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Parallel meetings for an in-depth review of progress made and peer learning on the subthemes of the Regional Forum: parallel meeting on the sub-theme of climate action

Background paper on Sustainable Development Goal 13 (Climate action), and the corresponding goals of Agenda 2063: The Africa We Want, of the African Union

I. Introduction

1. The year 2019 was the second warmest year on record and the end of the warmest decade (2010-2019) ever recorded. Carbon dioxide (CO_2) levels and other greenhouse gases in the atmosphere rose to new records in 2019. By the end of 2019, the warming influence of human-produced greenhouse gases had risen 45 per cent above the 1990 baseline,¹ underscoring the rapid pace of climate change.

2. On a global scale, even a small increase in temperature can have a big impact on climate and our ecosystems. Rising temperatures pose a risk to our ecosystems and livelihoods by changing weather patterns and putting the global food supply at risk. For example, air can hold approximately 7 per cent more moisture for every 1°C increase, leading to an uptick in extreme rainfall events. These events can trigger landslides, increase the rate of soil erosion and damage crops – just one example of how climate change can cause a chain reaction.

3. Climate change is affecting every country on every continent. It is disrupting national economies and affecting lives. Weather patterns are changing, sea levels are rising, and weather events are becoming more extreme. If humanity continues on the current emissions trajectory, average global temperatures will increase beyond 3°C, and will adversely affect every economy and ecosystem, and damage all livelihoods.

4. Temperatures in Africa have been rising somewhat faster than the global mean surface temperature.² Africa faces the greatest impacts from climate change, including predicted large decreases in precipitation in Northern and

² World Meteorological Organization (WMO), *State of the Climate in Africa 2019* (Geneva, 2020). Available at https://library.wmo.int/doc_num.php?explnum_id=10421.



^{*} ECA/RFSD/2021/1/Rev.1.

¹ National Oceanic and Atmospheric Administration. Annual Greenhouse Gas Index (AGGI). Updated Spring 2020. Available at www.esrl.noaa.gov/gmd/aggi/aggi.html.

South-Western South Africa, while the Ethiopian Highlands are likely to record increases in rainfall by the end of the twenty-first century. More frequent and intense tropical storms and cyclones, recurring droughts and rising sea levels are also forecasted. This is despite Africa having contributed the least to the greenhouse gases that are causing climate change.

5. For Africa, climate change directly impacts the ability of the continent to achieve any of the Sustainable Development Goals and to meet the aspirations of Agenda 2063: The Africa We Want, of the African Union. The impact of climate change on the continent is likely to be severe because of adverse direct effects, high rainfed agriculture dependence, and limited capacity to adapt. Direct effects vary widely across the continent, with some areas (such as East Africa) predicted to get wetter, but much of Southern Africa getting drier and hotter. Crop yields will be adversely affected, and the frequency of extreme weather events will increase.

6. Climate change is one of the biggest obstacles to development on the African continent. It is expected to cost 3-5 per cent of the gross domestic product (GDP) of African countries annually by 2030, but in certain scenarios this can rise to over 15 per cent.³ In 2019, African countries were already spending 2-9 per cent of GDP in responding to climate events and environmental degradation (such as storms, floods and landslides).⁴

7. Africa is the most vulnerable continent to the impacts of climate change. Vulnerability to climate change is globally generalized and locally specific. The COVID-19 pandemic will likely exacerbate the existing vulnerabilities to climate change. Progressively, mortality in the COVID-19 pandemic has also demonstrated a correlation to poverty.⁵ It is estimated that COVID-19 will cost the world economy up to 5 per cent of GDP. Thus, quite clearly, climate change already poses an even greater risk to lives, livelihoods and ecosystems, and the COVID-19 pandemic will worsen the situation. Moreover, the climate response has not thus far demonstrated the same level of urgency as has been elicited by the COVID-19 pandemic.

8. Saving lives and livelihoods requires urgent action to address both the pandemic and the climate emergency. In addition to conflicts, instability and economic crises, climate variability and change are among the key drivers of the recent increase in hunger on the continent. In the drought-prone sub-Saharan African countries, the number of undernourished people has increased by 45.6 per cent since 2012, according to the Food and Agriculture Organization of the United Nations.⁶

9. Agriculture is the backbone of Africa's economy and accounts for the majority of livelihoods across the continent. Africa is therefore an exposure and vulnerability "hot spot" for climate variability and change impacts. Projections under Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathway 8.5 suggest that warming scenarios will have devastating effects on crop production and food security.⁷

³ ECA, African Climate Policy Centre, as featured in WMO, *State of the Climate in Africa 2019* (Geneva, 2020). Available at https://library.wmo.int/doc_num.php?explnum_id=10421.

⁴ Ibid.

⁵ Polly Toynbee, "Poverty kills people: after coronavirus we can no longer ignore it", *The Guardian*, 5 May 2020. Available at www.theguardian.com/commentisfree/2020/may/05/poverty-kills-peoplecoronavirus-life-expectancy-britain.

⁶ WMO, *State of the Climate in Africa 2019* (Geneva, 2020). Available at https://library.wmo.int/doc_num.php?explnum_id=10421.

⁷ Ibid.

II. Key trends and progress towards achievement of the set targets of the given Sustainable Development Goal

10. The United Nations Framework Convention on Climate Change (UNFCCC) is the primary international, intergovernmental forum for negotiating the global response to climate change. Under UNFCCC, the Paris Agreement, adopted in 2015, aims to strengthen the global response to the threat of climate change by keeping global temperature rise this century well below 3°C above pre-industrial levels. The Agreement also aims to strengthen the ability of countries to deal with the impacts of climate change, through appropriate financial flows, a new technology framework and an enhanced capacity-building framework.

11. Post-2015, the Nationally Determined Contributions (NDCs) to the Paris Agreement have become the main instrument for guiding policy responses to climate change. However, the world remains way off track for meeting either the 1.5° C or 2° C targets that the Paris Agreement calls for. We need to reduce greenhouse gas emissions by 45 per cent from 2010 levels by 2030 and reach net zero emissions by 2050. And for that, we need political will and urgent action to set a different path. To limit global warming to 1.5° C, as called for in the Paris Agreement, greenhouse gas emissions must begin falling by 7.6 per cent each year, starting in 2020.

12. Limiting global warming to 1.5°C would require rapid, far-reaching and unprecedented changes in all aspects of society. With clear benefits to people and natural ecosystems, limiting global warming to 1.5°C compared with 2°C could go hand in hand with ensuring a more sustainable and equitable society.⁸

13. Despite all the commitments, support and actions taken through current and previous initiatives, the United Nations Environment Programme (UNEP) 2019 Emissions Gap Report found that greenhouse gas emissions have risen 1.5 per cent per year over the last decade, and that the G20 nations collectively account for 78 per cent of all emissions. According to the World Resources Institute, all NDCs to date put the world on track for a global warming of 3°C or more by 2100. Ominously, each subsequent report by IPCC paints a grimmer picture than the one before.

14. All African countries have signed the Paris Agreement, and 48 of them have already ratified it and submitted their first NDCs, and are in the process of revising these. Furthermore, most African countries are now developing climate-informed development strategies and policies that seek to enhance low-carbon development pathways in key sectors – such as agriculture, energy, water and infrastructure – while at the same time taking measures to manage climate risks. In this regard, the African Union has been working with member States, through the Africa Risk Capacity, to implement innovative climate risk management through insurance.

15. The African Union Commission, supported by the Economic Commission for Africa (ECA), is also finalizing the Africa Climate Change Strategy (2020–2030). The strategy is designed to be a framework to guide climate actions in member States, to ensure that the impacts of climate change are managed in tandem with development of the continent's economies, using emissions avoidance pathways. The strategy will also be key in undergirding Africa's engagement at the twenty-sixth session of the Conference of the

⁸ IPCC, Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (2019). Available at www.ipcc.ch/sr15/.

Parties to the United Nations Framework Convention on Climate Change, where the continent will urge greater ambition and more urgency towards zero net emissions in developed countries, who bear the principal responsibility for the climate crisis.

16. The first iteration of African NDCs reflected this preoccupation, although implementation was hampered by financial constraints. Despite this focus, the African continent has massive mitigation potential through the carbon sequestration capacity of its ecosystems, as well as the opportunity to embark on carbon-neutral development pathways.

17. African countries are now in the process of revising their NDCs, with support from a multiplicity of institutions and programmes. ECA has developed a framework to guide the NDC revisions process. The framework is designed to mainstream climate actions into national development processes through a sectoral lens. It recognizes that, in order to meet the development aspirations of the continent, some emissions may have to rise before peaking and declining. This is particularly the case if the energy deficit is to be closed. Similarly, the massive infrastructure investments that must be undertaken will also result in increases in emissions, as will rapid urbanization and modernization of agricultural production and distribution systems. Such increases in emissions will need to be complemented by emissions reductions in developed countries.

18. Healthy ecosystems are critical for healthy functioning economic and social systems. Over half (55 per cent) of global GDP, equal to \$ 41.7 trillion, is dependent on high-functioning biodiversity and ecosystem services. Regrettably, ecosystems and the services they provide – such as oxygen, water and protection from flooding – are also affected by climate change and its impacts. Additionally, climate change is projected to decrease biodiversity and wetland regions, leading to loss of soil and trees, and the possible proliferation of zoonotic diseases (e.g. COVID-19) that could have adverse economic consequences. The poor and vulnerable communities, including mainly women and youth, mostly depend on ecosystem services and are thus the most affected by crisis. Africa is also home to vast tropical forests and savannah. Together with the Congo Basin peatlands and other wetlands ecosystems, the continent probably sequesters more carbon than it emits.

19. The challenge is for the continent to maintain its net carbon-positive status while accelerating its development efforts to meet its Sustainable Development Goals and Agenda 2063 aspirations. Given the critical role of agriculture in Africa's economic growth and development, heavy investment in research and development on the most appropriate climate adaptation interventions is vital in moving forward. Practical ways that can see accelerated development should include new and innovative ways of "doing business" that enable socially inclusive, environmentally sustainable economic development, leaving no one behind. Changes in policy, budgeting and monitoring frameworks, in ways that engage and empower the diverse climate change actors involved, are key in shaping the institutions necessary to achieve the Sustainable Development Goals and the goals of Agenda 2063. The climate change-related interventions of UNEP are geared towards supporting the continent to reduce vulnerability and build resilience to the impacts of climate change through ecosystem-based adaptation. UNEP also supports the continent in promoting development of renewable sources of energy and energy efficiency as part of the Sustainable Energy for All initiative and climate mitigation efforts.

20. In the spirit of "one Africa, one voice, one position", ECA – in collaboration with the African Union Commission, the African Development Bank and other development partners – has provided support and technical backstopping to the African Group of Negotiators, strengthening their capacity

in the climate negotiations for key outcomes for Africa, including on loss and damage, and non-carbon benefits of climate actions.

III. Challenges, constraints and emerging issues, especially COVID-19 and its implications and impact on implementation and achievement of the goals

21. The costs associated with extreme and slow-onset climate-related events are growing exponentially. African countries are already allocating significant proportions of their budgets to implement policies that aim at responding to the impacts of events such as droughts, floods, crop failures, livestock losses, infrastructure destruction and so on. In some cases, up to 10 per cent of GDP is already diverted towards climate change adaptation. This puts enormous budgetary constraints on already limited resources, and constrains the capacity of most African countries to achieve any of the Sustainable Development Goals.

22. A second challenge is that, to effectively implement the actions identified in their NDCs, African countries require more than \$ 3 trillion in both domestic and international financing. However, most African economies are highly indebted, with little flexibility to mobilize domestic resources for climate actions; and the capitalization of international climate funds has been much lower than the required level to meet the conditional funding requirements of Africa's NDCs.

23. Global climate-related financial flows saw a 17 per cent rise from 2013 to 2016, largely due to private investment in renewable energy, which represents the largest segment in total climate-related flows, to the amount of \$ 681 billion. However, investment in fossil fuels continues to be higher than in climate activities, to the amount of \$ 781 billion in 2016. To achieve a lowcarbon, climate-resilient transition, a much greater scale of annual investment in renewable energy is required. In 2019, at least 120 of the 153 developing countries had undertaken activities to formulate and implement national adaptation plans to enhance climate adaptation and resilience, an increase of 29 countries over the previous year. Furthermore, countries have made efforts to develop disaster risk reduction strategies and plans and, as a result, 25 countries in Africa have national disaster risk reduction strategies and plans aligned with the Sendai Framework, showing a slight increase compared to last year. However, there has been slow progress in achieving target (e) of the Sendai Framework and the programme of action for its implementation in Africa – substantially increase the number of countries with national and local disaster risk reduction strategies by 2020 - indicating the need for concerted action to advance the progress.

24. Africa and the small island developing States are the regions facing the largest capacity gaps with regard to climate services. Africa also has the least developed land-based observation network of all continents. In addition to the limited physical observation capacity, the continent is also lagging in terms of analytical skills to interpret and analyse the little available climate information. National meteorological and hydrological services (NMHSs) are generally underfunded and understaffed, with limited mandates to effect policies. Furthermore, the continent in general lacks an enabling environment to promote the uptake and use of weather and climate information in decision-making.

A. Limited climate finance

Article 6 of the Paris Agreement makes provision for the mobilization of 25. new and adequate finance by developed parties to support climate actions in developing countries. The Agreement projected that \$ 100 billion would be mobilized annually from 2020. However, this amount has not been mobilized. Instead, public resources have accounted for around \$ 10 billion annually, with no indication that more public funds will be forthcoming. UNFCCC set up climate funds such as the Green Climate Fund, the Adaptation Fund and the Global Environment Facility. These remain largely underresourced. Additional challenges are the complex mechanisms for accessing these funds, which means that many African countries are still learning the access modalities, and have not been able to fully utilize the existing funds. Finally, the structure and disbursement modalities have also meant that the climate funds that have been accessed have been to support projects, particularly adaptation projects. This has curtailed the ability of African member States to build climate actions into national long-term plans and programmes.

26. African countries have submitted ambitious NDCs requiring close to \$ 3 trillion of conditional and unconditional financing to implement. With increasingly shrinking fiscal space and competing demands for limited public funds, many African countries will find it challenging to implement even the unconditional components of their NDCs. This means that the private sector, which is an engine of growth, has to be the main source of finance for implementation of NDCs.

27. COVID-19, and especially the reallocation of funds to bailout and stimulus programmes, is likely to negatively affect available public funds for climate action. It is not clear how developed countries will meet their pledged contributions to climate funds in the light of severe budgetary contractions caused by the pandemic. Developing countries, already contributing a significant portion of their own budgets to climate change adaptation, will certainly experience further resource constraints, as scarce resources have been diverted towards the public health emergency caused by the pandemic.

B. Limited technology transfer

As with climate finance, the transfer of technologies to enable green 28. transitions on the continent remains limited. The major factors hindering transfer of technology include complex and generally unfavourable intellectual property rights regimes (laws and enforcement), prohibitive costs of accessing technologies, and poor absorptive capacity in recipient countries, largely caused by weak institutions that are underfunded and underresourced. Generally, limited public spending allocated to research and development on average is about 0.38-0.55 per cent of GDP in sub-Saharan countries, below the 1 per cent of GDP target that the Assembly of Heads of State and Government of the African Union has been recommending over the past decade. The marginal public funding typically allocated to climate and environmentally sound technologies is devoted to basic research and development. Progress on Sustainable Development Goal 13 targets relating to climate change mitigation and adaptation technologies can nevertheless benefit from progress made on Goals 9 (target 8), 12.A (target 14), and 17 (targets 6 and 8), which to a large extent address the ways of closing technological gaps, through financing, and North-South and South-South cooperation.

C. Capacity challenges

Most African member States experience limitations of institutional 29. capacities as well as skills to conceptualize and implement climate actions. Institutional limitations include limited mandates for NMHSs, which constrain their ability to integrate climate information into national development processes; limited investment in climate observation infrastructure, leading to limited weather and climate information to support decision-making at all levels; and inadequate legislation and policies to support mainstreaming of weather and climate information. Some initiatives at the continental and regional levels to address these challenges, respectively, include the Climate Research for Development in Africa (CR4D), and the Weather and Climate Information Services (CIS) for Africa (WISER) and the ClimDev-Africa Initiative and the West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL). CR4D seeks to contribute towards building the research and analytical capacities of African scientists and harness their scientific innovations to tackle the urgent impacts of climate change that hinder sustainable development in Africa. To date, through CR4D support, 20 researchers, a majority of whom are women, are conducting research in a range of climate-sensitive sectors – such as forestry, health and food security, and economics - to better prepare Africa's people to deal with the impacts of climate change. Through such endeavours, CR4D is supporting user-driven and co-generated applied climate research that explores avenues and best practices to address the gap between climate science, services and policy. Furthermore, the programme facilitates and strengthens interactions between scientists and decision makers, thereby improving the quality, access and usability of climate information, knowledge and services for different socioeconomic sectors. In a nutshell, CR4D builds a bridge between African decision makers and the climate science community, thereby catalysing the production of actionable climate research outputs that will inform adaptation decisions in Africa.

30. For the last five years, the WISER project has been strengthening the enabling policy and legislative environments to enhance the uptake and use of weather and climate information. WISER promotes the integration of CIS into development policy across key development sectors, whose ultimate impact is to ensure long-term sustainability of CIS as a core input into development policy. The ClimDev-Africa initiative supports investment in weather observation infrastructures and analytical capacities of NMHSs through the upgrading of observation networks and infrastructure, which will enhance the provision of essential data for climate data, information and services, and early warning systems. In addition, ClimDev-Africa's goal is to conduct deeper analysis of climate data and information for understanding the effects of climate change on vulnerabilities of sectors, socioeconomic groups and livelihoods. It analyses climate change adaptation and mitigation options in climate-resilient and low-carbon development pathways for key sectors, and assesses the economics of these pathways and climate finance arrangements. WASCAL is a large-scale research centre designed to actively participate in the fight against climate change in Africa and thereby enhance the resilience of human and environmental systems to climate change and increased variability. The centre does so by strengthening the research infrastructure and capacity in West Africa related to climate change and by pooling the expertise of 10 West African countries and Germany.⁹

31. Although greenhouse gas emissions are projected to drop about 6 per cent in 2020 due to travel bans and economic slowdowns resulting from the COVID-19 pandemic, this improvement is only temporary. Once the global

⁹ Available at <u>www.wascal.org</u>.

economy begins to recover from the pandemic, emissions are expected to increase to higher levels. Analyses of stimulus packages in developed countries so far show that, in fact, many of the beneficiaries are fossil fuel industries.¹⁰ In many countries, recovery programmes also support direct investments in new fossil fuel-based investments, such as coal plants.¹¹ The challenge, therefore, is to ensure that recovery programmes are climate-informed and put economies on zero-emissions pathways.

D. Just transitions

32. The climate response will have significant implications on the continent's natural resources. Africa is home to significant and as yet largely unexploited coal, oil and natural gas deposits. In the absence of support to mitigate such impacts, constraints on the ability to exploit its fossil fuel resources will constrain the growth of the continent's economies. Thus, the member States should advocate for just transitions and ensure that their climate actions take account of the potential impacts of shifts away from fossil fuels on their economies. Fossil fuels (oil, gas and coal) remain the main source of energy in Africa, accounting for 81 per cent of global total primary energy supply.¹² IEA (2019) notes that Africa's average net income from oil and natural gas from 2010 to 2018 was \$ 184 billion. Africa's exports of oil, gas and minerals account for 70 per cent of exports and 50 per cent of revenue. For resource-rich African countries, the COVID-19 crisis has uncovered the vulnerabilities of a high-level concentration of exports and revenue in commodities to price fluctuations and a slump in demand. Diversification of the economy is critical for long-term sustainable development. Countries should divest away from fossil fuels and move towards an economy that thrives on value addition, towards a green industrialization.

33. Transition dynamics towards low carbon are also complicated by the fact that Africa is both a heavily-endowed region with respect to resources, but severely deprived in terms of access to clean, affordable and sustainable energy. With Africa's population of 1.2 billion projected to double by 2050, economic growth and the demand for energy will necessarily surge. According to the International Renewable Energy Agency, energy demand across the region is expected to double by 2040. Moreover, according to a study by the United Nations University Institute for Natural Resources in Africa,¹³ there is a risk that, by 2050, \$ 1.3 trillion could be "stranded" across the world. As several African countries are still reliant on their natural resources for exports and revenue for development, and to lift millions out of poverty, the issue of "stranded assets" could pose a colossal challenge if they are not preparing and planning for that eventuality, as the world is moving towards a low-carbon-emissions pathway.

34. Global fossil fuel consumption subsidies, which were estimated at more than \$ 300 billion in 2017, are a major barrier for a transition to low-carbon and sustainable economic development. Subsidies reduce the amount of resources that could have been allocated to other more efficient sectors, including renewable energy; they decrease the competitiveness of low-carbon

¹⁰ C. Hepburn and others, "Will Covid-19 fiscal recovery packages accelerate or retard progress on climate change?" Oxford Review of Economic Policy, 36 (S1) (2020).

¹¹ ACPC post Covid climate change and development discussion paper.

¹² United Nations University Institute for Natural Resources in Africa, "Africa's Development in the Age of Stranded Assets", discussion paper, 2019. Available at

 $https://i.unu.edu/media/inra.unu.edu/publication/5247/DIscussion-paper-Africas-Development-in-the-age-of-stranded-Assets_INRAReport2019.pdf.$

¹³ Ibid.

industries and businesses, and increase the risk of stranded assets as exploration and production of fossil fuels are encouraged.

IV. Opportunities and transformative actions, partnerships and other measures for a sustainable recovery from COVID-19, and accelerating implementation, in line with the decade of action

The African continent possesses significant mitigation potential which, 35. if fully unlocked, can realize substantial resource inflows into the continent to fund adaptation and resilience-building. The massive untapped potential for clean renewable energy on the continent is an advantage for its own lowemission development. Indeed, Africa is endowed with 42 of the 63 elements that are required in low-carbon technologies and, as countries reconfigure their approaches in light of COVID-19, this could provide an opportunity to leapfrog to a low-carbon transition as a result of the demand for "green economy minerals" for low-carbon technologies. "Green economy minerals" include cobalt, nickel, copper, iron, lithium, graphite and rare minerals that are used to produce inputs for wind turbines, solar panels and batteries. While resourcerich African countries rely heavily on fossil fuels as their main source of energy, as well as exports and revenue, COVID-19 uncovered the vulnerabilities of high reliability on these commodities as prices and demand slumped. It also highlighted the inevitability that a low-carbon transition in the rest of the world could lead to stranded assets in Africa. African countries will need to take into consideration the growing demand for "green economy minerals" that are inputs to new technologies.

36. Given the above, a shift to renewable resources could incur costs to African countries in the short term, but they are set to gain in the long term. When strategizing stimulus packages post-COVID-19, African Governments should favour renewable energy, as it is cheaper and cleaner, and offers a faster transition towards low-carbon development.

37. Climate change offers significant opportunities for public and private investments in technologies and processes for clean development in Africa, including renewable energy, thereby boosting trade, industrialization, agricultural production and food security, while enhancing climate resilience and creating clean jobs for the continent's increasingly youthful population. The NDCs of all African countries refer to actions involving clean energy in one form or another, and covering all end-use sectors and technologies. However, current NDCs of African countries only have 22,000 megawatts of clean energy actions, representing an investment opportunity of only about \$ 40 billion, although there is scope for those actions to increase five-fold or more, representing an investment opportunity of over \$ 200 billion by 2030.

38. Mobilizing the high amount of investment needed requires innovative approaches to leverage limited public resources against a background of competing demands for resources, so that financing can be mobilized, particularly from the private sector. The Sustainable Development Goal 7 Initiative of ECA aims to achieve this by providing a mechanism to fast-track policy and regulatory reforms to put in place the enabling environment needed to enhance the confidence of investors and support countries to address key issues, including, among others:

(a) Policy and regulatory reforms covering generation, transmission and distribution;

(b) Strong institutions and enhanced bankability of utilities;

(c) Cost-effective tariffs and subsidy reform;

(d) Clear, structured and transparent procurement plans for long-term investments and a level playing field for all market participants;

(e) Rule of law and a transparent and accessible legal system;

(f) Promotion of innovation and use of digitalization for robust grid and decentralized systems;

(g) Responding to climate change and enhanced access through investment in interconnections, and strong and climate-resilient grids for cross-border trade with higher shares of renewables.

39. Climate-smart sustainable land and water use, agricultural practices and ecosystem management can turn Africa from a hungry continent into a net food exporter in a short period of time. It is possible to redesign food systems to deliver healthy foods, allow farming families to make a good living, and support thriving societies, while generating sustainable ecosystem services through increased agricultural crop diversification, irrigation, agriculture research and development, and innovative use of inputs and extension services. In their NDCs, most African countries mentioned climate-smart agriculture as one of their perceived methods to reduce greenhouse gas emissions, transform agriculture and build resilience. Hence, climate-smart agriculture is an approach that provides conditions for the achievement of sustainable agricultural for food security under climate change.

40. As highlighted by target 13.1, there is a need to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries, taking advantage of recently developed approaches - such as the ecosystem-based adaptation approach of the Convention on Biological Diversity, and the Climate Risk Informed Decision Analysis of the United Nations Educational, Scientific and Cultural Organization – which promote the use of nature-based solutions to develop effective adaptation pathways. United Nations-designated sites - such as the 85 Biosphere Reserves in 31 countries in Africa, 40 Natural Heritage Sites, and more than 400 Ramsar sites in the region – have a particular role in the pathway to long-term sustainable development, through demonstration of the co-benefits of nature-based solutions to strengthen disaster risk reduction. These sites are committed to conservation and ecosystem restoration, providing important areas of carbon storage with higher-than-average natural resilience and balanced human impact, and natural laboratories for monitoring of climate change and the piloting of adaptation strategies.

41. African States are among the most highly vulnerable to economic and environmental shocks. The unprecedented situation under the COVID-19 pandemic has placed an additional burden on African countries, particularly on the financing side. Debt was already a major concern for many developing countries, with pre-COVID debt reaching over \$ 9 trillion in 2019, and has now been hugely exacerbated by the economic collapse. Linking post-COVID-19 debt relief to climate and nature investments, through a debt swap mechanism, can help support a green and inclusive post-COVID-19 recovery. Large-scale debt for climate and nature swaps work through agreements with creditors for debt to be reduced – either by conversion to local currency and/or paid at a lower interest rate and some form of debt write-off – and the money saved is invested in budget support for climate resilience or biodiversity protection for poverty reduction.

42. Protecting climate and biodiversity while debt stands at record levels will be critical in the coming years. Post-COVID-19 economic recovery costs could deplete the financial resources needed to address the climate crisis and environmental degradation. Swapping debt for nature and climate protection

provides a bridge to greater debt sustainability, potentially benefitting both agendas.

43. As well as ensuring funded activities align with national climate and nature policies and plans, and with broader frameworks including Sustainable Development Goals and Sendai Framework for Disaster Risk Reduction indicators, monitoring and accountability procedures need to be based on context-specific and locally relevant indicators.

V. Key messages

44. Key messages include:

(a) Africa calls for a just energy transition that balances mitigation responsibility and the continent's imperative to develop. Developed countries should in turn enhance their climate ambitions. Respect for human rights must lead to a principle of international solidarity that alone can guarantee the global management of climate change. The principle of responsibility for future generations and the principle of solidarity of all towards all are essential for an equitable management of the ecological crisis;

(b) Climate adaptation measures need to be built from the bottom up, engaging local and indigenous knowledge systems from the start, while considering nature-based solutions. Nature-based solutions should be prioritized, in recognition of the environmental, social and economic benefits of this approach, and to help build resilience;

(c) Awareness-raising coupled with capacity development on climate change mitigation, adaptation, impact reduction and early warning at all levels is a key fundamental to achieve Sustainable Development Goal 13;

(d) Governments must promote a whole-of-society approach that will ensure coherent development and implementation of adequately financed disaster risk reduction, and climate change adaptation and mitigation strategies. Additional efforts must be exerted to ensure that disaster risk reduction strategies are informed by risk assessments and that adequate frameworks are put in place to strengthen multi-hazard early warning systems;

(e) Protecting climate and biodiversity while debt stands at record levels will be critical in the coming years. Swapping debt for nature and climate protection provides a bridge to greater debt sustainability, potentially benefitting both agendas.

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