

A publication of the International Institute for Sustainable Development

Friday, 8 July 2022 | Online at: enb.iisd.org/china-council-international-cooperation-environment-development-cciced-agm-2022

Summary of the 2022 Annual General Meeting of the China Council for International Cooperation on Environment and Development 13-16 June 2022

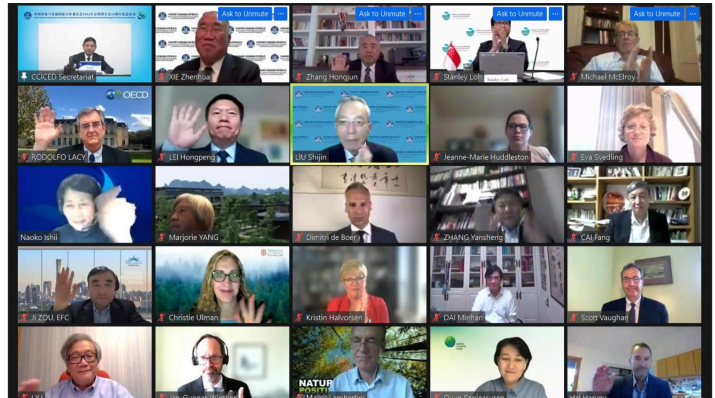
At the UN General Assembly in September 2021, Chinese President Xi Jinping announced what is now known as China’s dual carbon target: peaking carbon dioxide emissions before 2030 and achieving carbon neutrality by 2060. Xi also announced support for other developing countries that are embarking on a green and low-carbon energy transition, notably by committing to stop building new coal-fired power projects abroad. These commitments built on elements of China’s 14th Five Year Plan, released earlier in 2021. This Plan sets out a suite of environment and development initiatives for China to continue on its path toward meeting the targets of both having the basic framework of ecological civilization in place for a modern China by 2035, and realizing an environmentally-sound, beautiful China by 2050.

At the 2022 Annual General Meeting (AGM) of the China Council for International Cooperation on Environment and Development (CCICED), many traced the seeds of these commitments and China’s progress on environment and development fronts as a testament to this unique institution that has long provided a venue for experts from around the world to provide recommendations to China’s leadership, while also engaging with mutual learning and exchange with Chinese experts.

Thirty years after the CCICED was established in 1992, participants from around the world convened to celebrate the Council’s anniversary at its 2022 AGM. Meeting under the theme “Building an Inclusive, Green and Low-carbon Economy,” they reviewed results from CCICED’s Phase VI as the Council embarks on Phase VII of its work.

This AGM convened in parallel to a climate meeting in Bonn, Germany, the 12th Ministerial Conference of the World Trade Organization (WTO), and a meeting of the Conferences of the Parties (COPs) to the Basel, Rotterdam, and Stockholm Conventions on chemicals and waste in Geneva, Switzerland. Participants also made frequent reference to three high-profile events that took place in the month prior to the CCICED AGM, namely:

- the 50th anniversary of the 1972 UN Conference on the Human Environment in Stockholm, Sweden (Stockholm+50);
- the first meeting in the process of negotiating an international legally binding treaty to end plastic pollution in Dakar, Senegal; and
- the Annual Meeting of the World Economic Forum (WEF) in Davos, Switzerland.



Participants at the opening of the first plenary session of the 2022 CCICED AGM

As a result of CCICED’s intersessional work, this AGM also presented the outcomes of six Special Policy Studies (SPSs), four Scoping Studies, and a Special Study on gender mainstreaming.

As might be expected at a meeting on environment and development, many pointed to the need for urgent action in light of the triple planetary crisis of climate change, biodiversity loss and pollution. In addition, numerous speakers emphasized the “unstable” and “unpredictable” context during which the gathering took place. The continued challenges presented by the COVID-19 pandemic that was the focus of the 2021 AGM endured; indeed, due to a surge of cases in China, images of the

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in-person component in Beijing, China, of this hybrid meeting were even sparser than in 2021. In addition, the Russian invasion of Ukraine, and the resulting energy and food crises and spiraling inflation, prompted some to draw parallels with the tensions of the cold war era that had preceded the CCICED's establishment.

Discussions throughout the AGM took place in open forums and plenary sessions from Monday to Thursday, 13-16 June, including a plenary dedicated to the 30th anniversary and discussions of the Council's policy recommendations to the Chinese government. Over 2500 participants attended the sessions.

A Brief History of CCICED

Established in 1992, CCICED is a high-level international advisory body whose membership includes experts from governments, businesses, international organizations, research institutions, and social organizations from China and abroad.

CCICED's main tasks are to study critical environment and development issues facing China and to provide policy recommendations to the Chinese government. By providing a platform for international exchange on sustainable development, the Council seeks to "enable the international community to understand China and support China's engagement in the world." CCICED pursues this aim by carrying out comprehensive, cross-sectoral, and multidisciplinary research that integrates environmental, economic, and social concerns and draws on advanced international concepts, policies, technologies, and best practices, with the aim of advancing ecological civilization and sustainable development.

CCICED's research is organized under four Task Forces, which address: global environmental governance and ecological civilization; green urbanization and environmental improvement; innovation, sustainable production and consumption; and green energy, investment, and trade. The latter includes consideration of China's Green Belt and Road Initiative (BRI).

CCICED seeks to balance gender, geographic regions, nationalities, and areas of expertise among participating experts, and is making efforts to increase the involvement of youth, the private sector, and civil society in its work.

Research and Policy Recommendations: Since its inception, CCICED has carried out hundreds of research projects involving over one thousand Chinese and international experts. It has also put forward hundreds of policy recommendations on issues such as pollution control, cleaner production, biodiversity conservation, energy and environment, circular economy, low-carbon economy, ecological compensation, the social dimensions of environmental protection, sustainable consumption, media and public participation policies, corporate social responsibility, green supply chains, and green finance. In addition, the Council has partnered with national and local authorities to pilot its policy recommendations, including those on sustainable consumption, environmental information disclosure, and environmental risk management.

CCICED's annual policy recommendations are circulated as official government documents by the Ministry of Ecology and Environment (MEE) to China's State Council and local governments, providing a reference for policymakers at all levels. Many of the Council's recommendations have been incorporated into subsequent policies, institutions, systems, and standards. Since 2008, the support team for CCICED's Chinese and

international chief advisors has produced an annual report that tracks progress on China's environment and development policies and the impact of CCICED's policy recommendations.

Annual General Meeting: The Council meets once a year at an AGM to consider the reports and recommendations of the Task Forces and SPS groups that work throughout the year on various aspects of environmental and sustainable development policy. Experts from governments, academia, the business community, and civil society discuss the research findings and recommendations arising from CCICED's reports. At the conclusion of the meeting, the Council, drawing from these reports and AGM discussions, considers a set of policy recommendations, which are then forwarded to the Chinese government.

No AGM was held in 2020 due to the COVID-19 pandemic. In 2021, the AGM was held in a hybrid format under the theme "For Nature and Humanity: Building a Community of Life Together."

Report of the 2022 AGM

Opening Session

Huang Runqiu, CCICED Chinese Executive Vice Chair and Minister of Ecology and Environment, chaired the opening plenary session on Monday evening, 13 June, welcoming participants to the hybrid event. Explaining CCICED is beginning its Phase VII, he highlighted recent achievements and called for innovation as the main driving force to open up new pathways supporting sustainable development. He underscored China's continued commitment to multilateralism, mentioning, in particular, the upcoming meeting of the COP to the Convention on Biological Diversity (CBD), which China is presiding over. He said China will: speed up construction of the BRI; support BRI partner countries to develop green energy; encourage South-South cooperation; and help developing countries, especially small island developing states, African countries, and least developed countries, improve their ability to deal with climate change.

Steven Guilbeault, CCICED International Executive Vice Chair and Minister of Environment and Climate Change, Canada, underscored that energy security and energy transition go hand in hand. He called CCICED Phase VII "vital" for tackling specific challenges surrounding carbon neutrality, biodiversity loss, and green supply chains. He called for countries to, *inter alia*: emulate China's national power sector trading system; protect



Huang Runqiu, CCICED Executive Vice Chair and Minister of Ecology and Environment, China



Zhou Shengxian, CCICED Vice Chair

30% of Ocean waters by 2030; phase out unabated coal power; provide new skill sets for transitioning labor from the carbon sector; and phase out internal combustion engine sales by 2035.

Recognizing current unstable and uncertain world circumstances, Xie Zhenhua, CCICED Vice Chair and China's Special Envoy on Climate Change, stressed achieving a low-carbon transition and coordinating domestic and international efforts on climate change and on sustainable development more broadly. Flagging China's "1+N" Policy Framework, and its carbon peaking and neutrality goals, he said China will continue to place climate action as an internal requirement on itself and shoulder its responsibilities in contributing to the shared community of mankind. He underscored the need to realize systemic transitions and transformations, and said the difficulties faced today can be turned into an opportunity for the world to complete its green and low-carbon transition.

Achim Steiner, CCICED Vice Chair and United Nations Development Programme (UNDP) Administrator, noted Phase VII begins at a difficult time, with pandemic-exacerbated inequalities and the Ukraine conflict impacting food and energy security, climate change, and the 2030 Agenda for Sustainable Development. He said CCICED will influence China and other countries and called for, *inter alia*: redirecting finance through public policy; strengthening environmental law; and catalyzing low-emissions enterprises, particularly through food systems pricing and subsidies that prioritize positive environmental incentives.

Zhou Shengxian, CCICED Vice Chair and former Minister of Environmental Protection, China, noted CCICED can provide comprehensive policy recommendations to support China's journey into a modern socialist society and called for innovation while learning from successes. He called for integration in dealing with pollution alleviation, emission reductions, ecosystem restoration, and economic growth.

Kristin Halvorsen, CCICED Vice Chair and Director, CICERO Center for International Climate Research, urged everyone not to give up on limiting global warming to 1.5°. She lauded CCICED's SPS on the Ocean's role in fighting climate change and, echoing other speakers, said we must avoid letting short-term solutions put long-term goals at risk.

The CCICED chief advisors then introduced the 2022 Issues Paper on "Stability, Resilience and the Green Transition." Scott Vaughan, CCICED International Chief Advisor, emphasized that security and stability objectives are reinforced by low-carbon

green development. Noting growing pressure to use security concerns to dilute, delay, or discard climate action, he underscored the critical importance of effective implementation to achieve tangible outcomes that narrow inequality gaps. Liu Shijin, CCICED Chinese Chief Advisor, warned that grain prices are reaching record highs in some countries. He said that, although some countries are striving for energy security by increasing their fossil fuel dependence, many are reducing their dependence on imported energy, which favors renewable energy projects in the long term. He noted China's next steps include innovating products with multiple benefits, not simply carbon reduction.

During the ensuing discussion, Stanley Loh, Permanent Secretary, Ministry of Sustainability and the Environment, Singapore, marked the 15th anniversary of the China-Singapore Tianjin Eco-City. He called for CCICED to focus on food and energy security and supply chain connectivity, and for international cooperation on carbon capture and storage, green finance, and renewable energy.

Manish Bapna, President and CEO, Natural Resources Defense Council (NRDC), highlighted the 30th anniversary the Rio Declaration, calling on all to revitalize the positive energy of that occasion. Noting China plans to double its renewable energy capacity by 2025 but also increase coal production, he called for clear targets for phasing out coal power in national policies. He said managing climate risk is essential for managing financial risk. He also noted nature-based solutions (NbS) can provide over 30% of cost-effective mitigation, saying strengthened coordination and finance for NbS are needed.

Noting China has established the world's largest carbon emissions system, Gwen Ruta, CCICED Council Member and Environmental Defense Fund (EDF) Executive Vice President, said EDF is working with government and industry to expand that market to include additional high emitting industry sectors, including cement, aluminium, and iron and steel. She said the world needs China to take a lead role in delivering on the promise of limiting warming to 1.5°.

Christie Ulman, CCICED Council Member and Sequoia Climate Foundation President, stressed the need to align low-carbon, high-quality green development with stability and security goals, noting clean energy development enhances both energy and climate security. She said without China, the world will not have a chance to achieve inclusive, green, and low-carbon development.

Zou Ji, CCICED Special Advisor and President of Energy Foundation China, noted significant growth opportunities in green and low-carbon investment. He said if international cooperation in trade to avoid sanctions, duties, and tariffs can be achieved, China can increase component and equipment manufacturing to help the US, the European Union (EU), and developing countries complete their green, low-carbon transition.

Closing the opening plenary, Huang thanked participants for their targeted suggestions and said they would have many more opportunities for in-depth exchanges on the Issues Paper during Tuesday's and Wednesday's sessions.

CCICED 30th Anniversary Forum: Towards a Green and Prosperous Future

Zhao Yingmin, CCICED Secretary General, chaired the 30th anniversary celebration on Tuesday evening, 14 June. Noting 30 years is "but the wink of an eye," he underscored that the-

ories and practices of environment and development in China have undergone tremendous transformation over the past three decades. He welcomed old and new friends, explaining that many participants in the celebration had taken part in the Council's work from Phase I to VI, while others had joined the Council at the beginning of the current Phase VII.

Participants then watched a video detailing CCICED achievements recognizing the contributions of more than 1000 Chinese and foreign experts, over 100 research projects, and over 300 policy recommendations produced since the Council's founding. The video closed with a call for collaboration to write a new chapter of global ecological civilization for a green and prosperous world and to continue work through CCICED's inclusive, open, and mutually-beneficial platform.

Following this, the CCICED Executive Vice Chairs delivered welcoming remarks. Huang noted CCICED's recommendations go directly to China's highest leadership, resulting in laws, policies, regulations, and action, including on clean production, circular economy, air pollution, and overseas coal investment. He said China's socialist modernization model provides options for developing countries, and CCICED organizes dialogues for knowledge sharing on green development. He recommended continuing research centered on the goal of building a beautiful China, through: carbon peaking/neutrality; measures for a green transition, an energy revolution, and high quality, low-carbon lifestyles; achieving a modern socialist economy; and the triple challenge of climate change, biodiversity loss, and pollution.

Guilbeault said CCICED brings together great minds for international dialogue on tackling the triple challenge. He noted Canada has a long history with CCICED, including having provided two international chief advisors and support from the International Institute for Sustainable Development (IISD) and others. Citing CCICED's tremendous record, while cautioning that "a clean future is our only future," he said Phase VII will work to accelerate environmental protection for all.

CCICED Secretary General Zhao then asked the two CCICED co-founders to address the Plenary. Martin Lees outlined reasons for its enduring success and relevance, highlighting in particular: the Chinese government's openness to international advice; the combination of expertise across the science-policy interface; and the enduring friendships formed and sustained through the Council's AGMs. In comments read on behalf of Qu Geping, Xu Guang, Secretary General, China Environmental Protection Foundation, highlighted a line from the minutes of the first AGM, which noted the Council's establishment demonstrates the Chinese government's sincerity and resolve in pursuing reform and wider cooperation to address environmental issues. Commenting that humankind is now at a crossroads, he called for continuing to steadfastly pursue sustainable development and expressed his wish for continued hope and solidarity through the Council.

Following this, CCICED Secretary General Zhao invited keynote reflections from several speakers on their work at different phases of the Council's work.

Sustainable Development Process of the World: Suring this session, Achim Steiner noted that an interdisciplinary approach has been "part of CCICED's DNA" since its early days. He said China's action in addressing the environmental Achilles' heel of the modern development paradigm has been



Xie Zhenhua, China's Special Envoy on Climate Change

remarkable, noting other countries have taken decades to do what China has achieved in a fraction of the time. Pointing to China's commitment to wisdom, and thinking long term without compromising the short term, he highlighted China's concept of ecological civilization. Noting China and the world confront a troubling outlook today, he underscored that current challenges remind us to take CCICED's mission very seriously as the Council embarks on Phase VII.

Opportunities and Challenges for China's Environment and Development: Xie Zhenhua recalled creating CCICED to assist China's integration into international endeavors on global environment and development. He opined that: the green/low-carbon trend from 1992 will never reverse, despite some countries' domestic policies and many multilateral challenges; the Paris Agreement and the Sustainable Development Goals (SDGs) are essential to the system transformation that is required; and the upcoming climate COP must focus on implementation, finance, and cooperation. Given countries' differing abilities and challenges, he urged dialogue to foster collective wisdom.

Zhou Shengxian lauded CCICED's principles of inclusiveness, openness, and mutually beneficial cooperation. He highlighted the "green is gold" concept, which aligns economic growth and environmental protection. He cited China's ecological civilization, which incorporates institutional reform for coordination on environment and economy and intensifying international cooperation. Lamenting current severe challenges to economic recovery, he said CCICED must now work toward achieving a beautiful China and the 2030 Agenda for Sustainable Development.

30 Years for CCICED: Shen Guofang, CCICED Chinese Chief Advisor (2004-2017), highlighted China's reforms since 1992, explaining CCICED benefits from the opinions and experiences of many organizations and individuals and mobilizes international experts to collaborate while overcoming any potential political differences. He said CCICED has contributed to China's world leadership in conservation, restoration, and renewables. He urged CCICED to: expand its coverage; work with developing countries on emerging topics; and import, as well as export, knowledge as a global think tank.

Arthur Hanson, CCICED International Chief Advisor (2002-2019), said China is transitioning along a unique ecological civilization development path, although many tasks remain unfinished, and identified harmonization of environment and devel-



Scott Vaughan, CCICED International Chief Advisor

opment as the next step for China. He lauded the Council's policy successes on green fiscal reform, China's accession to the WTO, green taxation, and carbon trading, noting none have been easy. He also highlighted China's Ecological Conservation Redline policy and new paradigms on circular economy and ecological civilization. He called a green financial system a "cornerstone" and invited everyone to read his forthcoming study on CCICED's history and future.

CCICED Secretary General Zhao then opened the floor to representatives who had made outstanding contributions to the Council.

Liu Shijin highlighted the culture of trust among CCICED participants as being key to its success. He called the Council a major window for opening up China to environmental ideas, including the concept of a low-carbon economy 15 years ago and that of NbS more recently.

Scott Vaughan said CCICED's success was built on basic principles and values, notably scientific evidence, interdisciplinary research, a commitment to sustainable development, and an ongoing focus on social issues, including closing the gender and poverty gaps. Highlighting how those involved in CCICED's work have volunteered their time, often unnoticed and unrecognized, he thanked all partners for their work.

Dirk Messner, President, German Environment Agency, said CCICED is one of the most fascinating spaces for international dialogue, explaining that reciprocal learning and mutual trust are some of the Council's cornerstones. Noting the urgent need for implementing "disruptive" processes of sustainable transformations, he called attention to managing sustainability alongside the trend of digitalization, artificial intelligence (AI), and machine learning.

Stephen Heintz, CEO and President, Rockefeller Brothers Fund, said over the past three decades, scientists and policy-makers in China have partnered with leaders and organizations across the world to find solutions for China's, and the world's, greatest environmental challenges. He pointed to CCICED as a safe space for stakeholders across all sectors to build trust, deepen mutual understanding, learn, and form durable partnerships. He warned against returning to a cold war logic, explaining the future of global peace will largely be determined by how the US and China are able to constructively manage their differences while cooperating on areas of mutual concern such as climate change.

Marco Lambertini, Director General, World Wide Fund for Nature International (WWF), said he has been especially impressed by: the openness of discussions; the willingness to address system change; and the Chinese leadership's responsiveness to the CCICED's recommendations. Noting growing global instability, he said ongoing crises should push us forward and accelerate transitions. He called for a nature-positive economy and roadmap and for realigning the finance and business sectors in an environmentally friendly manner.

Zhang Hongjun, Holland & Knight (law firm) and Energy Foundation China, recommended CCICED carry out more activities in overseas markets and improve the sharing of Chinese case studies to help those outside of China.

CCICED Chinese Executive Vice Chair Huang summarized the plenary discussion as a "feast," commenting that the speakers represent different milestones in CCICED's journey. He urged continuing this legacy and intensifying the global partnership, noting CCICED is a platform to gather collective wisdom for better environmental governance in China and the world.

Open Forums

"Digital + Green"—Twin Transformation for

Sustainability: This Open Forum, organized by the World Economic Forum (WEF), the German Environment Agency, and the German Agency for International Cooperation (GIZ), convened on Thursday, 13 June. Chaired by Antonia Gawel, Head, Climate Change, WEF, the session was based on the Scoping Study on Digitalization to Advance Sustainability.

In his welcoming remarks, Liu Shijin underscored that: advances in green development depend on digital technologies; and knowledge and information are key to better integrating the digital economy and green development.

In her welcoming remarks, Gim Huay Neo, CCICED Special Advisor, Managing Director, Centre for Nature and Climate, WEF, reported on the recently concluded 2022 Davos Summit, noting that throughout the meeting, discussions on climate change focused on "action, action, and more action." She said environmental sustainability challenges and the climate crisis present risks as well as significant opportunities. However, she emphasized that the longer we delay our responses, the more severe the risks and consequences, and the smaller the window of opportunity for transformation.

Rebecca Ivey, Chief Representative Officer, WEF, moderated **Session 1—Overview of the emerging trends on digitalization and how to develop the green and smart digital infrastructure in China: Key issues, challenges, and opportunities.** She recalled that, earlier in 2022, the China State Council published the plan for development of the digital economy during the country's 14th Five-Year Plan, explaining China aims to increase the contribution of core digital industries to 10% of gross domestic product (GDP) by 2025.

Liang Guoyong, Senior Economist, United Nations Conference on Trade and Development (UNCTAD), emphasized the importance of an integrated approach linking the digital sector to other sectors of the economy. He discussed the methodologies used to assess the direct and indirect impacts of digitalization on sustainable development, calling for adopting a dynamic view that considers counterfactuals while assessing dig-



Antonia Gawel, World Economic Forum

italization's net impact. Providing an overview of these impacts, he highlighted the dramatic increase in data center power consumption and underscored the importance of working towards a people-centered digitalization.

Zeng Yi, Professor, Chinese Academy of Sciences (CAS), spoke on responsible AI for the SDGs and innovation. He noted only 0.1% of research publications on AI are directly related to the SDGs. He explained that AI related to SDGs 3 (good health and well-being) and 4 (quality education) are the most popular research areas given their connection to opportunities for revenue generation. He warned that in other SDG areas, increased reliance on AI may be worsening problems such as climate change. He introduced the AI Carbon Efficiency Observatory and called for clarifying values and principles to guide how AI can contribute to climate action.

Chen Long, Vice President and Chair of the Sustainability Steering Committee, Alibaba Group, said digital transformation is going to play a very important role in responding to climate change. Highlighting a recent Luohan Academy report on Digital Circular Economy for Net Zero, he said green goals alone are not enough. Stressing the benefits of integration, he presented examples of how digital technology and a circular economy can enhance each other.

Shouqing Zhu, Climate Action Head, WEF, moderated **Session 2—Digital innovation and its vital role in enabling the green transition of traditional industries: Vision, best practices, and challenges for scaling up.** He asked detailed questions to prompt the four panelists to share their sustainability journeys through the implementation of digital solutions.

Raymond Yau, General Manager, Technical Services and Sustainable Development, Swire Properties, explained Swire Properties has relied on science-based targets to drive decarbonization of their properties, including scope three emissions (indirect emissions that result from activities related to a company or organization). Noting equipment replacement is not enough, he reported on the digital transformation of their technical services, using a centralized cloud platform, which can collect, visualize, analyze, and optimize energy and operational performance of their portfolio, including by engaging tenants in meeting their goals.

Dany Qian, Global Vice President of JinkoSolar, reported on a smart factory project that has allowed three of JinkoSolar's 12 plants to achieve RE100. She underscored the importance of smart manufacturing, energy efficiency management, and dis-

tributed system management, highlighting that simulation and big data technologies have allowed them to gather and analyze "oceans of data."

Xing Ge, Senior Director, Envision Digital, shared best practices for how his company provides AI of Things technology, AI technology, and Internet of Things technology to help industrial parks, factories, office buildings and other clients meet their zero carbon goals.

Liu Jian, CCICED Special Advisor and Director of the Science Division, United Nations Environment Programme (UNEP), discussed challenges faced in achieving a digital transformation in developing countries. Highlighting that data is necessary for a digital transformation, he reported that of the 240 SDG indicators, only 42% have sufficient data to allow for the evaluation of progress in these areas, underscoring the problem applies to developed and developing countries alike.

Antonia Gawel moderated **Session 3—Define the roadmaps and prioritize the key areas of focus to shape the agenda to drive the twin transformation for sustainability for the coming years.**

Marcel Dorsch, Senior Scientist, Digital Change and Sustainability Transformation, German Environment Agency, presented on the Action Plan for a Sustainable Planet in the Digital Age, recently released by the Coalition for Digital Environmental Sustainability (CODES). Explaining CODES is an international multi-stakeholder alliance formed in 2021 in response to the UN Secretary-General's Roadmap for Digital Cooperation, he invited participants to join this inclusive process and community. He explained the Action Plan identifies three areas for urgent collective action: aligning digitalization with sustainable development; mitigating negative impacts with sustainable digitalization; and accelerating digital innovations to meet sustainability goals.

Shan Zhiguang, Director, Information and Industrial Development Department, State Information Center, China, discussed three major areas for investment that require twinning of green and digital transformations: green infrastructure development, notably the greening of data centers by turning to liquid cooling technology; urban renewal and opportunities for smart infrastructure; and the service industry, including harnessing data to understand the impact of this growing sector.

In her closing remarks, Gawel thanked the Forum organizers and participants, explaining this collaboration would move forward following the publication of the Scoping Study on this topic. Li Qiuping, WEF, explained the next step will be to prepare a SPS on the issue.

Green Supply Chain—New Opportunity for Global Development: This Open Forum was organized by MEE's Foreign Environmental Cooperation Center (FECO) and the World Resources Institute (WRI) and took place on Monday, 13 June. It was based on the Sustainable Food Supply Chain SPS, and was moderated by Chen Ming, SPS Deputy Chinese Leader and FECO Deputy Chief Economist.

In his opening remarks, Scott Vaughan commended the SPS, noting its focus on a systems approach within broader green supply chains. He said the report makes a valuable contribution by highlighting the need to identify and reform environmentally harmful subsidies, estimated to be over USD 500 billion dollar per year at the global level. Vaughan also highlighted the report's emphasis on the use of tools like food labels, nutritional labels, or other types of labels such as identifying a low-carbon footprint in food products.



Ani Dasgupta, President and CEO, World Resources Institute

Zhang Yujun, FECO Director General, reported on China's recent policy commitments, including those related to carbon peaking and neutrality. Highlighting CCICED's long track-record on the green supply chain, he highlighted recent efforts in China to innovate in greening the supply chain, including through top-down and bottom-up approaches.

Ani Dasgupta, WRI President, presented via recorded remarks. Thanking CCICED for its continuous focus on green supply chain issues, he said no pathway to reaching 1.5°C exists without changing supply chains, and the way we produce, distribute, and consume. He stressed the urgency of ensuring the food supply chain can function as smoothly as possible by keeping borders open to agricultural trade while reducing food loss and waste. He underscored that China plays a decisive role in global supply chains and said if China takes proactive steps in collaborating with other major markets, the world will be able to transition to a more sustainable path.

Chen Ming moderated **Session 1—Global food supply chain: Security and green development**, explaining that food security is a key component of China's new development paradigm.

In his lead remarks, Craig Hanson, SPS International Co-Leader and Vice President of Food, Forests, Water and the Ocean, WRI, presented the SPS report "Sustainable Agrifood Systems: Meeting China's Food and Security Goals." He explained that pursuing a sustainable agrifood system would allow China to meet both its aspiration of achieving peak carbon by 2030 and carbon neutrality by 2060 as well as its aspiration to achieve food security. Noting China's agrifood system contributes 12% of China's total greenhouse gas (GHG) emissions, he identified challenges to achieving China's food security, including increased reliance on international food imports and pollution and food safety concerns. He explained the report frames four categories of solutions that, combined, would help reduce China's agrifood climate footprint while also increasing food security:

- produce more nutritious food;
- protect nature;
- reduce inefficiencies and pollution; and
- restore degraded land.

He then outlined the report's six recommendations, namely that China:

- develop a national food system transformation strategy;
- redirect agricultural fiscal incentives and finance;

- undertake a dietary guidance initiative centered on the development of a gender-responsive and inclusive national programme for encouraging a healthy and sustainable diet;
- accelerate the agrifood system transformation by harnessing private sector support;
- incentivize alternate sources of protein and starches; and
- establish a national green value chain strategy and provide policy and institutional support for green international food value chains.

Chen then opened the floor for remarks.

Guillermo Castilleja, SPS International Co-Leader and CCICED Special Advisor, supported taking a systemic view. Using soybeans and their role in community markets as an illustration, he underscored the importance of:

- recognizing that food system components are closely interlinked and interdependent, and that interventions to improve a given component create unexpected positive and negative outcomes elsewhere in the system;
- making the true cost of food visible, as it is currently distorted by the system's ability to externalize losses and privatize financial profit; and
- developing the governance management and knowledge that stakeholders need to be able to envision and deliver positive outcomes without hidden unaffordable costs.

Meng Han, UNEP World Conservation Monitoring Center (UNEP-WCMC) China Officer, discussed several tools and platforms available to financial institutions and the private sector to improve understanding of the impacts of their investments and decisions on biodiversity and environmental systems. Among others, she highlighted ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure), an online, open-access, integrated assessment tool to support the financial sector in understanding, managing, and mitigating natural capital risks.

Lei Hongpeng, CCICED Special Advisor and Regional Director, East and Southeast Asia and China Chief Representative, Children's Investment Fund Foundation (CIFF), identified areas in which they are seeking partners for pilot projects related to promoting green supply chains, including: climate friendly agriculture that minimizes food waste; developing tools and indicators to guide waste-minimizing agricultural purchasing; and publicity and education campaigns about the climate-impact of food choices.

Intervening on behalf of Fan Shenggen, Chinese SPS Lead, Dean, Academy of Global Food Economics and Policy, China Agricultural University, his collaborator Meng Ting explained their team's research centers on the agrifood system transition, underscoring they cover food supply chains, as well as the stakeholders and environments that are part of these chains. She explained their research focuses on long-term strategies to promote food, safety, resilience, inclusiveness, and balanced nutrition to safeguard food safety and security, noting their work has demonstrated the potential of reducing emissions through investments in the agriculture sector.

Tang Dingding, International Finance Forum, commented on the role of the financial sector in promoting green supply chains. He highlighted that many financial institutions are currently considering the new concept of a bio-circular-green economy model, proposed at the 2021 Asia-Pacific Economic Cooperation High-Level Meeting. Highlighting the role of part-



Fang Li, Country Director, WRI China

nerships, he underscored the importance of connecting the private sector to the financial sector through matchmaking to enable close collaboration.

Fang Li, Country Director, WRI China, moderated **Session 2—Green supply chain: New mechanism for global governance**.

In her lead remarks, Naoko Ishii, CCICED Member, Professor, Institute for Future Initiative, and Director, Center for Global Commons, University of Tokyo, recognized progress already made towards greening the supply chain. She underscored the importance of:

- measuring and valuing natural capital and ecological products;
- measuring environmental impacts resulting from consumption, and related imports;
- a multi-stakeholder value chain approach bringing businesses and governments of producing and consuming countries together; and
- addressing friction between top-down, homogeneous trade approaches and bottom-up, heterogeneous country-based efforts to green the supply chain.

Opening the floor to discussion, Fang asked private sector participants to consider how they can promote development of the green supply chain, and which measures are needed from policymakers to drive it.

Dominic Waughray, Senior Advisor to the CEO, World Business Council for Sustainable Development (WBCSD), underscored the complexity facing businesses, explaining that for any business there are thousands, if not hundreds of thousands, of suppliers with which to work. He also emphasized challenges in both obtaining and sharing data. He introduced the Partnership for Carbon Transparency, which was established to deliver the methodological and technological foundation to achieve accurate end-to-end business-related emissions accounting that will enable precise and comprehensive corporate carbon transparency across the value chain. He also reported on an action agenda arising from Stockholm+50, which identifies three priorities for the international community:

- a Global Corporate Accountability and Transparency Mechanism to fully account for business action;
- a Global Circularity Protocol geared towards promoting a set of harmonized policies and regulations; and
- a Global Sustainability Skills for Action Initiative, to build capacity to speed up the sustainability transformation across multiple markets.

Bernice Lee, CCICED Special Advisor and Research Director, Futures, Chatham House (Royal Institute of International Affairs), discussed “turnkey” solutions, underscoring the importance of meeting multiple goals at once and fostering learning and sharing. Citing fashion as an example, she stressed the importance of connecting the supply and demand chains, especially for consumer sectors where improvements should aim for a circular economy, waste reduction, and emission reductions, as well as meeting social and equity goals.

Zhang Jianping, Director General, Center for Regional Economic Cooperation, Chinese Academy of International Trade and Economic Cooperation, Ministry of Commerce, China, explained that, in the context of the crises prompting food security concerns, discussing the green value chain can be seen as a luxury. Pointing to the countries that are most vulnerable to food security issues, he underscored the importance of cooperation among institutions in global governance and called for a systems approach to deal with the food crisis.

Wu Bixuan, Senior Partner, Hiways (law firm), discussed the recent failed vote in the EU Parliament on revising the EU Emissions Trading Scheme (ETS). He explained this does not necessarily represent a failure of the Green New Deal for Europe, but rather a reflection of green voices in the EU negating the EU’s efforts to water down the ETS.

Jin Wencheng, Director General, Research Center for Rural Economy, Ministry of Agriculture and Rural Affairs, China, highlighted the importance of maintaining food security in China. Emphasizing great potential for emission reductions and carbon sinks in agriculture, he stressed that farmers are very vulnerable to climate change. He underscored the need to maximize both GHG reductions and resilience to climate change.

Jiang Hao, Director, Department of International Development, China Renewable Energy Engineering Institute, discussed international cooperation for renewables, noting many challenges. Highlighting the success of collaboration, he acknowledged that, in some regions, a gradual approach, with pilot projects to validate these renewable energies, will be more feasible.

After soliciting a quick round of recommendations from panelists, Fang closed the Forum with a brief summary, highlighting a shared belief in the need for a systemic approach that maintains a stable and secure supply chain.

Linking River Basins Management with Nature Resilience: The Nature Conservancy (TNC), the China Academy of Urban Planning and Design (CAUPD), and PBL Netherlands Environmental Assessment Agency organized this Open Forum on Monday, 13 June. Bob Tansey, Senior Policy Advisor, TNC, and Kees Bons, Senior Advisor, Deltares, co-chaired the session, which was based on the SPS on Low-Carbon and Resilient Urban Development and Adaptation to Climate Change.

In opening remarks, Liu Shijin emphasized the importance of integrated management, and underscored the need to address sustainable development in the Yangtze River Basin, including through a NbS approach. He explained international exchange can enable China to benefit from lessons learned over recent years in other river basins, such as the Rhine, and thus avoid mistakes that have been made.

Li Xiaojiang, CCICED Special Advisor, SPS Chinese Team Leader, and Former President of CAUPD, noted the SPS' focus on the Yangtze River Basin is of vital importance for meeting CAUPD's goals, including in national spatial planning and achieving disaster prevention and urban resilience.

Joyce Ma, TNC China Country Director, highlighted the pressing challenge of how to improve the effectiveness of integrated and collaborative river basin management in times of climate change, especially in large river basins. She shared that TNC China has over 15 years of experiences in freshwater conservation, and briefly described several ongoing collaborations.

Bob Tansey moderated **Session 1—Climate change and river basin management.**

Fernando Miralles-Wilhelm, SPS International Team Leader and TNC Lead Scientist for Global Water, discussed climate change implications for river basins, underscoring that climate change is structurally changing hydrological patterns, which, in turn, change water and sediment flow, leading to an exacerbation of existing pressures on river basins. He said the challenge is to: update river basin governance to adapt to these changes, with integrated policies; and reach a new balance between economic, social, and ecological development to “make the most” of river basins, including by turning to NbS.

Xue Lan, CCICED Member, President of Schwarzman Scholars, Tsinghua University, presented on efforts towards eco-conservation and high-quality development of the Yellow River, explaining the SPS is supporting legislative efforts to protect the Yellow River. He underscored lack of water resources is a problem for this basin, noting the Yellow River uses 2% of China's national water resources to support 12% of the population and 15% of the land.

Xue flagged problems in the region, many stemming from inefficient water management, including irrigation, river basin ecology, pollution, vulnerability to disasters, low-quality economic development, and threats to the rich cultural heritage in the region. He underscored the challenge of coordinating ecological protection, river basin management, and high-quality development along the entire river basin, which spans several administrative regions and involves many ministries and sectors.

Bob Tansey moderated **Session 2—Actions on river basin management for climate change resilience and security.**

Yang Bo, TNC China Freshwater Project Director, presented a summary of the SPS recommendations. She said the report underscores that large river basins are integral to achieving ecological civilization targets, noting the next five decades present a critical window for building a “watershed community of life.” She stressed the need for systemic research and analysis to improve resilience to extreme events and restore ecosystems, highlighting successful case studies of NbS. Yang underscored the need to strengthen integrated water management of basin shorelines and emergency response capabilities. She also called for a greater focus on gender balance and vulnerable groups, especially their vulnerability to disasters.

Li Xiaojiang presented on Yangtze River Basin management. He explained the SPS report focuses on how to apply the lessons from the 2015 Sendai Framework for Disaster Risk Reduction to the Yangtze River. Li highlighted the need for a holistic approach, notably related to managing the relationship between river basins and settlements. He stressed the importance



Fernando Miralles-Wilhelm, SPS International Team Leader

of understanding how vulnerability to torrential rain, temperature rise, drought, and extreme weather events is related to economic, agricultural and urban development, and population density. He outlined four resilience strategies, namely: ecological conservation and restoration; optimizing spatial planning; NbS; and emergency management. Turning to shoreline utilization, Li underscored the importance of green, low-carbon, and livelihood-oriented shoreline optimization strategies.

Henk Ovink, Special Envoy on Water for the Netherlands, presented, via a recorded video, on opportunities for the SPS's work to impact the 2023 UN Water Conference. He explained this is the first such Conference since 1977 and it will mark the halfway point in the UN Global Water Action Decade. Noting the relevance of several CCICED programmes, he encouraged the Council to bring this experience to China's engagement in the Conference. He suggested the SPS could play a critical role in conducting focused follow-up studies to their 2022 report to contribute to the water action agenda envisioned to arise from the Conference.

Marcus Wishart, World Bank, presented on gender in river basin management, highlighting activities the Bank is carrying out in the context of its support to government strategies for ecological protection and water pollution control in the Yangtze River Basin. He highlighted the status of gender mainstreaming in water resource management worldwide, noting significant progress in recent years. Turning to ongoing projects in China, he highlighted specific commitments to increase the representation of women in river governance, notably China's River Chief System (RCS). Wishart presented data on the participation of women at all levels, noting participation distortion especially in more formal roles and at the bottom-tier level. He highlighted specific recommendations arising from this work, such as:

- including knowledge and awareness around the RCS;
- ensuring sufficient resources to incorporate gender dimensions into the RCS; and
- establishing a more robust monitoring and evaluation system to better identify challenges and remove barriers.

Qin Yi, CAUPD, presented on gender in the SPS report, noting the CCICED requires gender mainstreaming for all SPS topics. She explained a focus on gender and vulnerable populations was incorporated in every chapter, highlighting the finding that rural and poor areas are disaster-prone regions and have signifi-

cantly weaker disaster response capacity. She added that in those regions a higher proportion of women, children, and the elderly are more vulnerable to disasters. Regarding ways to improve gender equality and social justice, she said the SPS conducted a review of case studies and developed a policy assessment framework, which yielded several recommendations, including to mainstream gender in all phases of policies and projects by collecting and using gender-disaggregated data.

Kees Bons moderated Session 3—Linking China with global: Learning from large river basin management across the world.

Yu Fang, Chief Scientist, Chinese Academy of Environmental Planning, presented on the evolution of Chinese environmental and economic accounting. Recalling that GDP is not a good measure of well-being, she outlined several alternative accounting frameworks, including the Gross Ecosystem Product (GEP) and the Gross Economic-Ecological Product (GEEP). She explained the latter was proposed in 2007 and that it deducts environmental and ecological degradation and destruction from GDP, and then adds ecological regulating services and benefits. She reported that, from 2015 to 2020, GEEP accounting shows the growth rate of ecosystem service values exceeded that of environmental degradation costs. Yu discussed future research areas, including mainstreaming such accounting in a national strategy setting and special planning work.

Klaas Groen, Rijkswaterstaat (Netherlands Directorate General for Public Works and Water Management), presented on governance in the Rhine Basin. He explained the Rhine is governed by three institutions:

- the Central Commission for the Navigation of the Rhine, established in 1815;
- the International Commission of the Protection of the Rhine, established in 1915; and
- the International Commission for the Hydrology of the Rhine Basin, established in 1970.

He noted the first two are politically-driven bodies, governed by ministers of the Rhine River states, while the third is an independent scientific organization. Next, he discussed the Rhine Action Plan and outlined the accelerating and seasonable challenges expected to arise from climate change. He closed by discussing long-standing Sino-Dutch cooperation between the Huaihe River Basin and the Rhine Delta area, including the exchange of experiences on flood management, flood forecasting, and decision support.

Gerry Galloway, Chair of the Natural Heritage Institute and Former Commander of Mississippi River Commission, presented on the Mississippi River Basin. He explained that in the US, water is the responsibility of states rather than the federal government, although the federal government has taken responsibility for flood control and associated activities. He outlined current challenges, *inter alia*: fostering cooperation without an overall responsible agency; dealing with uncertainty, including from climate change; ensuring social and gender equity to enhance sustainable development in affected communities; strengthening research on and management of sediment; and learning from the experience in the management of other large river basins.

In the ensuing panel discussion, participants were asked to:

- discuss what they consider the biggest challenges and benefits of realigning the economic organization of river basins with the changing natural system;
- consider how we can learn from basins that are implementing an integrated approach; and
- share views and experiences on how attention to gender equality and social equity can help improve emergency response capabilities.

Li Lifeng, Director, Land and Water Division, Food and Agriculture Organization of the UN (FAO), stressed the challenge of coordinating competing agendas within a single river basin and pointed to the potential of a stakeholder mapping process. Highlighting FAO's work on integrated land and water resource management, he underscored the potential gains from improving social and land management. He called for carefully studying how large infrastructures in a river basin can be managed to maximize benefits and minimize impacts.

Bao Qifan, Former Vice President, Shanghai International Port (Group) Co., Ltd, discussed the evolution of the Yangtze estuary and the dredging situation, underscoring the river basin's importance to local livelihoods. Noting the historical evolution of sediment in the Yangtze, he explained that, since the 1950s, the estuary has shifted from a siltation port to an erosion port, meaning no more land expansion in the estuary area. He reported on different studies, including on using dredged soil for land expansion and on sand fixation to reduce erosion.

Ren Xiyan, Chief Engineer, Ecological Municipal Institute, CAUPD, called for multidisciplinary studies and encouraged the sharing of experiences to overcome common challenges faced by global large river basins. He underscored the need for in-depth studies at different scales, and the challenge of breaking through administrative jurisdictions to allow for more coordinated management to achieve social justice and equity.

Teresa Kho, Director General of East Asia Department, Asian Development Bank (ADB), stressed the importance of improving river basin management by strengthening adaptation and institutions. She outlined the ADB's commitments in the Yangtze and Yellow River Basins, including through supporting the development of the Adaptation Strategy 2035 and developing guidelines for provincial action plans for adaptation. Highlighting the Yangtze River Protection Law that took effect in March of 2021, she underscored the importance of basin-wide institutional coordination and cooperation among sectors, locations, upstream to downstream or downstream to upstream, and governments at various levels.

In closing remarks, Scott Vaughan said that looking at climate and other stressors from a basin-wide level offers tremendous opportunities to move forward on some of the relevant SDGs and to update integrated water resource management practices. Flagging the potential of tools discussed in the Open Forum, he echoed many speakers in highlighting that good management requires good measurement. Finally, he suggested that CCICED submit the SPS report to, and participate in, the 2023 UN Water Conference.

Ocean Governance—Past and Future: This Open Forum was organized by Xiamen University's Key Lab of Marine Environmental Science on Monday, 13 June. It stemmed from the SPS on Ecosystem-Based Integrated Ocean Management Under the Vision of Carbon Neutrality.



Arthur Hanson, CCICED International Chief Advisor (2002-2019)

Dai Minhan, CCICED Member, CAS Academician and Professor, Xiamen University, moderated **Session 1—Ocean in the 30 years of CCICED**. He opened the Forum with a brief video on the work of the Ocean SPS, including the introduction, at CCICED AGMs, of the benchmark of ecological civilization construction for the development of China's marine economy.

In his opening remarks, Erik Solheim, CCICED Member and WRI Senior Advisor, identified four areas for strong action:

- combining protection with sustainable use of the Ocean, highlighting Norway's experience with multi-sectoral management programs;
- sustainable shipping, flagging outcomes of the recent meeting of the Green Hydrogen Organization, which adopted a global best standard for green hydrogen;
- offshore wind, noting the opportunities of the BRI in this area; and
- sustainable fishing and sustainable fish farming, including stopping illegal fishing.

Li Yonghong, CCICED Assistant Secretary General and FECO Deputy Director, underscored the Ocean's importance for society and the economy, highlighting that Ocean transportation accounts for 85% of the world's transport and that Ocean products make up around 22% of human protein consumption. Noting that CCICED's extensive work on the Ocean has yielded practical results, Li pointed to, *inter alia*, the 2022 UN Environmental Assembly (UNEA) resolution to launch negotiations for an international legally binding instrument on plastic pollution

In introductory remarks, Jan-Gunnar Winther, Specialist Director, Norwegian Polar Institute, underscored the unprecedented growth in ocean-related economic activities that put short-term economic gains and immediate needs in conflict with long-term prosperity and a healthy Ocean. Highlighting the availability of a toolbox of solutions, he noted the Ocean has reached the top of the international agenda in the last five years. He recalled that since 2016, the Ocean SPS has delivered more than ten reports, including on the potential of integrated Ocean management (IOM).

Participants then heard keynote addresses.

Arthur Hanson, IISD Senior Advisor, distinguished between old and new agendas, noting the old agenda was driven by the UN Convention on the Law of the Sea, which, he underscored, is not a sustainable Ocean agenda. Turning to the new agenda, he explained it stemmed from the Rio+20 outcomes and the SDGs, notably SDG 14 (life below water). Despite this progress, he

denounced the lack of success to date in taking an integrated approach to Ocean management, and emphasized the need for ecosystem-based, synergistic, and inclusive approaches. Flagging promising developments, he highlighted the launch of negotiations for a plastic pollution treaty, the increased use of marine protected areas, and green shipping and ports.

Turning to the history of placing the Ocean on the CCICED's agenda, Hanson noted that while China itself has been very interested in Ocean strategy for a long time, the issue was only tangentially addressed by CCICED until the first Ocean Task Force was established in 2009. He commended the evolution of CCICED's Ocean agenda since then, especially over the course of Phase VI (2017-2021). He looked forward to continued work on the Ocean during Phase VII, notably on influencing China's citizens on their actions affecting the Ocean.

Su Jilan, CAS and China Ministry of Natural Resources (MNR) Second Institute of Oceanology, presented on achievements of the Ocean SPSs, noting the strong correlation between recommendations arising from CCICED's Ocean work and Chinese government policies. He then tracked the evolution of the Ocean SPS, highlighting:

- the 2009-2010 SPS on Ecosystem Issues and Policy Options Addressing the Sustainable Development of China's Oceans and Coast, stemming from concern with green tides during the 2008 Beijing Olympics;
- the 2011-2012 SPS on China's Marine Environmental Management Mechanism, based on the case of the 2011 Bohai Oil Spill; and
- the 2017-2020 SPS on Global Ocean Governance and Ecologic Civilization, which yielded several reports.

Noting that over 100 Chinese and international experts have contributed to CCICED's Ocean projects, Dai Minhan invited participants to reflect, through a combination of videos and livestream reflections, on their work to mark CCICED's 30th anniversary. Many underscored the importance of seeing their recommendations taken up by the Chinese government and fondly recalled friendships forged during convivial and productive site visits and workshops.

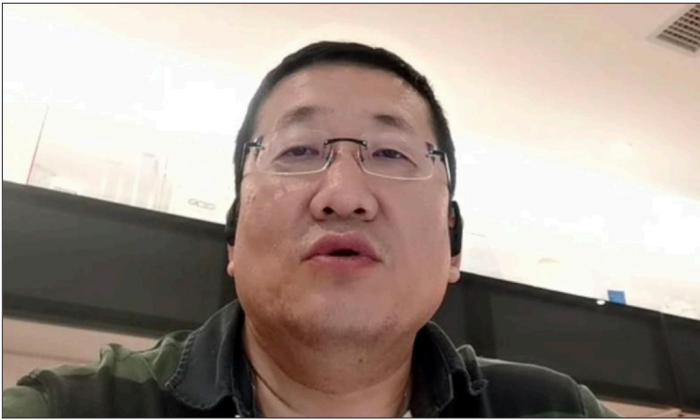
Jan-Gunnar Winther moderated **Session 2—The future of oceans in CCICED**.

In his introductory remarks, Dai briefly noted we are entering a new era where the Ocean is increasingly recognized as important for humanity and the Earth. Acknowledging enormous challenges, he expressed optimism that the world and the Ocean will be moving forward in a more sustainable manner based on lessons learned over the past 200 years.

Scott Vaughan noted that sustainable Ocean management is now a cornerstone of the CCICED's work moving forward. He underscored that any solution to achieve carbon neutrality will not succeed unless it includes sustainable Ocean management. Vaughan highlighted opportunities identified in the SPS report on embedding net-zero carbon neutral operations within ports. Looking ahead to Phase VII, he underscored the importance of sustainable fisheries, pointing to ongoing negotiations on fishing subsidies at the WTO Ministerial Conference.

Participants then heard two keynote speeches.

Speaking on risks and challenges in global and domestic Ocean governance in a turbulent and changing world, Peter Thomson, United Nations Secretary-General's Special Envoy



Zhang Jianyu, EDF China Program

for the Ocean, underscored there is no healthy planet without a healthy Ocean, noting 50% of the planet's oxygen is produced in the Ocean. Reminding participants that there is only one Ocean, he called for exercising the precautionary principle through action, including decommissioning "weapons," such as bottom trawling, in what UN Secretary-General António Guterres has called "our war against nature." Thomson also emphasized the importance of sustainable Ocean planning, decarbonization of shipping, and sustainable aquaculture.

Speaking on CCICED Phase VII Ocean work, Dai introduced a preliminary framework: Blue Economy Towards Carbon Neutrality. He explained the goal is to try and develop a future Ocean governance framework, based on a comprehensive and sustainable approach that is more adaptive to maximize synergies between the blue economy and carbon neutrality. He noted the SPS would focus on:

- optimizing the blue economy framework and ocean-based solutions for carbon neutrality and the synergies between them;
- examining needs and tools for a more efficient and adaptive framework of IOM for maximizing synergies, including by examining blue finance as an instrument;
- taking marine plastics, one of the ultimate fates of plastic, as a case study, examining the gaps of knowledge, policy, and legal frameworks associated with the entire life cycle of plastics, and exploring policies and international cooperation approaches for incorporating marine plastics into the blue economy and carbon neutrality; and
- examining the needs and potential of technological innovations, particularly digital technologies.

Dai emphasized that a sustainable Ocean blue economy could be a triple win for people, nature, and the economy, presented potential case studies, and closed by inviting participants to submit comments and suggestions on this preliminary framework via e-mail.

In the ensuing discussion, Winther asked participants, including leaders of other CCICED SPSs, to address what they see as the major challenges and needs in Ocean policies moving forward.

Li Xiaojiang reported on the SPS on river basin governance, notably findings on shoreline utilization in the Yangtze River Basin. He called for better handling land- and water-based eco-

system management in estuaries, including through better spatial efficiency of ports and industrial clusters. He encouraged more synergies between the Ocean SPS and the River Basin SPS.

Fernando Miralles-Wilhelm pointed to the challenge of integrating climate policies with Ocean conservation and emphasized the importance of incorporating blue carbon and the blue economy in accounting and in countries' nationally determined contributions (NDCs).

Zhang Jianyu, Executive President of the BRI Green Development Institute (BRIGDI), underscored that the Ocean presents a pivotal solution to the triple crisis of climate change, biodiversity loss, and pollution. He noted we are in the era of holistic approaches and pointed to potential solutions arising from the BRI.

Erik Solheim stressed the importance of both governments and business. He noted governments can take the lead without waiting for international agreements, citing India's action on plastics as an example. He underscored that, in most countries, businesses are well ahead of government. He highlighted the role of governments in regulating markets to facilitate businesses' innovation, citing the example of shipping companies' advances in green hydrogen.

Liang Xi, University College London, emphasized the need to increase the understanding of blue carbon monitoring and measurement. Flagging the need to improve monitoring techniques, he noted the potential of converting blue carbon's uncertainty into assets that can be traded and managed.

Nishan Degnarain, WEF, questioned whether the right institutions are in place for the road forward, and asked how technologies, such as AI and big data, can be used to organize and create new institutions, including for carbon tracking. He invited CCICED to take the lead in this area to begin defining the institutions of the future for a low-carbon, biodiversity rich, Ocean economy.

Yeung Chung Wing, WWF China Program Expert, said the major challenge to a sustainable blue economy is that no clear definition of it exists in China. He explained consensus on a definition can help drive society towards a unified direction on a sustainable blue economy. He also called for promoting active public participation and providing sustainable finance in line with sustainable blue economy principles.

In closing, Winther and Dai thanked participants and SPS members and experts, with Dai noting that more than 2000 people had participated in this online Open Forum.

Build a Green BRI Together to Boost Global Green and Low-Carbon Transition: Zhou Guomei, CCICED Deputy Secretary General and Director General of International Cooperation Department, MEE, moderated the opening of this Open Forum, which was organized by the BRI International Green Development Coalition (BRIGC), China International Capital Corporation Limited (CICC) Global Institute, and Energy Foundation China. Held on Monday, 13 June, this Forum was based on the SPS on Key Pathways of a Green and Low-Carbon BRI.

Reporting on progress on the Green BRI, Zhao Yingmin, CCICED Secretary General, Convener of the BRIGC Advisory Committee and Vice Minister of MEE, noted the current global context required, *inter alia*: collaboration to improve BRI partner



Marco Lambertini, Director General, WWF International

countries' capabilities; using BRIGC as a platform to identify needs and develop synergies that enable partner countries to complement each other; and using demonstration and pilot projects.

Andrew Steer, CCICED Member, BRIGC Co-Chair, and President and CEO of Bezos Earth Fund, commended China for understanding, before most countries, that under the new economics of the 21st century, bold action on climate change yields economic efficiency, drives new technologies, reduces risk, and reshapes expectations about the future. He explained these results, in turn, lead to new ideas, more investment, more jobs, and a healthier future for people and the economy.

Commending progress made under the Green BRI, Marco Lambertini, CCICED Member, BRIGC Co-Chair, and WWF International Director General, said increasing the portion of renewable energy investments in China's total overseas energy investment portfolio is also necessary, flagging the rise in fossil fuel emissions other than from coal. He explained China and BRI partner countries can work together to promote comprehensive green investment beyond renewable energy power generation, also focusing on upstream and downstream industry chain and power grid infrastructure. Lambertini underscored the need: to combine energy-focused efforts with the protection of ecosystems; and for an integrated solution to climate change.

Erik Solheim, CCICED Member, Convener of the BRIGC Advisory Committee and WRI Senior Advisor, celebrated progress made during the 30 years of CCICED and the 10 years of the BRI. Echoing Steer's characterizing of the BRI as the Marshall Plan of our time, he called for: better cooperation with BRI partner countries; a greater private sector focus; and for the BRI to be a people-to-people partnership.

Guo Jing, CCICED Special Advisor and President of the BRIGDI, moderated **Session 1—Driving BRI low-carbon development with clean energy innovation and cooperation**. He underscored that the Green BRI has been the subject of a CCICED Forum every year since 2017. He explained the Green BRI and 2030 Agenda for Sustainable Development team, which he co-chairs with Kevin Gallagher, Boston University, is entering its fourth phase and flagged their SPS on Key Pathways of a Green and Low-Carbon BRI.

John Podesta, Board Chair of ClimateWorks Foundation and Chair of the Board of Directors for the Center for American Progress, flagged that, while the BRI resulted in almost USD 60 billion in financing and investments in 2021, just USD

6.3 billion of that was allocated to green energy. He said the US and China share a common vision in pursuing overseas development pathways where both renewable energy and innovation continue to play an increasing role, all while both countries are accelerating the pace of decarbonization in their own domestic economies. He underscored the need for cooperation to establish a shared set of principles as guardrails that emphasize sustainability, transparency, and innovation in overseas investment.

Scott Vaughan commended the recommendations arising from the SPS. He highlighted the role of the Green BRI in helping partner developing countries meet their NDCs through South-South cooperation, including by closing some of the funding gaps from the international commitments which have yet to be delivered, and to help them work towards meeting net-zero goals. He suggested that, in Phase VII, CCICED focus on putting guidance into action on the ground with partner countries, including by looking to case studies and pilot projects for lessons. He flagged opportunities within the Green BRI beyond the low-carbon transition, notably opportunities for sustainable food security in combination with CCICED work on sustainable Ocean management.

Zou Ji, CCICED Special Advisor, Advisor of the BRIGC Advisory Committee and CEO and President of Energy Foundation China, said the current energy crisis is an opportunity for renewable energy. Stressing the importance for developing countries to have stable energy supplies and integrated supply chains, he highlighted the potential of low-carbon manufacturing and cooperation among Southeast Asian countries to promote policy and planning synergies, including through preferential trade for low-carbon products.

Richard Florizone, CCICED Member and President and CEO of IISD, shared IISD's experience developing an assessment methodology that provides policymakers and investors with a comprehensive analysis of how much their infrastructure projects and portfolios will cost throughout their lifecycles, taking into account risks that are overlooked in traditional valuation. He explained the methodology uses a combination of system dynamics and project finance modelling to capture the full costs of environmental, social, economic, and governance risks. He also highlighted IISD's work as Secretariat to the [National Adaptation Plan Global Network](#) and the 2021 launch of IISD's [Nature-Based Infrastructure Global Resource Center](#), a hub to share and develop performance metrics, case studies, and worldwide best practices in nature-based infrastructure.

Kate Hampton, CCICED Member, Convener of the BRIGC Advisory Committee, and CIFF CEO, delivered recorded remarks. She called on China, Europe, and the United States to step up their finance and technology collaboration with the global South on clean energy, as well as on resilience and adaptation. Highlighting opportunities stemming from the BRI, she encouraged the sharing of Chinese expertise, finance, and technology with developing countries to catalyze faster and wider decarbonization efforts. She recommended:

- developing innovative, renewable energy application models;
- mobilizing private investment with public finance; and
- strengthening international regional coordination, including by facilitating stakeholder dialogues or preparing joint assessments and investment plans that better align BRI projects with partner country climate agendas.

Lo Sze Ping, CCICED Special Advisor and Program Director, Sequoia Climate Foundation, noted that despite Chinese enterprises' willingness to support renewable energy in other markets, many enterprises need more guidance and funding channels. He explained the Sequoia Climate Foundation is helping enterprises in Pacific Island countries, African countries, and Southeast Asian countries to support BRI partner countries in realizing low-carbon and green development.

Liu Meng, Head, China Office, UN Global Compact, explained that UN Global Compact participants include more than 16,000 participating companies, and over 3,000 non-business entities, across over 160 countries, making it the world's largest corporate sustainability initiative to advance environmental, social, and governance issues. She reported on the UN's [Global Action Platform](#), established in 2020, to align private sector investments and operations with the SDGs and support the sustainability of infrastructure projects under the BRI framework. She flagged the 2021 report on a [Corporate Net Zero Pathway](#), and announced plans to launch, in 2022, a digital hub on "BRI for SDGs," which will compile corporate practices that advance the SDGs under BRI investments and infrastructure projects.

Zhao Kun, Director, Policy Research Division of the Belt and Road Center, China National Development and Reform Commission, reported on lessons learned. He recommended promoting: clean energy companies in China to join the BRI to build up pilot projects; joint research and training on green technology and equipment; and innovation in green financing to build multi-layered platforms to match financiers to industries needing financing.

Noting time constraints did not allow for opening discussion, Guo acknowledged the many participants in the Forum, recognizing that many of the countries and institutions have been key partners in this work.

Kevin Gallagher, Boston University, moderated **Session 2—Facilitating post-pandemic green recovery with green finance**. Echoing earlier speakers' commendation of China's greening of the BRI, he noted that although China now has the policy orientation to be able to finance low-carbon transformations, many countries lack the physical space or the debt sustainability to be able to take on loans.

Oyun Sanjaasuren, CCICED Special Advisor and Director, Division of External Affairs, Green Climate Fund (GCF), stressed the importance of helping developing countries leapfrog to green and low-carbon development. She shared that the GCF is eager to share experiences gained from almost 200 projects in 130 countries. She emphasized the importance of thinking holistically about how partners can co-finance and co-invest in a green resilient future.

Ma Jun, CCICED Special Advisor, Advisor of the BRIGC Advisory Committee, and Chairman of the Green Finance Committee of the China Society of Finance and Banking, reported on broad participation in the Green Investment Principles. In light of President Xi's 2021 pledge that China will not build new coal-fired power plants abroad, he underscored the need for a multi-sectoral approach to shift the focus of investment away from coal so as to avoid earlier investments becoming stranded assets. He underscored such efforts should consider not only climate risk but also risks arising from biodiversity degradation.



Kevin Gallagher, Boston University

Wu Huimin, Managing Director of CICC Global Institute (CGI) and Head of CGI BRI Research Center, explained CICC is a financial institution and the first investment bank to be a joint venture between China and an international partner. She explained that against the backdrop of increasing instability and uncertainty, Belt and Road countries must find new paradigms for economic development to realize a sustainable recovery. She discussed opportunities to use green finance, including through green bonds for example, to support a green transition. She recommended adopting a unified green infrastructure standard and called for greater international cooperation and encouraging private investment.

Lin Gang, Vice General Manager, Client and Management Department, Export-Import Bank of China (China Eximbank), underscored the importance of financial institutions, including in implementing the Green Investment Principles for the BRI. He highlighted the potential for financial institutions to: support innovations of financial instruments and technologies; promote the adoption of standards; and deepen international cooperation.

Zhang Jianyu, SPS Deputy Co-Leader and Executive President of BRIGDI, reported on the SPS on Key Pathways to a Green and Low-Carbon BRI, acknowledged the study reflects partners' inputs and recommendations, and noted this topic was set under CCICED Phase VI. Recalling CCICED's earlier work on the BRI, he highlighted the importance of: risk prevention for managing investment risks; reducing environmental and social negative impacts; and using investment activities to guide and promote green and sustainable development in BRI partner countries.

In closing, Gallagher provided a summary of the ways in which the BRI can play a role in a green, inclusive recovery, highlighting: the need for comprehensive standards without separate policies for the public and private sectors; the importance of bringing down the cost of capital and making projects more "bankable;" the need to mix grants with other kinds of instruments; and the need for global cooperation.

Nature-based Solutions and Eco-benefits Assessment: This Open Forum, held on Tuesday, 14 June, stemmed from the SPS on Value Assessment of NbS, and was organized by the CAS Research Center for Eco-Environmental Sciences (RCEES) and the International Union for Conservation of Nature (IUCN). It was based on the [SPS on Value Assessment of Nature-based Solutions](#) and also featured the Scoping Study on Innovative Green Finance.

In his opening remarks, Cui Shuhong, Director General, Department of Nature and Ecology Conservation, MEE, explained that China has been using the concept of ecological civilization as guidance and NbS as a concrete concept. He outlined progress, including the Ecological Conservation Red Line policy, an increase of 70,000 hectares of forest area in the past ten years, and the protection of 90% of terrestrial ecosystem types and 85% of wild fauna and flora. Recalling the 2021 Kunming Declaration, he highlighted the promise of the second phase of CBD COP 15 later in 2022.

Hideki Minamikawa, CCICED Member and President, Japan Environmental Sanitation Center, discussed future policy options for securing biodiversity and conserving ecosystems in collaboration with experts from China and other countries. He highlighted key outputs from the first part of CBD COP 15 (held virtually in October 2021), such as the “30 by 30” goal of conserving at least 30% of the world’s land area as healthy ecosystems by 2030, the establishment of the Kunming Biodiversity Fund, and the unanimously adopted [Kunming Declaration](#). He lamented that because the meeting was held online, its results are not widely recognized nor well known. Noting links between biodiversity and the SDGs, he reminded participants that poverty precludes access to food and electricity for many in the world. He hoped biodiversity-related CCICED activities will be taken up by the Chinese government to achieve the SDGs and support developing countries.

Participants next heard keynote presentations.

Ouyang Zhiyun, SPS Chinese Team Leader and Director of RCEES, spoke on ecosystem service assessment and policy innovation. Recalling different approaches to conceptualizing ecosystem services, he noted consensus that: ecosystem services are essential; they cannot be replaced by modern technologies; their degradation has resulted in global environmental crises; and their assessment and evaluation are key to linking ecology and economic decision making. He underscored the importance of ensuring the sustainable supply of ecosystem services while also alleviating poverty. Given China’s goal to build an ecological civilization, he called for exploring how to use ecosystem service assessments in policymaking.

He introduced the concept of GEP, explaining that GDP assesses economic performance while GEP assesses the products and services provided to humans by nature. He noted China has many case studies to share on GEP accounting and reported on how mapping ecosystem services is guiding decision making.

Stewart Maginnis, IUCN Deputy Director General, presented on the concept and norms of NbS for societal challenges. Recalling IUCN’s role in conceptualizing NbS, including the development of a common definition in 2016 and the adoption of an NbS standard in 2020, he pointed to global momentum building on NbS, in both the public and private sectors. He flagged the 2022 UNEA adoption of an NbS definition, noting it further clarified the IUCN definition. He underscored that well-managed or restored ecosystems and ecosystem functionality lie at the heart of NbS.

Maginnis explained the IUCN Global Standard for NbS, the widely piloted result of broad consultations, focuses on eight criteria for designing and assessing NbS:

- addressing societal challenges;
- design at scale;
- biodiversity net gain;
- economic feasibility;



Hideki Minamikawa, CCICED Member and President, Japan Environmental Sanitation Center

- inclusive governance;
- balancing trade-offs;
- adaptive management; and
- mainstreaming for sustainability.

He reported on ongoing development of a certification system, expected to be in place by the end of 2022. He noted this is in collaboration with several established certification partner schemes and will ensure NbS claims are robust and credible. In closing, he identified recognition of NbS at the second part of CBD COP 15 and the upcoming climate conference in Egypt as opportunities to adopt and accelerate NbS at scale.

The Open Forum next addressed **Session 1—NbS and natural capital valuation mainstreaming**.

Zhang Jieqing, Country Director of NRDC China, discussed NbS mainstreaming in China’s climate policies. Recalling the triple planetary crisis of climate change, biodiversity loss, and pollution, she explained that climate change and biodiversity are closely intertwined. Zhang underscored NbS are the solution through which biodiversity loss and climate change can be tackled synergistically. Building on several specific examples, she acknowledged that NbS is not a replacement for the energy transition and other climate mitigation activities. She discussed how to mainstream NbS into China’s climate action, highlighting the need for: policy integration across sectors; a multi-stakeholder governance mechanism; learning; and scaling up.

Zhu Chunquan, China Head of Nature Initiatives, WEF Centre for Nature and Climate, spoke on NbS mainstreaming and multi-stakeholder cooperation. He said that, without NbS, achieving carbon neutrality will not be possible and halting or containing biodiversity loss will be very difficult. Recalling WEF’s reports [Nature Risk Rising](#) and [The Future of Nature and Business](#), he underscored the potential for systemic transformation. He reported on the launch, at the 2022 Davos Summit, of the [1t.org](#) initiative, which aims to mobilize, connect, and empower the global reforestation community to conserve, restore, and grow one trillion trees by 2030. He highlighted that China plans to plant 70 billion trees as part of the initiative.

Violante di Canossa, Head of the Research and Policy Team, UNDP China, presented on the Scoping Study on Innovative Green Finance, explaining it sought to survey the field of innovative finance trends and formulate a series of recommendations to guide CCICED’s Phase VII work on green financing. She reported the key conclusion is for CCICED to prioritize green finance as both a cross-cutting and stand-alone research theme throughout Phase VII. She emphasized, in particular, how to:

align and integrate climate finance and ecological protection and conservation finance; and maximize innovation through market-oriented and public sector alignment.

Di Canossa underscored the urgent need to scale up finance, both for climate and for nature-aligned investments, noting biodiversity and nature finance is lagging behind climate finance. She said NbS financing is a perfect example of the challenges nature financing faces. Noting current financing is insufficient in size and highly dependent on public funds, she explained current USD 130 billion annual flows would need to triple by 2030. She further highlighted current flows are dwarfed by environmentally harmful subsidies. She closed by outlining opportunities for climate-nature finance alignment, through: international commitments, international financing, and existing tools and instruments.

Meng Han, UNEP-WCMC China Officer, presented on natural capital assessment and the [System of Environmental Economic Accounts Ecosystem Accounting \(SEEA EA\) framework](#). Reporting on a 2020 [Global Environment Facility \(GEF\) assessment and summary of GEF-funded NbS projects](#), she outlined common challenges. Meng then introduced SEEA EA, adopted by the UN in 2020 as an international standard for ecosystem accounting. She explained that it recognizes China's GEP concept as an indicator and a good international case. After presenting several pilots of the framework's application, Meng underscored that, by providing quantifiable data on ecosystem benefits, the framework can help guide decision making and provide information on the cost-effectiveness of NbS, and could provide opportunities for cost sharing among stakeholders and help in building collaborations.

The Forum then turned to **Session 2—Case study presentations**.

Will McGoldrick, TNC Asia-Pacific Regional Managing Director, presented case studies of how TNC is supporting efforts to scale up financial flows into NbS. He emphasized that, while NbS are a critical part of the response to climate change, they are not an alternative to clean energy and dealing with industrial emissions. Presenting the Water Fund model, he explained it enables downstream water users to invest in upstream land management to improve water quality and quantity and generate long-term benefits for people and nature. After explaining the steps of this model, which he characterized as deceptively simple, he detailed the [Longwu Water Fund](#), the first of its kind in China. He explained TNC has supported the Water Fund model in various locations including in Latin America, Africa, and Asia.

Next, McGoldrick presented case studies of: using markets to generate carbon credits from Indigenous fire management projects in Northern Australia; turning to blue carbon credits as a financial mechanism to account for the sequestration potential of coastal wetlands in China; and using insurance in Mexico to quickly fund coral reef restoration following storm damage by local Reef Brigades.

Kristin Meyer, IUCN Legal Officer, presented on a prototype database of NbS case studies prepared for the NbS SPS, set up using the [PANORAMA-Solutions for a Healthy Planet](#) platform. She explained the process began by agreeing on a documentation framework based on the IUCN Global Standard for NbS, which would then be combined with the requirements of the PANORAMA platform. She noted case study project teams completed a self-assessment according to the IUCN Standard, which was then verified and reviewed by IUCN. She said the SPS selected five international case studies for this prototype. For a

detailed example, she took participants through the framework's application to the well-known case of the Medmerry Managed Realignment in the UK, including key lessons learned from the case study.

Luo Ming, Land Consolidation and Rehabilitation Center, MNR, presented on the state of play on NbS in China. She underscored that political will is very strong, noting it is in line with the goal of ecological civilization. She explained the 2018 establishment of MNR has laid a very good institutional foundation for NbS in China, flagging the Ecological Red Line policy and policies for "sponge cities" (cities with urban infrastructure designed to absorb water in times of high rainfall and release it in times of drought).

Luo underscored that China's spatial planning system can guide further collective action for NbS, including through coordinated development of ecosystems and agricultural and urban spaces. She highlighted the "Double Key Plan," a master plan of national key projects for the protection and restoration of key ecosystems from 2021 to 2035. She underscored the importance of listening to scientists, explaining the IUCN Global Standard for NbS has been translated to China's context through a series of workshops, which yielded Guidelines for Conservation and Restoration of Mountains, Rivers, Forests, Farmland, Lakes and Grasses. Luo reported 44 projects are already scaling up this work in China and provided a detailed case study of interventions in the Oujiang River watershed, including Lishui City in Zhejiang Province. In closing, she highlighted that, in 2021, China and IUCN released China's "top ten" NbS case studies.

Lu Fei, RCEES and CAS, reported on the eco-benefits assessment of China's Natural Forest Resource Protection (NFRP) project. Recalling NFRP was launched in response to disastrous 1998 floods in three large river basins, he explained the project aims to conserve biodiversity, protect water quality, prevent soil erosion, and shift timber sources to human-made forests. He noted Chinese Yuan (CNY) 231.6 billion had been invested in the project by 2015, including CNY 103.9 billion for ecological restoration alone. Reporting on an assessment of the eco-benefit of NFRP, he outlined gains in terms of water, soil, and nutrient retention and carbon sequestration. He said based on GEP accounting, the total value of eco-benefits is about CNY 577.3 billion for the period from 2000 to 2015, exceeding both direct ecological investment and total investment.

Xing Lei, President of Beijing ZEHU Waterfront Ecological Environment Treatment Co., Ltd., reported on NbS in water management, focusing on the Erhai Lake Riparian Buffer project in Yunnan Province, which concluded in 2021. He explained the project was launched in 2015, with the goal of purifying water and restoring the ecosystem along the Lake's shoreline. He noted the project relied on, *inter alia*: an interdisciplinary team; public participation; a multi-pronged ecosystem approach; and dynamic assessment. He reported that Erhai Lake is no longer shrinking nor being threatened by human activities. He highlighted ecological, economic and social benefits arising from the project, including: increased ecosystem health and species diversity; industrial transformation in the region as visitors are drawn to the ecological corridor; improved quality of life; and rejuvenated culture of the local ethnic minority group. In closing, Xing underscored the promise of NbS as a tool and a way of thinking.

The Forum was then opened for discussion and participants, *inter alia*:

- asked for information on policies or measures that can help guarantee NbS pricing is in line with its valuation to guarantee the generation of multiple benefits;
- called for a list of case studies for public and private sectors to review;
- encouraged more information exchange and sharing;
- stressed the need to realize that ecosystem services are not free and that NbS can provide a pathway for “paying nature back” by ensuring the sustainable use of natural resources;
- called for leveraging multiple financial tools and mechanisms to invest in NbS; and
- reported on an afforestation project in China, flagging the promise of NbS.

In closing the Forum, Dindo Campilan, IUCN Regional Director for Asia, provided an overview of the event, underscoring:

- the importance of framing NbS in the broader context of sustainable development, the valuation of natural capital, and green financing;
- the rich information presented on terms, theories, methodologies, case studies, policy developments, and partnerships that allowed for a stocktaking on NbS; and
- the remarkable progress already achieved on NbS, including by China, now a key NbS champion globally.

Synergizing Economic Growth, Energy Security and Climate Action for a Steady Growth: This Open Forum, held on Tuesday, 14 June, was organized by the Energy Foundation China, CIFF, and the CAS Institutes of Science and Development, and was based on the SPS on Carbon Dioxide Peaking and Carbon Neutrality Policy Measures and Implementation Pathways.

Wang Yi, CCICED Member and Professor, CAS Institutes of Science and Development, moderated the opening of the Forum.

In his opening remarks, Xie Zhenhua reported on progress on renewable energy in China, highlighting the recent release of an implementation plan to promote the high-quality development of new energy in the new era to achieve China’s carbon peaking and carbon neutrality goals. Noting that China, the US, and the EU share similar policy measures on the energy transition, albeit perhaps under different national conditions, he emphasized common ground and the great potential for future cooperation, including to facilitate the development of green and new energy in other countries.

Liu Shijin underscored the importance of addressing both energy security challenges and climate change goals, by taking a long-term view and balancing a reliance on old energy with building additional capacity in the form of new energy. He encouraged participants to learn from China’s path of reform and opening up as it shifted from a state-owned economy to a private, market-driven economy.

Wang moderated **Session 1—Green investment supporting green recovery**, which opened with keynote speeches.

Mauro Petriccione, Director General for Climate Action, European Commission, said the climate and energy transition remains the key to our future and sustainable prosperity, noting the challenge is to organize this transition in an orderly, efficient, and just manner. He stressed the importance of investing in the “hardware” of society, namely new and green technologies for power, industry, and mobility. He said these would make society more competitive and secure and help escape the “fossil fuel



Liu Shijin, CCICED Chinese Chief Advisor

trap.” He outlined ongoing investments in Europe on the path to transition, noted China and Europe share the same challenges and similar approaches, and said both are at the forefront of transition efforts. Acknowledging this transition will take a few decades, he detailed ongoing cooperation between China and the EU. He expressed hope that China will take more resolute action in the short and medium term, to match the very ambitious goals and efforts already made with respect to investment in research, innovation, and international corporation.

Zhu Min, President, National Institute of Finance, Tsinghua University, underscored the Chinese economy is faced with twin challenges: stabilizing economic growth in the short term and achieving a green, low-carbon transition in the long term. He explained investment is the link between them. Acknowledging economic difficulties especially since the start of 2022, he called for focusing on traditional instruments to stabilize the Chinese economy’s three key drivers: investment, exports, and real estate. He also called for focusing on three new drivers: green investment; investment in science, technology, and innovation; and consumption. He underscored the importance of building a future-oriented, low-carbon infrastructure, noting it requires not just the production of new energy, but also the expansion of grid energy storage, the power distribution network, and charging stations. Acknowledging the high cost of infrastructure, he also called for smart community development and green investment for a more efficient and resilient industrial supply chain, including through digitalization. He called on government to take the lead in accelerating and increasing investment in financing for the low-carbon transformation and the stabilization of economic growth, noting the private sector and banks must also play an important role and will follow.

Zou Ji explained goals for economic growth, energy security, and climate mitigation overlap significantly, but he acknowledged the current context is presenting challenges and may give the impression that these three goals contradict each other. He warned against abandoning climate goals, and flagged investment to accelerate the energy transition as key to synergy among these three goals. Outlining promising areas for investment, Zou explained that China’s electricity security needs more flexibility, not more thermal capacity. He flagged the need for more grid interconnections and market mechanisms. He underscored that no new coal power plants are needed. He said renewables can fulfill China’s growing energy demand and contribute to China’s

socio-economic development, and detailed benefits, such as the provision of new jobs, stemming from adding new solar and wind to meet China's annual electricity demand growth.

Wang next invited contributions to a panel discussion.

Tim Gould, Chief Energy Economist, International Energy Agency (IEA), echoed others in asserting that solving the climate, food, and energy crises should not make the resolution of other problems more difficult. Highlighting findings from the IEA's soon-to-be-released World Investment Report, he flagged that increases in spending towards the clean energy transition since the adoption of the Paris Agreement have come from advanced economies and China. He warned efforts to address energy and climate issues will not be successful if other emerging and developing economies are left behind. He noted a host of non-market barriers are preventing capital flows to take advantage of renewable technologies in many economies. He underscored that the international financial institutions must do much more to bridge the widening regional divergences in the pace of energy transition investment.

Neo Gim Huay, CCICED Special Advisor and Managing Director, WEF Centre for Nature and Climate, highlighted that wasteful mismanagement of nature's resources should be perceived as inefficient and costly to business. On promoting synergies between economic growth and green development, she called for a broader definition of wealth, and flagged the potential of WEF's notion of stakeholder capitalism. On the finance gap, she underscored the need for: high-quality and comparable data; definitions and taxonomies for green activities; and a consistent set of standards for disclosures and reporting. She explained that China can play a significant role in driving the adoption and shaping of international best practices.

Oyun Sanjaasuren congratulated China on incredible strides in the low-carbon transition. At the global level, she stressed the importance of not losing sight of a green and low-carbon transition. She called for continuing to support scientifically-sound, long-term innovation and sustainable growth, not only in China, but around the world, especially in developing countries. She emphasized the imperative that all investments are viewed through a climate, green, and nature-positive lens, and outlined GCF investment activities to support the green transition. She concluded by highlighting Intergovernmental Panel on Climate Change (IPCC) estimates of new climate investment needs: USD 1.6 to 3.3 trillion dollars per year through 2050 to meet the 1.5° target; and USD 114 to 300 billion for adaptation. Acknowledging these are major needs, she said the urgency is clear and underscored the GCF is open to collaborating with all partners, including China.

Zou moderated **Session 2—Decarbonization energy system on the premise of energy security**, which opened with keynote speeches.

Wu Yin, Academic Advisor, China Energy Research Society, said challenges to renewable energy development include grid connection issues and weak points and disruption in the supply and value chains. He flagged the importance of improving the performance of renewable energy to make it more competitive, especially through digital technologies and AI. Regarding the coal fleet, he said coal generation should not be constrained if

we can achieve zero carbon from coal. He noted the coal fleet should not be phased out by government administrative orders but by market mechanisms.

Du Xiangwan, Academician of the Chinese Academy of Engineering, underscored energy security is an important part of national security. Noting it involves both supply and demand, he called for curbing the irrational demand of energy. He said energy efficiency should be at the top of the agenda for energy security, explaining that, if China can reduce its energy intensity to the world average level while maintaining GDP, it can greatly reduce its coal consumption. He highlighted that China has a rich resource endowment of non-fossil energy and supported a gradual shift to an energy system dominated by non-fossil sources.

Kate Hampton highlighted continuous momentum on renewable energy in China, as well as in the EU, South-East Asian nations, and the US. She said we need to get on a completely different trajectory if we want to solve the climate problem, underscoring the direction of a trend is not the same as the pace. She called for addressing just transition issues by focusing not only on the supply side but on the demand side as well, particularly for poorer households. In terms of areas for international collaboration, she highlighted energy storage, trade barriers, and overseas energy investments as presenting great opportunities. In closing, she called on all countries to ensure energy efficiency is given its rightful place in economic, energy security, and climate debates.

Next, participants turned to a panel discussion. Wang Zhongying, Director General, Energy Research Institute, National Development and Reform Commission, called for building a new power system that is more people focused and co-exists in harmony with nature, predicting electricity use will dominate energy demand by 2060. On energy security, he stressed the importance of energy independence, noting there is no room for the further development of fossil fuels. He underscored that relying on current technology for renewable energy requires addressing production and lifestyle, to develop the economy while reducing emissions. He then detailed the scale of investment in new wind and solar capacity this would require.

Francesco La Camera, Director-General, International Renewable Energy Agency (IRENA), said IRENA's World Energy Transition Outlook 2022 made very clear that the energy transition is not on track, explaining that anything short of radical and immediate action will diminish, and may eliminate,



Kate Hampton, Children's Investment Fund Foundation



Francesco La Camera, IRENA Director-General

the chance of staying on a 1.5°, or even 2°, path. He highlighted that IRENA's [Geopolitics of the Energy Transformation: The Hydrogen Factor](#) report identified that the emergence of new green hydrogen producers will diversify the pool of hydrogen suppliers, improving energy security for all. He noted the subsequent economic development, especially for developing countries, will contribute to global equity and stability. He underscored that the technologies needed to stay in line with 1.5° climate goal are already available.

Hideki Minamikawa said the biggest challenge in implementing global warming counter measures is potential conflict with SDG 1 (no poverty), emphasizing that this trade-off must be overcome. He highlighted energy efficiency and energy conservation as key for decoupling energy consumption from living standards. Noting so-called carbon negative countries will be severely affected by climate change, he expressed hope that mitigation and adaptation support will be offered to those countries. In closing, he warned against carbon leakage and stressed the importance of international cooperation.

Stephan Sicars, Managing Director, Environment and Energy Directorate, United Nations Industrial Development Organization, noted industry is: a major source of GHG emissions; suffering from climate change; and also expected to deliver the solutions. He explained all three aspects relate to economic growth and can be linked to energy security. He underscored the benefits of wise, optimized, responsible use of resources, which provides economic growth and reduces green energy supply challenges. He noted this can be achieved through circular economy approaches, including resource efficiency and eco-industrial parks, which can deliver savings while simultaneously creating more growth and resilience.

Kate Hampton moderated **Session 3—Coordinate policy systems for goals of carbon peaking and carbon neutrality and promote pragmatic progress in international climate governance**, which opened with keynote speeches.

Wang Yi spoke on China's dual carbon targets, providing an overview of the regulations and policies already released across different departments and noting that more are forthcoming. Although he pointed to a rebound in short-term coal-fired generation, he said the long-term outlook has not changed. Discussing the priorities set out for achieving the dual carbon targets, he highlighted goals to, *inter alia*:

- establish and improve data statistics and monitoring systems;
- establish a Chinese carbon neutrality standards system;
- develop a comprehensive carbon pricing mechanism; and
- improve overall coordination and governance.

In terms of strengthening international cooperation, he highlighted, *inter alia*:

- the need to build mutual trust through better communication and cooperation;
- promoting low-carbon technology research and development, while striking a balance between cooperation and competition;
- cooperation and communication on low-carbon policy tools;
- promoting sustainable trade and investment cooperation; and
- extensive South-South cooperation, including by enhancing Green BRI development.

Highlighting discourses around energy security, national security, and climate change, Bernice Lee said we do not have the luxury of tackling one crisis at a time. She stressed the importance of raising ambition, and focusing not only on mitigation but also on resilience and adaptation. Acknowledging a lack of low-carbon assets to meet investment needs, she underscored the importance of leadership and policy to overcome challenges around supply chains, trade, and technologies. Nevertheless, she also emphasized the need for technocratic solutions to develop interoperable standards and systems to “future proof” policies that might be implemented.

Next, participants turned to a panel discussion. Xu Huaqing, Director General, National Center for Climate Change Strategy and International Cooperation, underscored the importance of addressing tensions between: development and emission reductions; short and long-term goals; and local and global needs. He highlighted, *inter alia*, China's commitment to improve energy efficiency, establish a unified carbon accounting system, and improve carbon pricing mechanisms. He also flagged efforts to further strengthen G20 international cooperation, including by working on establishing a trading system in green products, improving the Green BRI, and promoting South-South cooperation.

Nick Mabey, Founding Director and Chief Executive, Third Generation Environmentalism (E3G), highlighted a lesson learned in the last year: volatility in crisis is not an aberration, and we should not plan for going back to stable economic systems. He said investment should not only focus on energy delivery and efficiency, but also on resilience, whether in economic, health, or climate adaptation systems, noting this will change cooperation, including in such areas as trade. He highlighted four areas for cooperative focus:

- energy market reform;
- just transition;
- industrial sector decarbonization; and
- supporting investment, especially in other emerging and developing countries.

Helen Mountford, President and CEO, ClimateWorks Foundation, said that, even in the current challenging context, opportunities to further strengthen and coordinate policies for early carbon peaking and neutrality exist, both domestically and internationally. She recommended China:

- use this moment to accelerate a clean and modern energy transition;
- support policy action for a clean and just transition, including through strengthening monitoring, reporting, and verification systems;
- encourage demand-driven South-South cooperation, and supporting it through BRI low-carbon development; and
- seize opportunities to strengthen China's leadership in multilateral fora.

Emmanuel Guerin, Executive Director for the International Group, European Climate Foundation, called attention to the metal intensity of the clean energy transition, noting that collaboration between China and Europe on specific initiatives on sustainable mining could avoid unnecessary trade frictions and supply-chain bottlenecks. He called for pragmatic progress in international climate governance, notably at the upcoming climate COP in Egypt. He highlighted the opportunity for China and Europe together to create investment vehicles for the deployment of renewable energy and energy access in Africa, including by blending philanthropic, public, and private finance, as well as Chinese and European technologies and investments.

Following a brief discussion on the need for international dialogue and the advantages of China adopting a dedicated climate law, Scott Vaughan closed the session, commending the rich exchange. He highlighted, *inter alia*, the importance of aligning short-term planning, particularly in the face of unprecedented volatility, with a longer-term transition to net-zero plans, and underscored the important role of continued progress on investment, measurement, and coordination.

Policy Studies Release

On Wednesday, 15 June, CCICED Chief Advisors Scott Vaughan and Liu Shijin moderated the release of the 2022 policy research outcomes in morning and afternoon sessions.

SPS on Sustainable Food Supply Chain: This report, titled “Sustainable Agrifood Systems: Meeting China’s Food and Climate Security Goals,” was introduced by SPS Co-Chairs Craig Hanson and Fan Shenggen.

Hanson explained China’s aspiration of achieving both food security and its dual carbon targets will require dramatic transformation in China’s agriculture and food (“agrifood”) systems. Fan outlined key challenges to achieving carbon neutrality and food security, including climate change’s impact on agricultural productivity and China’s reliance on food imports to meet its needs. He outlined a suite of solutions: a produce-protect-restore strategy, explaining this would help China “produce” more, and more nutritious, food, “protect” nature; “reduce” agrifood system inefficiencies and pollution; and “restore” degraded lands. Fan outlined recommendations, notably that China: pursue a national food system transformation strategy; repurpose agriculture fiscal incentives and finance; promote healthy diets and consumption; accelerate transition through private sector leadership; incentivize alternative sources of protein and food technology; and build a global green food value chain.

SPS on Key Pathways of a Green and Low-Carbon BRI: This report was introduced by Kevin Gallagher. He explained the report examines case studies and best practices, in China and internationally, along three key pathways: promoting industrial and technical cooperation; guiding financial resources, notably China’s experience with public-private partnerships (PPPs); and enhancing BRI cooperation.

He explained the report develops recommendations for scaling these lessons to green the BRI, including:

- establishing a systematic and complete mechanism for BRI clean energy cooperation, with support for aligning policies and strategies, capacity building, and technical assistance;
- scaling up financial support via green development funds, blended finance models, and exporting China’s PPPs model;
- reinforcing a “whole lifecycle” approach to BRI project environmental management;

- exploring a new path for green and low-carbon cooperation in a changing global governance system; and
- focusing on open, inclusive, mutually-beneficial cooperation on BRI green and low-carbon development and seeking common ground.

Scoping Study on Innovative Sustainability Finance:

Violante di Canossa and Andrew Deutz, Director of Global Policy, Institutions and Conservation Finance, TNC, presented this report. Di Canossa explained the report’s key conclusion is for CCICED to prioritize green finance as a cross-cutting and stand-alone research theme during Phase VII, with work emphasizing how to: align and integrate climate finance and ecological protection and conservation finance; and maximize innovation through market-oriented and public sector alignment.

She underscored the urgent need to align climate finance and ecological/nature financing, noting the gap between the scale of global climate finance (USD 630 billion per year) and that of global biodiversity finance (USD143 billion per year).

Deutz outlined opportunities for climate-nature finance alignment, reviewing international commitments, notably the Glasgow Leader’s Declaration on Forests and Land Use and the Post-2020 Global Biodiversity Framework expected to be adopted by the end of 2022. He further highlighted opportunities that will allow closing the gap between climate and biodiversity finance, pointing to a range of tools and instruments, including steps to define green and sustainable finance taxonomies, opportunities around transition financing, and the need to manage greenwashing risks.

Deutz identified key conclusions, namely: scaling up financing in high-quality NbS; identifying roadmaps for private sector involvement; increasing and leveraging public sector finance; opportunities for PPPs and blended nature and climate finance; systemic, comprehensive reform of environmentally harmful subsidies; and supporting and strengthening international cooperation.

Scoping Study on Sustainable Trade and Investment:

John Hancock, Head, Policy Development and Strategic Planning, WTO, presented the four issues examined in this report:

- green industrial policy, including the need to link big policy goals such as net zero with green technology innovation and green skills training;
- green supply chains, including refining tools around transparency to positively influence soft commodity trade to halt deforestation, notably through PPPs;
- tackling plastic pollution, particularly the complexities of plastic issues in trade; and
- carbon pricing and competitiveness, noting that CCICED is especially well placed to foster critical dialogue and further research in this area, including to address leakage concerns.

Hancock encouraged all trade partners to recognize how their interests converge as they all seek transformation, even if they may turn to different strategies to reach this common goal.

Scoping Study on Risks Prevention for Green Transition Towards Carbon Neutrality: Zhang Yongsheng, Research Institute for Eco-civilization, Chinese Academy of Social Sciences, explained the report examined the risk of carbon neutrality, notably to ensure the security of energy, industrial chains, supply chains, food, and daily life while meeting the promises of a new era of green development.

Noting that perspectives on risks from development differ, he underscored the new development concept presumes that environment and development are not in conflict but rather are mutually reinforcing. He detailed existing research on risks, outlining contexts in which risks tend to be overestimated.

Regarding risks of carbon neutrality, he highlighted:

- risks of supply instability brought about by characteristics of new energy sources, including their impact on consumption;
- risks to green industrial chain security, notably brought about by competition among major powers over minerals; and
- food security risks, which requires shifting from a business perspective to an emphasis on health and nutrition.

Zhang then outlined future research topics, including on: market mechanisms to reduce risks; incorporating the dual carbon goals into the overall planning of ecological civilization; and incentives for green technological innovation.

SPS on Carbon Dioxide Emissions Peaking and Carbon Neutrality Policy Measures and Implementation Pathways:

Wang Yi, Professor, CAS Institute of Science and Development, presented this report. After providing an overview of developments since the Glasgow Climate Change Conference in November 2021, he outlined the report's recommendations to:

- synergistically promote steady growth and green development;
- accelerate low-carbon energy transition under the premise of energy security, which requires systemic efforts to develop a new power system;
- deploy legal, economic, and administrative measures to establish efficient and coordinated policy systems and institutional mechanisms for carbon peaking and carbon neutrality, adhering to the principle of “construction before destruction”;
- lead overseas green investment, and enhance international cooperation and trade in low-carbon technologies while maintaining a resilient supply chain; and
- enhance international cooperation on climate change and promote pragmatic and balanced progress in international climate governance, including by facilitating synergies between climate governance and governance in other fields, such as energy, food, and supply chains.

He concluded with suggestions for future research topics, including coordinating between energy security, carbon emission reductions, biodiversity conservation, and sustainable development.

SPS on Ecosystem-Based Integrated Ocean Management Under the Vision of Carbon Neutrality: Jan-Gunnar Winther presented this report, underscoring the Ocean plays a critical role in capturing carbon dioxide from the atmosphere.

Emphasizing that efficient Ocean management must be holistic, integrated, knowledge based, and ecosystem based, he outlined several approaches to such management, including: reducing the carbon dioxide footprint from existing ocean activities, including the post-harvest processing and distribution of aquatic products.

Winther explained the report recommends, *inter alia*:

- taking immediate action to capture and store carbon dioxide through natural means by avoiding further marine habitat and coastal wetland destruction;
- accelerating technological innovations in marine carbon dioxide removal, and offshore carbon capture, utilization, and storage, and establishing related management systems; and

- aiming for more ambitious goals, including through the International Maritime Organization, to decarbonize and shift to renewable energy, such as by establishing “green corridors” between ports to accommodate for using renewable fuels for deep-sea fleets.

SPS on Low-Carbon and Resilient Urban Development and Adaptation to Climate Change—River Basin Governance Under Climate Change:

Li Xiaojiang presented this report, explaining that natural and anthropogenic drivers, such as weather, agricultural, and urbanization patterns, interact to have a long-term, and complex, impact on large global river basins. He stressed the importance of building river basin resilience in light of the “changing game” of increased uncertainties, including from climate change.

Recalling the 2015 Sendai Framework for Disaster Risk Reduction, Li pointed to lessons from several case studies. He explained the report puts forward a vision of river basin governance that aims to transform the Yangtze River Basin into a co-governed, greener, low-carbon, and more coordinated, balanced, safer, resilient, inclusive, and open “River Basin Life Community.” On improving resilience, he flagged several strategies, including optimizing shoreline utilization in the lower reaches of the river, notably through creating a people-oriented waterfront living space.

After calling attention to social equity and gender issues, Li presented the report's policy recommendations, including:

- strengthening extreme event protection to restore watershed ecosystems;
- developing long-term plans for climate adaptation and carbon reduction in industrial port cities; and
- building capacity for responding to climate change.

SPS on Value Assessment of Nature-based Solutions:

Presenting this report, Ouyang Zhiyun explained the goal was to develop a framework for the design and implementation of NbS compatible with established Chinese environmental protection and sustainable development concepts, including through development of a prototype database of case studies and a framework that enables consistent and comprehensive measurement of NbS benefits.

He noted the report required the review of more than 40 Chinese policies from varied ministries covering forest, grassland, wetland, farmland, the Ocean, and urban ecosystems. He reported the SPS analyzed eight Chinese cases of national and local-led programmes, and five international case studies. Li highlighted key results from the SPS, including:

- a summary of Chinese policies according to the criteria in the IUCN Global Standard for NbS;
- the detailed documentation of ten case studies using the PANORAMA platform;
- examples of valuing NbS benefits; and
- analyzing women's contributions to ecosystem provisioning, and cultural and regulating services.

He concluded by outlining policy recommendations, including to:

- expand and mainstream the application of NbS;
- broaden NbS investment and financing channels; and
- emphasize the role of women in NbS development and implementation.

Scoping Study on Digitalization to Advance Sustainability: Dirk Messner introduced this report on how to combine the megatrends of digitalization and sustainable development, the “twin transitions,” in the Chinese context. He explained work focused on three areas, namely:

- greening the digital sector, including data centers;
- strengthening the linkage between the green and digital transitions, including using macroframeworks to address missing links between digitalization and sustainability in corporate strategy, research, and policymaking; and
- digital innovative solutions for low-carbon development, including on circular economies.

He noted studies show that digital solutions might enable GHG reductions of 20% by 2030 using existing technologies, such as smart manufacturing and sustainable mobility. Looking to future studies, he suggested a three-pronged approach: employing a sectoral approach; researching key innovations; and applying a city perspective.

CCICED Study on Gender Mainstreaming in SPS

Research: Jennifer Savidge, WPS Group, explained gender equality had been identified as a cross-cutting issue across the SPS reports. For each of the six SPSs, she reported on the ways in which gender was incorporated in their work, noting it demonstrates several best practices for gender mainstreaming.

In conclusion, she drew attention to the still limited data in case studies available on the gendered impacts of environmental issues and climate change, and the measures developed to address them, noting this represents an important opportunity for SPS teams moving forward. Savidge recommended a greater emphasis on integrating gender equality as early as possible and throughout the research cycle, including to allow for an appropriate budgetary allocation to carry out gender-specific research and produce case studies within each SPS.

Policy Research Dialogue

Zhou Guomei, CCICED Deputy Secretary General, opened the Policy Research Dialogue Plenary on Wednesday evening, 15 June.

Noting the 2022 AGM marks the start of CCICED’s Phase VII, Zhao Yingmin, CCICED Secretary General, encouraged participants in the Plenary to engage in candid exchanges based on the Open Forums and SPSs so their ideas can be incorporated into policy recommendations.

Participants then heard reports on the outcomes of each of the Open Forums.

Synergizing Economic Growth, Energy Security and Climate Action for a Steady Growth: Kate Hampton highlighted:

- the transition must address social supply and demand issues, including both workers in carbon-intensive sectors and poor households without energy access;
- energy access includes modifying buildings and transportation for energy efficiency and savings while phasing out coal power;
- legal, economic, and administrative measures, including a roadmap and speedy timetable, are needed for a coordinated and efficient response, including mechanisms for carbon peaking and neutrality;
- trade standards need harmonizing, and institutions at all levels must ensure private capital flows to solutions; and
- BRI countries need green finance solutions and technology, which China can supply and which will support green value chains.



Dirk Messner, President, German Environment Agency

Nature-based Solutions and Eco-benefits Assessment: Bruno Oberle, Director General, IUCN, identified five key messages from the Forum:

- nature provides solutions for addressing global challenges, especially climate change, and for achieving the SDGs;
- outcomes must be measured consistently across scales and locations, following international standards and recommendations;
- by linking efforts to address multiple challenges such as climate change and biodiversity loss, NbS have the potential to increase green financing and close financing gaps;
- NbS call for coherent policy, knowledge sharing, and stakeholder cooperation to increase uptake and scale successful solutions; and
- China has made remarkable progress and is one of the world’s NbS champions.

Ocean Governance—Past and Future: Dai Minhan reported that key recommendations included:

- assessing the needs and tools for more effective and adaptive IOM, including on marine plastics;
- decarbonizing shipping, and advancing green hydrogen and sustainable fuels;
- establishing a comprehensive emergency response for oil spills; and
- innovating technology and finance to incorporate low carbon and blue carbon into tradable assets.

Linking River Basins Management with Nature and Resilience: Jan Bakkes, Senior Strategic Advisor to the Director General, PBL Netherlands Environmental Assessment Agency, presented recommendations from this Open Forum, including to:

- strengthen against multiple natural hazards;
- build resilient urban and rural settlements, including NbS;
- pilot comprehensive planning for key industrial and port cities in the low-carbon era;
- transform industrial port shorelines into ecological shorelines; and
- invest in monitoring and local response capacities that attend to gender equality and social equity.

Green Supply Chain—New Opportunity for Global Development: Chen Ming reported three key messages arising from the Forum:

- a green supply chain is essential, and requires policy coordination and support from enterprises;
- strategies to building a green supply chain are known and must be implemented systematically; and



Bruno Oberle, IUCN Director General

- a green supply chain can help ensure food security and meet carbon neutrality targets to drive the sustainable transformation of agricultural and food systems.

Build a Green BRI Together to Boost Global Green and Low-Carbon Transition: Zhang Jianyu noted key recommendations included:

- promoting industrial, technological, and financial cooperation and resources to support green and low-carbon energy development, particularly given rising US interest rates;
- mobilizing sovereign funds and private funding to give more effective assistance to highly indebted countries;
- deepening international cooperation, especially given the damage from the current conflict, and healthy competition between China and the US, to bring better low-carbon development to BRI countries; and
- enhancing overseas investment in renewable energy and combining its development with other initiatives such as for agriculture or medical facilities.

‘Digital + Green’—Twin Transformation for

Sustainability: Antonia Gawel highlighted:

- obstacles, including lack of a business case for linkages because the market pulls business toward other applications;
- the need for China, as the global leader in both green transition and digitalization, to lead the twin transformation;
- a skills gap in digital expertise, both for market applications and, even more so, for sustainable development; and
- the need for data governance for fostering open access and exchange of data given the business implications of open access.

CCICED Draft Policy Recommendations: Introducing the recommendations, Liu Shijin explained 24 recommendations were organized under five areas:

- staying committed to a green and low-carbon transition and ensuring security and stability in key areas, including economy, energy, food, and climate;
- promoting green technological innovations to foster new driving forces for economic development;
- improving the green and low-carbon system to bolster long-term endeavors in high-quality development;
- enhancing integrated ecosystem-based management and optimizing low-carbon and resilient spatial patterns; and
- deepening dialogues, exchanges, and practical cooperation to maintain an open, inclusive, and mutually-beneficial international environmental governance process.

Underscoring these draft policy recommendations are still a work in progress, Scott Vaughan invited participants to continue submitting productive suggestions until they are finalized. He then opened the floor to comments from CCICED Special Advisors on the recommendations.

Jennifer Morris, TNC, encouraged:

- China to use its Ecological Conservation Redline policy to identify where development should take place, for example by placing solar arrays on contaminated land to expand renewable energy without affecting biodiversity;
- the uptake of proven methods of regenerative agriculture, welcoming the opportunity to support China in such a shift, including in the dairy sector; and
- debt restructuring for nature.

Rodolfo Lacy, Organisation for Economic Co-operation and Development (OECD) Director for Climate Action and Environment for Latin America and Special Envoy on Climate Matters to the UN, said the OECD emphasizes NbS should play an integral role in pushing forward the climate and biodiversity agendas, noting research is needed to identify how to integrate them effectively and efficiently into the food system. Flagging the upcoming launch of the OECD’s second [Global Plastics Outlook: Policy Scenarios to 2060](#), he drew attention to carbon plastic waste, including marine litter. He invited China to join the OECD International Programme for Action on Climate (IPAC), noting it would benefit from IPAC’s evidence-based analysis and could share its own best practices to allow mutual learning among countries.

Ani Dasgupta lauded China’s Overseas Finance Inventory Database on overseas coal plant investments. He advocated for enhancing climate resilience and infrastructure, noting issues relating to sea level rise and drainage systems, and called for the use of NbS. He urged China to work to ensure secure and stable supply chains, given current problems with access to energy and food, and to lead the world in food systems transformation.

Stephan Contius, German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, recommended mainstreaming NbS in policymaking and implementation, including modifying incentives for NbS for flood prevention and protection. Noting food systems equal one-third of global GHG emissions and 80% of biodiversity loss, with huge implications once tipping points are reached, he urged shifting to low-carbon, plant-based diets, reforming agricultural subsidies, and introducing green taxation and eco-compensation programmes.

Galit Cohen, Director General, Ministry of Environmental Protection, Israel, urged that carbon pricing schemes protect lower income households through redistribution mechanisms, such as subsidies for food and transport. She recommended: mapping climate risks based on local exposure and identifying priority hotspots based on adaptivity; aligning the financial sector with policy objectives; regulations for providing information, such as in Israel’s contaminated soil database; regulatory frameworks for uniform reporting of GHG emissions and impacts; and taxonomies of economic activities’ environmental benefits and harms.

Zafar Makhmudov, Executive Director, Regional Environmental Center for Central Asia, encouraged China to share and support the best carbon neutral technologies for sustainable production and consumption. He also called for diversifying economies through rural infrastructure and the involvement of youth.



Jennifer Morris, CEO, The Nature Conservancy

Closing Session

CCICED Chinese Executive Vice Chair Huang chaired this session on Thursday evening, 16 June.

Achim Steiner congratulated CCICED on its historic contributions and on the substantive AGM discussions on the increasing challenges and risks to building an ecological civilization. Saying the pandemic and war are increasing food insecurity and poverty, he called for translating the AGM's examination of why, when, and how to work toward a green and inclusive low-carbon economy into bold action. He lauded CCICED as a unique body for fostering international cooperation.

Inger Andersen, CCICED Vice Chair and UNEP Executive Director, highlighted past successes: global agreements, notably on ozone depletion; the phase-out of lead in petrol; and the influence of the IPCC. She said the triple crisis is nevertheless accelerating faster than efforts to address it. She noted Chinese leadership, and further opportunities for Chinese leadership, on carbon peaking and neutrality, renewable energy, energy efficiency, greening the BRI, circular economy, and digitalization. She called for open, accessible data so consumers can make decisions based on their carbon footprint. She lauded China's move from a high growth to a high-quality development model of ecological civilization, and CCICED's contributions to building a better global future.

Kristin Halvorsen noted that, globally, USD 500 billion goes to environmentally harmful subsidies. She said failure to adhere to long-term goals will increase the risk of conflict and instability, while also acknowledging the need to maintain sustainable supply chains to "keep food on the table." She called for ceasing tropical deforestation to keep the 1.5° goal within reach, including through deforestation-free supply chains and halting finance that destroys nature and ecosystems. She highlighted China's extensive forests, large food and commodities market, and leadership, including the CBD COP 15 presidency. Noting threats to the Ocean's contributions to the global climate, biodiversity, and food security, she encouraged consideration that threats and crises often spur innovation and action.

Liu Shijin noted AGM participants reached consensus on the need to balance growth and security with long-term sustainable development and on the importance of prioritizing green investments. He stressed the need to: stabilize existing energy production while developing new installed capacity; deconstruct national targets for different cities and regions; and lay a solid foundation for future development by simultaneously furthering the digital and green transitions.

Building on the AGM's rich body of research, discussion, and recommendations, Scott Vaughan flagged the opportunity for China to adopt a new national climate law that could firmly underpin the strategies already in place and facilitate enforcement. Noting successful laws evolve from enforcement and deterrence to being embraced as common sense, he explained that such a law would also broaden public awareness of how green lifestyles throughout society can contribute to advancing a low-carbon ecological civilization.

Børge Brende, President, WEF, said the Council has established itself not only as a leading champion of sustainable development but as a vital resource for forward-leaning policy guidance. He encouraged other countries to learn from the Council's model.

Peter Bakker, President and CEO, WBCSD, congratulated CCICED on the launch of Phase VII. He said the WBCSD is committed to continued engagement in the CCICED's work, flagging the crucial role of business in realizing an inclusive green and low-carbon world.

Juergen Voegele, Vice President for Sustainable Development, World Bank, highlighted the need for urgent action on climate change despite global instability. He noted many reasons for China to act early on climate change and sustainability, including to increase energy security and develop technologies that are increasing in demand. He flagged the need for China to continue to make structural reforms and noted a climate law would be a critical next step.

Francesco La Camera said ongoing crises make clear the need to abandon old, centralized energy systems based on fossil fuels. He noted that electrification and efficiency are key drivers for accelerating the energy transition.

Han Zheng, Vice Premier of China and CCICED Chair, thanked the Council for its three decades of support for China's sustainable development and for the AGM's recommendations, saying a green and low-carbon economy is essential for China's high-quality development. He asked CCICED to continue building on the Chinese tradition of joint dialogue and invited participants to visit China, when the pandemic subsides, to understand the environment and development situation in its different regions and provide more targeted advice. He said China must balance a clean energy transition with a secure energy supply by building new renewable energy capacity before eliminating coal power production, underscoring the need to double renewable energy production in five years. He concluded by noting CCICED's expert, in-depth discussions and suggestions had inspired him to hope for a green and beautiful world.

CCICED Chinese Executive Vice Chair Huang closed the AGM at 20:58 CST (UTC+8).



Achim Steiner, CCICED Vice Chair and UNDP Administrator

Upcoming Meetings

HLPF 2022: The 2022 meeting of the High-level Political Forum on Sustainable Development, under the auspices of the UN Economic and Social Council, will convene under the theme “Building back better from the coronavirus disease (COVID-19) while advancing the full implementation of the 2030 Agenda for Sustainable Development.” The 2022 meeting will hold in-depth reviews of five SDGs: 4 (quality education), 5 (gender equality), 14 (life below water), 15 (life on land), and 17 (partnerships for the Goals). **dates:** 5-7 and 11-15 July 2022 **location:** UN Headquarters, New York **www:** sustainabledevelopment.un.org/hlpf

Fourth Meeting of the Intersessional Process Considering the Strategic Approach and Sound Management of Chemicals and Waste Beyond 2020: This meeting will support stakeholders in their efforts to elaborate the future arrangements of the Strategic Approach and the sound management of chemicals and waste beyond 2020 for consideration and adoption at the next session of the International Conference on Chemicals Management (ICCM5). **dates:** 29 August – 2 September 2022 **location:** Bucharest, Romania **www:** saicm.org

Clean Energy Ministerial and 7th Mission Innovation Ministerial: This event gathers ministers from the world’s major economies to collaborate on accelerating clean energy adoption through enabling policy frameworks. **dates:** 21-23 September 2022 **location:** Pittsburgh, Pennsylvania, US **www:** cleanenergyministerial.org

UNFCCC COP 27: The 27th session of the COP to the UNFCCC, the 17th meeting of the COP serving as the Meeting of the Parties to the Kyoto Protocol, and the fourth meeting of the COP serving as the Meeting of the Parties to the Paris Agreement will convene. **dates:** 7-18 November 2022 **location:** Sharm el-Sheikh, Egypt **www:** unfccc.int/cop27

Plastics INC-1: The first meeting of the Intergovernmental Negotiating Committee (INC) to develop an international legally binding instrument on plastic pollution, including in the marine environment, is tentatively scheduled to convene. **dates:** 28 November 2022 - 2 December 2022 **location:** Uruguay **www:** unep.org/events/unep-event/Intergovernmental-Negotiating-Committee-end-plastic-pollution

UN Biodiversity Conference (CBD COP 15): This meeting includes the 15th meeting of the COP to the CBD, the 10th meeting of the COP serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety, and the 4th meeting of the COP serving as the Meeting of the Parties to the Nagoya Protocol on Access and Benefit-sharing. The meetings are scheduled to take place to review the achievement and delivery of the CBD’s Strategic Plan for Biodiversity 2011-2020. It is also expected to take a final decision on the post-2020 global biodiversity framework, as well as decisions on related topics, including capacity building and resource mobilization. **dates:** 5-17 December 2022 **location:** Montreal, Canada **www:** cbd.int/conferences/2021-2022

UN 2023 Water Conference: On 28 November 2018, the UN General Assembly (UNGA) Second Committee adopted by consensus a resolution calling for a midterm review of the Water Action Decade at UNGA 77 in 2023. Officially known as the UN 2023 Water Conference, the UN Conference on the

Midterm Comprehensive Review of the Implementation of the Objectives of the International Decade for Action, “Water for Sustainable Development,” will coincide with World Water Day and will focus on the objectives of the Decade as laid out in the Secretary-General’s Plan: Water Action Decade 2018-2028. **dates:** 22-24 March 2023 **location:** New York, US **www:** sdgs.un.org/conferences/water2023

For additional upcoming events, see: sdg.iisd.org/

Glossary

AGM	Annual General Meeting
AI	Artificial intelligence
BRI	Belt and Road Initiative
BRIGC	BRI International Green Development Coalition
CAS	Chinese Academy of Sciences
CBD	Convention on Biological Diversity
CCICED	China Council for International Cooperation on Environment and Development
CIFF	Children’s Investment Fund Foundation
COP	Conference of the Parties
FECO	Foreign Environmental Cooperation Center, MEE
GCF	Green Climate Fund
GDP	Gross domestic product
GEP	Gross Ecosystem Product
IOM	Integrated Ocean management
IUCN	International Union for Conservation of Nature
MEE	China Ministry of Ecology and Environment
MNR	China Ministry of Natural Resources
NbS	Nature-based solutions
NRDC	Natural Resources Defense Council
SDGs	Sustainable Development Goals
SPS	Special Policy Study
TNC	The Nature Conservancy
UNDP	United Nations Development Programme
UNEP	UN Environment Programme
UNEP-WCMC	UNEP-World Conservation Monitoring Center
WBCSD	World Business Council for Sustainable Development
WEF	World Economic Forum
WRI	World Resources Institute
WTO	World Trade Organization
WWF	World Wide Fund for Nature