See www.uneca.org/sites/default/files/PublicationFiles/eca_policy_brief_improved_access_to_broadband_rev1_0.pdf.
[64] ITU, *ICTs, LDCs and the SDGs*.
[65] ITU, “Connecting the unconnected”.
[66] GSM Association, *Digital Inclusion and Mobile Sector Taxation 2015* (London, 2015).
[67] See http://uis.unesco.org/en/news/tools-help-countries-measure-digital-literacy.
[68] ITU, “Connecting the unconnected”.

51. Low incentives to go online due to a scarcity of relevant content represent another important barrier to digital inclusion. Digital solutions, including those aimed at low-skilled and low-literate users, are most effective when content is simple, clear and culturally relevant. Jointly developing content with the end user can help to ensure that the content created is relatable, pertinent to the audience's needs, inclusive and representative of diversity in language and culture. For instance, The Talking Book, an audio player and recorder that was jointly developed with its target audience, provides easily digestible agricultural and livelihood information to rural communities in four African countries.[69] Public awareness campaigns can enhance knowledge and cultural acceptance of services available on the Internet. Low-literate people can use a device with the support of trusted intermediaries, typically younger family or community members. Thailand has established 21 rural Internet centres for teaching ICT skills to young people, who can, in turn, teach their communities how to use e-commerce platforms and expand their families' businesses and income.[70]

52. The digital inclusion of marginalized groups requires multifaceted measures. Such measures include identifying and amending exclusionary policies and systems; convening dedicated multi-stakeholder forums (government, civil society organizations representing marginalized groups, businesses and technology designers and developers) to reflect diverse views in the design of ICTs and science, technology and innovation policies; raising awareness of the digital exclusion faced by marginalized groups; and combating stereotypes through more empowering images of women, older persons and other marginalized groups. Targeted digital services represent another measure that is growing in importance. About 80 per cent of Member States provide specific digital services to young people, women, older persons, persons with disabilities, migrants and/or people living in poverty. Measures to close gender gaps include establishing gender-responsive national broadband plans, closing the digital skills gap through education and establishing gender-friendly public Internet access and training venues. ITU and the United Nations Entity for Gender Equality and the Empowerment of Women established EQUALS, a global partnership aimed at building political commitment and leveraging knowledge and resources to achieve digital gender equality.[71]

53. To address additional barriers faced by persons with disabilities, such as affordability barriers (due to lower incomes and expenses related to their disability) and limited accessibility of ICT devices, programmes and websites, it is necessary to implement targeted measures, including financial support and ICT accessibility standards, and inclusive design principles based on the concept of "design to the edges". Accessibility standards should also be integrated into national ICT procurement procedures.

54. For indigenous peoples, while digital technologies and the Internet provide opportunities for the preservation and sharing of their culture, they also pose a potential threat with regard to its dilution. Forging close partnerships among indigenous leaders, public sector organizations and private companies can enhance the digital inclusion of indigenous peoples.[72] Similarly, targeted measures should foster media pluralism that is inclusive of indigenous media and expand culturally sensitive e-government and e-community initiatives.

55. Young people (in the 15–24 age group) represent almost one quarter of the online population. In 2017, 70.6 per cent of the global youth population was online.[73]

[69] See https://unesdoc.unesco.org/ark:/48223/pf0000265537.
[70] See https://news.itu.int/thailands-rural-internet-centres-connecting-unconnected/.
[71] See www.equals.org/about-us.
[72] See www.internetsociety.org/wp-content/uploads/2020/04/ICS-2019-Report-EN.pdf.
[73] See www.itu.int/en/mediacentre/backgrounders/Pages/digital-inclusion-of-youth.aspx.

While young people are often considered to be “digital natives” and “early adopters”, they often lack job-relevant digital skills required by the labour market. Building the digital skills of young people is crucial to boosting their employability. Growing concerns about the impact of digital connectivity on the mental health and well-being of young people call for further research and policies to protect and support them.

56. There is a need for a clear and agreed set of metrics to monitor and guide efforts towards digital inclusion. Disaggregation of data by geographical area and user type (including age and gender) helps public interventions to target the most marginalized groups and areas. Creating more comprehensive digital inclusion indicators has cost implications linked to increased data collection complexity. Nevertheless, investment in such metrics is essential. National statistical agencies may be able to make better use of data collected by the private sector. Taking a participative approach in the design of indicators and data collection processes to monitor digital inclusion remains crucial.

2. Enhancing digital governance and partnerships

57. Existing digital cooperation architecture and national and international legislative frameworks have yet to keep up with the pace of digital change to provide an enabling regulatory environment that ensures accountability and transparency in the way technologies work and data are used. The design of legislation in relation to digital technologies requires an inclusive and participative approach to capture the multifaceted and dynamic impacts of digital technologies on the interests of a wide range of stakeholders.

58. Gaps in digital cooperation and governance thwart potential and current applications of digital technologies for social development. For instance, in the field of financial inclusion, fragmented systems and a lack of cooperation within and across countries hamper the full realization of the benefits of digital technology.[74] International standards for cross-border interoperability of mobile money could enhance innovation.[75] In the health sector, ongoing efforts to establish international standards for electronic health records for interoperability are a step in the right direction. Ensuring privacy, security and responsible management of data is a cornerstone of human rights in the digital age. The legal framework regulating the use of digital technologies should be designed to enforce the personal data protection and privacy principles adopted in 2018 by the High-level Committee on Management of the United Nations System Chief Executives Board for Coordination.[76] For instance, in the field of digital ID systems, the risk of data breaches could threaten the privacy of millions of people. A broad national conversation could ensure the fair, transparent and inclusive design of the national laws regulating digital ID systems, with options to opt out and tools to monitor use and redress misuse.

59. Similarly, Governments should provide directionality to innovation activities so as to ensure that emerging technologies are developed with inclusiveness and sustainability in mind. Because the alignment between science, technology and innovation, on the one hand, and the Sustainable Development Goals, on the other, has been weak, the focus of national strategies on frontier technologies is rarely on sustainable development.[77] A socially just transition towards sustainable development can be greatly facilitated by breakthrough innovations that address difficult and intertwined social and developmental challenges. Promising avenues to strengthen that alignment include State-funded programmes; initiatives led by philanthropic

[74] United Nations, High-level Panel on Digital Cooperation, “The age of digital interdependence”, report, 2019.

[75] GSM Association, *State of the Industry Report on Mobile Money 2018* (London, 2019).

[76] See www.unsystem.org/personal-data-protection-and-privacy-principles.

[77] UNCTAD, *Technology and Innovation Report 2021* (forthcoming).

organizations; mission-oriented finance programmes that are funded by State investment banks and that create demand for new technologies; and public-private initiatives such as the Global Alliance for Vaccines and Immunization.[78]

60. At the policy level, other measures include establishing technological foresight, to better understand the technological paths ahead and their potential long-term social, economic and environmental impacts; and bringing more technological expertise into government through science, technology and innovation policy fellowship programmes, thereby allowing researchers and practitioners in science, technology, engineering, arts and mathematics to contribute to policymaking. Such fellowships also allow for the recruitment of members of groups underrepresented in science, technology, engineering and mathematics, such as women, persons with disabilities and indigenous people, so as to diversify perspectives and ensure the wide distribution of benefits of science, technology and innovation policy.

61. International cooperation, including South-South, North-South and triangular collaboration, can support research networks that reach across borders, institutions and disciplines. Similarly, international collaboration can support countries in building their national capacity for science, technology and innovation. Levels of official development assistance in this area remain inadequate (less than 4 per cent commitment to developing countries in those sectors in 2017) and should be increased. In that regard, the Secretary-General launched a Road Map for Digital Cooperation in June 2020.

IV. Conclusion and policy recommendations

62. The world is at a crossroads. With 10 years left to complete the implementation of the 2030 Agenda, the COVID-19 pandemic is posing unprecedented and multifaceted challenges to social development and the well-being of people worldwide, hitting those in vulnerable situations the hardest. Those challenges intertwine with high and rising inequalities, extreme poverty, unemployment, exclusion, overconsumption, environmental degradation, food insecurity and climate change. They amplify each other, further exposing the fragility of the current systems and highlighting the need for a socially just transition to sustainable development.

63. Although digital technologies have the potential to help to address those challenges and accelerate the realization of the 2030 Agenda, they also give rise to new risks. The accelerated pace of digital transformation is expected to further deepen the digital divide in many parts of the world, which could, in turn, exacerbate existing socioeconomic inequalities. There has also been little alignment between science, technology and innovation, on the one hand, and socioeconomic policies, on the other; as a result, new technologies may not necessarily serve to advance social development or improve the well-being of all people.

64. Recovery from the COVID-19 pandemic provides a window of opportunity for promoting a socially just transition to sustainable development, where economic growth is used as a means to advance human well-being and capabilities, while protecting the planet. Enabling a socially just transition requires a shift in mindsets and approaches, from pursuing short-term economic and material gains to rebalancing economic, social and environmental objectives within the framework of the 2030 Agenda, in order to build a common sustainable future for all.

[78] See https://unctad.org/system/files/official-document/dtlstict2017d4_en.pdf.

65. To that end, the Commission may wish to consider the following recommendations:

(a) **To reduce inequality and poverty in all their dimensions and address food insecurity, Member States should identify and pursue new models of socioeconomic development, while aiming to rebalance economic efficiency and social and environmental resilience, as embodied in "people-centred and planet-sensitive" models of production and consumption;**

(b) **To support a socially just transition to sustainable development, Member States should continue to strengthen nationally appropriate social protection systems, including floors, and consider extending such coverage to all people, in particular those who are jobless or who cannot work, those in the informal economy and those affected by digital transformation or a transition towards green growth, in line with Sustainable Development Goal targets 1.3 and 3.8 and the ILO Social Protection Floors Recommendation, 2012 (No. 202). Innovative approaches to sustainably financing social protection systems and measures, as well as skills development and lifelong learning to upgrade skills, should be integral to that strategy, so as to support people in navigating life and work transitions and to ensure a human-centred future of work, in line with the ILO Centenary Declaration for the Future of Work;**

(c) **Member States should close the digital divide and promote digital inclusion, by taking into account national and regional contexts and addressing the challenges associated with access (poor infrastructure roll-out); affordability (cost of connection and of computers and similar devices); skills (digital literacy); and awareness and/or relevance (limited awareness of the benefits and absence of relevant content in local languages);**

(d) **Member States should seek to achieve universal connectivity by catalysing essential partnerships, for example, as outlined in the manifesto of the Broadband Commission;**

(e) **Member States, international communities and United Nations entities should develop a holistic and multipronged approach and targeted strategies and policies to address specific barriers to digital inclusion faced by marginalized groups and communities, in collaboration with all other stakeholders, including national and local governments, the private sector, academia, science, technology and innovation experts, civil society organizations and representatives of marginalized and disadvantaged groups, in particular women and girls, persons with disabilities, indigenous peoples and older persons;**

(f) **All stakeholders should strengthen existing and, where necessary, develop new digital governance and partnerships to formulate an enabling regulatory framework that ensures accountability and transparency in the way technologies work and data are used, in full respect of human rights, including the right to privacy, and in an inclusive and participatory manner, including through effective social dialogue, so that the interests of a wide range of stakeholders are fully incorporated;**

(g) **All stakeholders should consider providing directionality to innovation activities in order to ensure that emerging technologies are developed with inclusiveness and sustainability at their core, so that they contribute to the advancement of social development and to improving the well-being of all people and thus facilitate the implementation of the 2030 Agenda;**

(h) **The United Nations system should continue to support Member States in their pursuit of socially just transitions towards sustainable development and facilitate international digital cooperation for developing countries.**