A Great Transition Toward a Green Development Epoch: Low carbon, inclusive, and harmonious with nature

——2021 Policy Recommendations of the China Council for International Cooperation on Environment and Development

A once-in-a-generation transition is underway. The world faces multiple crises, including COVID-19 and its economic consequences, climate change, the destruction of nature, and pollution. The 2021 Intergovernmental Panel on Climate Change report warns that climate change is widespread, rapid, and intensifying, with some changes, such as the rise in sea level, being irreversible. The fifth Global Biodiversity Outlook concludes that the rate of biodiversity loss is unprecedented in human history. The ongoing economic recovery must place a strategic priority on integrating low-carbon solutions, nature stewardship, and pollution protection.

Global action against COVID-19 has shown us again that global ecosystems are interconnected. No country or region can face these crises alone. Therefore, global solidarity and international cooperation in reducing wildlife trade and the destruction of natural habitats are urgently needed to reduce the risks of future pandemics caused by zoonotic diseases. Commitments are deepening across countries and all levels of society to reach carbon neutrality, protect nature, minimize waste and pollution, fund integrated approaches like One Health, and support greater equity. The Convention on Biological Diversity's 15th Conference of the Parties, in Kunming, and the 26th United Nations Climate Change Conference of the Parties (UNFCCC COP 26), in Glasgow, present historic opportunities to advance an inclusive, carbon-neutral, and nature-positive agenda. Efforts to strengthen environmental governance and enhance synergies among multilateral environmental agreements are especially significant to support integrated policies.

The members of the China Council for International Cooperation on Environment and Development (CCICED) greatly appreciate President Xi's commitment to building an ecologically sustainable world and to the harmonious co-existence of humanity and nature. This commitment includes targets and measures mainstreaming high-quality, green development as detailed in the 14th Five-Year Plan and 2035 Long Range Objectives.

CCICED members believe that President Xi's announcement of the nation's plan for carbon peaking and carbon neutrality sets a clear direction for China's post-pandemic recovery and green prosperity. The world is looking to China for experience and inspiration. To implement its commitments in an efficient, stable, and predictable manner, China needs to pay attention to policy coherence across economic sectors, the interplay

between regulatory binding targets and market-based pricing mechanisms, and the dynamic role of demand-side consumption.

Accordingly, based on the research outcomes of ongoing Special Policy Studies and discussions during the Annual General Meeting, CCICED members recommend that China grasp and capitalize upon the dynamic opportunities offered by technological innovation and the green industrial revolution; pay special attention to targets, timelines, and pathways for structural transformation; formulate actions at both the macro and micro levels; and set out clear, robust, integrated, and systemic green policies that advance and implement a comprehensive socio-economic green transition. CCICED highlights the following broad areas for action:

- **Value the integrity of global ecosystems.** Mainstream actions for addressing climate change, protecting biodiversity and ecosystems, and controlling pollution, and enhance policy coordination across regions. Examine steps to establish green responsibility mechanisms through ecological and natural capital accounting in ways that strengthen the micro-level foundation for green, low-carbon development and that ensure a comprehensive, stable, and inclusive transition.

- **Develop a new model for green urbanization,** taking it as a strategic starting point for commitments on carbon peaking and carbon neutrality. With urban renewal, county development, and green rural revitalization as the three pillars, innovate spatial planning with low-carbon roadmaps.

- **Jointly promote sustainable production and consumption,** with an emphasis on the utility of digital technology innovation for sustainability. Integrate low-carbon and ecosystem protection standards into green supply chains, including upstream product design to expand materials and product reuse and recycling, to bolster circular economy practices. Establish a green "dual circulation" model to provide new impetus for high-quality development.

- **Align domestic green targets and measures with multilateral and international cooperation:** Develop closer green development partnerships, promote an equitable and inclusive green transition, and share development achievements, including through the adoption of green investment and green financing, green supply chains and sustainable trade, and jointly building the green Belt and Road Initiative.

Specific suggestions are as follows:

I. Enhance global ecosystem integrity, prioritize nature agendas, and promote a new development pattern of harmony between nature and humanity.

a. Coordinate and implement the carbon-peaking and carbon-neutrality targets

1.Institutionalize China's high-level central working group on carbon peaking and carbon neutrality to advance inter-agency and inter-sectoral coordination in the development of carbon-neutral interim targets, timetables, and action roadmaps. Encourage those provinces and cities that have rich endowments in renewable energy, as well as the sectors that produce power, steel, and cement, and other high-carbon industries to reach peak CO_2 emissions ahead of schedule. By 2050, build a carbon-neutral economic and social system, striving to reach near-zero CO_2 emissions.

2.Update the nationally determined contributions plan prior to the Glasgow UNFCCC COP 26, with a view to closing the gap between collective global ambitions and the Paris Agreement targets. Establish an absolute carbon-emission cap control system. Replace the total energy consumption control target with a binding target for total greenhouse gas (GHG) emissions control. Pay full attention to reducing non-CO_2 GHG emissions, such as methane emissions. Step up measures to drive energy efficiency and demand-side management. Bring all high emissions sectors into the carbon market as soon as possible. Provide long-term, clear, stringent, and stable market expectations and an effective price transmission mechanism to support the national emissions trading system. Take account of differences in carbon-peaking timetables within and between sectors and regions, and enable market-based approaches to provide price, investment, and other incentives for early action. Clarify the asset attributes of carbon emission rights, promote the establishment of carbon accounts for market players, and improve the disclosure of carbon emissions. Reserve a policy window for introducing a carbon tax for key sectors not covered under the emissions trading system, supported by a hybrid carbon pricing system at an opportune time. Implement climate-friendly air pollution prevention and control strategies.

3.Strengthen the legal basis for the climate transition. Encourage ongoing public awareness and education regarding the "dual carbon" objectives. Encourage all actors in society to play their part. Undertake climate risk assessments associated with extreme weather events like flooding, heat waves, coastal storms, droughts, and other climate stressors, and increase climate adaptation, including in the wider river basin areas of the Yangtze and Yellow Rivers.

4.Accelerate the decarbonization of the manufacturing sector, including by strictly controlling the increase of production capacity of industries with high energy consumption and high emissions. Promote net-zero technological innovation and applied scientific research in hard-to-address industries like steel, non-ferrous metals, cement, and the chemical and petrochemical sector. Integrate low-carbon, climate-resilient, and nature-positive infrastructure planning and project design, paying special attention to achieving high rates of renewable energy penetration with minimal biodiversity impacts. Develop and deploy low-carbon roadmaps for other key areas, including transportation, construction, and so on.

5.Set out clear targets, timetables and detailed green investment roadmaps to achieve carbon peaking before 2030 and carbon neutrality before 2060. Conduct cost-benefit analyses of proposed carbon-intensive infrastructure, including the analysis of economic and financial risks such as stranded assets. Fully implement climate risk

disclosure and climate risk reporting. Encourage innovation in climate investment and in financing products and instruments, initiate local pilot projects, and develop an applicable, efficient, and advanced classification standard system for climate investment and financing. Actively phase out fossil fuel subsidies.

6.Address equity and justice issues that may arise from the green transition prudently, especially employment and economic development in coal-reliant areas. Advance gender equity in this context. Develop coal phase-out mechanisms. Consider solutions such as resettlement compensation and employment transition. Establish dedicated funds for a just transition and the orderly phase-out of coal, for the upgrading of high energy-consuming industries and for the inclusive transformation of underdeveloped areas.

b. Mainstream biodiversity conservation

7.Mainstream biodiversity conservation within key economic sectors; integrate nature and nature-based solutions into financial planning for public and private sectors. Develop science-based, quantifiable, ambitious, and pragmatic biodiversity objectives and associated indicators to track progress, covering the pressures on biodiversity, the state of biodiversity, and the impacts and outcomes of response measures.

8.Strengthen the system of national parks and protected areas by identifying low-cost and high-efficiency priority conservation areas; improve the effectiveness of protection based on respective capabilities; and ensure high levels of ecological integrity within each national park, as well as marine and wilderness protected areas. Pay special attention to maintaining green connectivity in cross-provincial and cross-border biodiversity hotspots. Assess the overall carbon-sequestration potential of the Ecological Conservation Redline areas, and identify areas with a high carbon-sequestration function.

9.Take actions to promote the full implementation of the Post-2020 Global Biodiversity Framework, and share innovative implementation mechanisms such as the ecological redlines, eco-compensation, and other actions. Support these actions with reliable and operable indicators capable of assessing progress in ways that take full account of natural capital and ecosystem services, treating nature and its systems as valuable assets. Actively contribute to meeting the goals of the UN Decade of Ecological Restoration.

10.Scale up biodiversity-relevant conservation financing and investments. Highlight ecological protection, conservation, restoration, and regeneration as key focuses of green finance. Further identify the steps needed to ensure public and private finance flows are consistent with biodiversity objectives, supported by conservation finance pilots, risk disclosure, reporting, stress-testing, and wider public accountability for private sector investments. Apply financial technology in biodiversity conservation, including establishing "fintech and biodiversity" pilot demonstration areas. Ensure that the benefits derived through conservation accrue to local communities. Evaluate emerging international conservation finance goals such as green debt arrangements.

11.Actively identify and subsequently reform environmentally harmful incentives, regulations, spatial planning, subsidies, and other measures. For example, replace environmentally harmful agricultural subsidies with low-carbon, regenerative agricultural practices. Introduce convenient and quantifiable subsidy identification standards according to local conditions. Increase investment in agricultural science innovation and technological application. Provide stronger support for female farmers and provide much-needed knowledge and skills training.

12.Jointly promote livestock, wildlife, and plant health; ecosystem integrity; disease prevention; and early warning systems within the One Health framework that gives full play to "whole-of-society" approaches.

c. Strengthen integrated management of land and sea, and promote integrated ocean management based on ecosystems

13.Strengthen the protection of key marine species and the conservation and restoration of their habitats to improve the quality and stability of marine ecosystems. Conduct baseline studies of marine ecosystem values. Assess the impact of coastal development and other activities on marine natural capital. Monitor and assess the effectiveness of the conservation and adaptation of vulnerable and carbon-rich coastal ecosystems such as mangroves, seagrass beds, salt marshes, coral reefs, dunes, and islands. Enhance the protection and restoration of coastal ecosystems, and build stronger climate resilience, including through coastal nature-based solutions.

14.Establish and improve joint scientific and technological research mechanisms to improve science-based marine and oceans management, including tackling marine pollution from point and non-point sources. Strengthen pollution prevention and control with integrated land and sea management. Bolster the monitoring and traceability of mercury pollutants, tackle marine plastic and micro-plastic pollution at the source, reduce plastic waste, and enhance the capacity of waste management and disposal.

15.Set out targets and plans for the sustainable management of the seafood supply chain. Implement advanced traceability and monitoring systems, regulatory targets, and broader public awareness campaigns regarding sustainable fishery benefits. Formulate and deploy science-based indicators, standards, and management mechanisms to track the progress of sustainable fisheries. Develop long-term and profitable business models. Identify the green financial instruments and market opportunities for the sustainable sourcing of fisheries. Integrate community and social resources to explore the joint management model of fishery resources protection.

16.Enrich global marine public goods, and deeply engage in global marine environmental governance. Drawing on international experiences, set up blue economy financing principles, standards, and guidelines in line with China's conditions; pioneer the development of the Bohai Bay and Guangdong-Hong Kong-Macau Greater Bay Area as "Beautiful Bay" demonstration areas.

II. With urban renewal, county development, and green rural revitalization as the three pillars, create a new model of green urbanization and a low-carbon spatial pattern.

17.Ensure that carbon peaking and carbon neutrality form the strategic foundation of green urbanization and spatial planning. Fully consider the leading role of urban clusters in economic development and environmental protection, and promote rural revitalization and urban green transformation. Redefine urban-rural functions and the division of labour with a new supply of ecological products. Support local governments to formulate an urban sustainable development vision and strategy based on a multi-stakeholder participation process.

18.Optimize urban renewal actions as a major opportunity for green urban transformation. Establish green urban renewal targets, design and construction standards, and best practices that enhance multiple benefits such as ecological protection, public health, and enhanced human capital and quality of life. Fully recognize the unique cultural and historical value of old towns, and revitalize them in various ways to transform them into economic benefits. Strictly control large-scale demolition and construction, and restore brownfield sites. Increase the green revitalization of older neighbourhoods and older buildings, including through circular and green building materials and through retrofitting plans to increase energy efficiency. Assess impacts on green landscapes and urban spaces, and on GHG emissions as part of the approval reviews of new construction and development projects.

19.Intensify the transformation to green, low-carbon urban infrastructure. Increase the construction and management of urban stormwater systems, including through nature-based solutions such as sponge cities. Given warming average temperatures, pay special attention to the mitigation of urban heat island effects. Increase investments and financing in green urban infrastructure projects. Explore and pilot neighbourhoods powered by renewable energy; realize the role of digital smart towns in supporting carbon neutrality.

20.Improve rural and county green development, including reform of the rural land acquisition system and land transfer system. Moderately increase farmers' rights to engage in independent land transactions, and combine the revitalization of land resources with modern green agricultural transformation, industrial layout adjustment, and farmers' employment and sustained income increase. Give full play to counties as the bridge to link urban and rural areas in terms of industries and resource allocation to synchronize rural revitalization and urban green transformation.

21.Adhere to the "one pole and multiple wings" rural integrated development model dominated by green development and supported by diversified development. Assist local cities in clarifying their green transition roadmaps and advantages; greatly expand the space for green development; and help underdeveloped areas in deploying green technologies and practices capable of leapfrogging older development patterns. Promote ecological and climate-friendly tourism, and guide villages in planning green development in the context of their local conditions, promoting the transformation of ecological resources and advantages into economic resources and industrial advantages. Provide capacity-building funds and set qualifications for a green, smart, and participatory urban transition. Promote integration among rural ecological environment protection, rural environment governance, and the development of a rural economy suitable to the region. Realize the diversified rural industrial operation at an appropriate scale, guided by green and ecological agriculture.

III. Empower digital technology innovation for sustainability, jointly promote sustainable production and consumption, and build domestic and global green value chains.

a.Build a green supply chain incorporating a circular economy

22.Incorporate green, biodiversity-positive, and low-carbon elements into the upstream product design and production as well as downstream consumption of the value chain both within China and in international trade. Follow the principles of a circular economy, and encourage the sustainable transformation of global production and consumption through improved product standards, green finance, advanced technologies, and strengthening the supervision and innovation of business models.

23.Strengthen the establishment of relevant laws and regulations, and clarify the responsibilities and obligations of participants in the global value chains. Accelerate the development of a green value chain support system, including through due diligence systems, to ensure the sustainability of production at source, with a special focus on the deforestation risk posed by soft commodities (soy, palm, beef, pulp and paper, timber, etc.). Reinforce this system by using traceability technologies like blockchain, digital tags, and other technologies and practices needed to support credible, robust, transparent, independent third-party certification. Support the system by using labels and other mechanisms to increase the market share of green, regenerative consumer products and services. Formulate a comprehensive, national Five-Year Plan and roadmap to green China's supply chains, supported by the Green Supply Chain Institute.

24.Identify opportunities for preferential tariffs for sustainable soft commodities, and examine means to tackle trade in single-use plastics through the World Trade Organization and other forums.

Under the Asia-Pacific Economic Cooperation and the Regional Comprehensive Economic Partnership, pilot alignments of sustainable standards for the production and trade of soft commodities.

b. Promote sustainable production and consumption

25.Integrate green consumption into in-depth, supply-side structural reform to green the "dual circulation" and high-quality development patterns. Incorporate green production and consumption into the national legislative process. Build a statistical system for green consumption with a green consumption evaluation index and medium- and long-term target indicators. Establish a nationwide green consumption information platform to release information on green products and services. Strengthen public awareness about low-carbon and biodiversity-friendly consumption through activities such as enhancing capacity building and training on green consumption and building networks to engage stakeholders.

26.Promote a digital, green, and smart industrial transition. Adopt eco-design tools for industrial products to improve efficiency. Strengthen the top-level policy framework for green consumption and related design requirements. Build strong links between digitalization and sustainability. Shift the innovation visions and patterns of digital pioneers toward sustainability. Modernize digital capabilities as a precondition for governing digital change. Build strong networks between digital and sustainability research communities, and create dialogue structures between civil society, the state, private business, and science to ensure sustainability is deeply anchored in the digital economy.

27.Develop a mechanism to allow stronger inter-agency governance and coordination between upstream and downstream entities to advance green consumption. Put in place voluntary or regulatory documents such as guidelines and regulations on eco-design and a low-carbon circular economy. Advance a consistent consumer labelling scheme for green, biodiversity-friendly, and low-carbon products, services, and companies in one universal certificate system to expand the supplies of green products and services. Encourage the normalization of the green and low-carbon work and lifestyle behaviours adopted during the pandemic. Strengthen the development of green logistics. Adopt instruments for the circular economy such as extended producer responsibility and deposit-refund schemes to address problems at the source. Level up waste reuse and recyclability by improving the market potential for product recycling and reuse. Develop the second-hand product market and the shared economy as important pillars of the low-carbon, circular economy

28.Adopt an assessment system covering the entire life cycle of products in the steel industry, including developing standards, assessment measures, and certification schemes for eco-design in the steel industry to encourage synergies in carbon emission reduction and pollution control. Advance green taxation reform in the automobile industry, and implement tax policies to encourage the use of HFC-free technologies. Apply eco-design concepts and methodologies, as well as stronger disclosure and public participation mechanisms, to ensure the minimal environmental footprints of waste incineration facilities, creating livable habitats for people.

29.Develop guidelines for public entities to integrate sustainability criteria for public procurement. Develop a central registry for green procurement practices and case studies in order to share the business argument for green procurement, as well as to register performance outcomes including carbon emission reduction, nature protection, and other benefits. Develop and implement a comprehensive green labelling scheme as the basis of green public procurement practices.

30.Support the implementation of the Law Against Food Waste with awareness-raising campaigns to promote healthy eating habits and reduce food waste; introduce implementation rules and plans according to specific regulations. Establish a mechanism that allows for collaboration in the efforts of the government, industry associations and non-governmental organizations, catering businesses, and consumers to tackle food waste.

IV. Actively participate in international environmental governance, and build closer partnerships for green development; emphasize extensive consultation and joint contributions to international green principles and the sharing of development achievements.

31.Broaden the "green" concept of Belt and Road Initiative (BRI) development. Deeply align BRI partnerships and investments with the United Nations 2030 Agenda for Sustainable Development, incorporating the implementation of the Sustainable Development Goals, such as climate mitigation; climate adaptation; clean, accessible, and affordable energy; and biodiversity conservation, into the development of the green BRI, and strengthen the synergy between the goals. Enrich the forms of, and pool of participants in, green investment and financing, and broaden and mainstream the sources of green investment funds for BRI. Scale up financing in sectors such as renewable energy, sustainable storage and power grids, and conservation financing. Establish mechanisms to ensure that future BRI financing and investment will exclude coal projects. Promote cooperation in green energy, green infrastructure, and green finance. Support sustainable development and post-pandemic green and low-carbon recovery in BRI countries.

32.Build a green management system for all BRI projects. Based on the management needs of the project's full life cycle, conduct environmental, biodiversity, and climate risk screening and impact assessment for all projects. In line with

project-based green investment and financing management needs, advance a BRI green investment and financing evaluation system based

on standards, safeguards, and best Chinese and international practices on environmental and social governance. Strengthen the communication, cooperation, and information-sharing among overseas investment and financing authorities, ecological environmental authorities, and financial regulatory authorities, and improve the classification management system of BRI investment and financing projects. Work with key ministries to incorporate "green and sustainable" as core risk evaluation criteria into the performance evaluations of financial institutions and project developers.

33.Rely on professional platforms to strengthen dialogue, exchanges, and capacity-building. Strengthen multilateral cooperation platforms such as the BRI International Green Development Coalition, the BRI Environmental Big Data Platform, and the Green Investment Principles. Promote information-sharing, experience exchange, and dialogue on policy among participating countries regarding key topics, such as the definition of green and low-carbon projects, environmental and climate management in investment and financing, and mutual recognition of green standards. Collaborate with the Belt and Road South-South Cooperation Initiative on Climate Change and the Green Silk Road Envoy Program. Further implement capacity-building projects, forge closer partnerships for green and sustainable development, and actively communicate the benefits of green solutions to partner countries. Organize the Belt and Road Green Development Expo to present green products, strengthen green industry technology matchmaking, and share emerging practices around emerging green and sustainable trade.