



CCICED Scoping Study Innovative Sustainability Finance

Background Annex
23 February 2022

Objective

The 2022 CCICED Innovative Finance Scoping Study examines recent developments in China and internationally related to innovative green finance, notably in relation to the Glasgow and Kunming United Nations Framework Convention on Climate Change (UNFCCC) Conferences of the Parties (COPs), as well as financing proposals related to the Ramsar Convention. (China will host the Ramsar in November 2022.)

In 2021, President XI noted that “our solutions are in nature” in addressing key nature, climate, green development, and ecological civilization goals. In 2021, [China issued](#) more than 80 state-, provincial-, and municipal-level regulations, opinions, and guidelines in support of climate neutrality and other goals, while the “1+N” framework is intended to set a comprehensive framework.

Financing nature that includes biodiversity protection, ecosystem protection, greening food, and other systems is critical to fulfilling the goals set out in Kunming and Glasgow. Therefore, integrating biodiversity and climate financing under a comprehensive framework will provide greater opportunities for a green and people-centered transition than separate financing pathways.

The 2022 CCICED study therefore identifies pathways to integrate climate finance and nature finance. This background note examines examples from China and internationally of increasing private sector nature financing, including through private-public sector partnerships. The study also examines options at the international level to align sovereign debt financing with nature and climate.

An important outcome of such integration should strengthen people-centered approaches that protect and improve people’s livelihoods, and contribute to China’s just transition to support carbon neutrality, as well as to human rights and social and income equality.

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scoping study included international and Chinese experts (list to be completed), who will meet 2–3 times between January and early April 2022.

Report Outline

Part one examines three priorities to integrate climate and nature financing:

- Opportunities for nature-based solutions (NbS) financing to integrate biodiversity and climate outcomes.
- Approaches and tools, such as regulations, standards, guidelines, and tools to integrate nature and climate, including green taxonomy, risk disclosure, subsidy reform, and other measures.
- Pathways to integrate nature and climate financing to support sustainable sovereign debt outcomes.

Part two identifies examples of short- and medium-term opportunities, as well as green transition planning.

Part three sets out recommendations from this scoping study. The overall recommendation is that CCICED should prioritize innovative green finance during Phase VII, including a top-level strategic plan and detailed examples to integrate climate and biodiversity finance with a people-centered just transition focus.

Context: Financing Levels, Sources, Gaps, and Options

In recent years, climate finance has steadily increased. [Global climate finance](#) in 2019–2020 was estimated at USD 632 billion annually. [Global biodiversity finance](#) in 2019 was estimated at USD 143 billion annually. Significant financing gaps persist. The Climate Policy Initiative estimates a global climate finance gap of between USD 3.6 trillion and USD 4.1 trillion annually. A January 2022 [McKinsey report](#) estimates an investment increase of USD 3.5 trillion annually will be needed to achieve net-zero transition goals (with a net investment of USD 9.2 trillion), while the [2020 Financing Nature report](#) estimates a biodiversity financing gap of USD 598 billion to USD 824 billion per year.

China has announced numerous technical regulations and initiatives related to climate finance. For example, in 2021, the Ministry of Finance issued preferential tax rates for enterprises based on energy savings, resource efficiency, and circular economy criteria. In November 2021, the People’s Bank of China ([PBOC](#)) established a new climate financing facility to provide low-interest loans via financial institutions to support company-based, low-carbon investments. China’s [national Emissions Trading System](#) (ETS) is an important source of climate finance: as [China’s ETS compliance carbon market](#) expands from the power sector to other sectors and identifies the transition from an intensity-based to emission cap system, so too will the revenues generated from these trades grow.

Integrated Investments

2021 saw numerous multilateral initiatives and pledges to increase and align climate and biodiversity financing. The October 2021 [Kunming Declaration](#) noted that “*urgent and integrated action is needed, for transformative change,*” calling for greater coherence between the UN Convention on Biological Diversity (CBD) and UNFCCC, as well as other international agreements. Experts are looking for the Kunming outcome to include both the Global Biodiversity Framework and a renewed emphasis on National Biodiversity Strategies and Action Plans (NBSAPs). The [Glasgow Leaders Declaration on Forests and Land Use](#) is a promise by 141 governments to “halt and reverse forest loss and land degradation by 2030.” At the country level, a growing number of Nationally Determined Contributions (NDCs) include [Forest Land Restoration](#), related land use, land-use change and forestry (LULUCF), and [water management](#) as part of climate mitigation and adaptation goals.

Misalignment Risk: Despite these top-level signals, there remains a risk that climate finance will continue to outpace financing for nature, biodiversity, and ecosystem protection. For example, there are risks that the increased demand in carbon offset markets (driven by several factors such as the completion of [Article 6](#) of the Paris Climate Agreement at Glasgow and the thousands of companies that have made net-zero pledges) can lead to negative ecosystem effects, for example, by investments in projects based on single-crop species. The CCICED [Special Policy Study \(SPS\) on Nature-Based Solutions](#) examines the International Union for Conservation of Nature (IUCN) Gold Standards to address some of these risks.

Risks also include climate financing that fails to consider or contradicts biodiversity conservation goals, for example, by increasing highly toxic battery waste for electric mobility or increasing coal-fired electricity to meet expected energy supply shortages linked to increased e-mobility demand.¹ Moreover, in the absence of a comprehensive framework, biodiversity finance will remain predominately supported by public financing and not become fully bankable, at least not in the near term.

The risks to people-centered development from misaligned climate and nature finance are pervasive, affecting farming, forest, and other communities, as well as efforts to enhance eco-tourism and other sectors.

Greenwashing Risks: Other risks include concerns that both voluntary carbon offset markets (which are likely to be a dominant form of NbS projects) and ESG funds face greenwashing risks. Work to

¹ In 2022, the [International Energy Agency](#) warned that Canada would face electricity supply shortages by 2035, based on current capacity and investment plans, due to the expected increase in electric automobiles linked to the regulatory phase-out of internal combustion engines.

reduce greenwashing continues on several fronts: for example, to adopt international standards to help ensure high-quality, high-integrity voluntary carbon offset markets. The recently finalized Articles 6.2 and 6.4 of the Paris Climate Agreement are intended to address risks associated with carbon markets, including rules to avoid the double-counting of carbon credit, guidance to ensure additionality, permanence, reporting, and others. Yet these will take years to be fully implemented.

Among the initiatives related to COP 26 is the [Glasgow Financial Alliance for Net Zero](#), which to date comprises 450 financial firms. No major Chinese banks are signatories, and only one asset investor is. Following this commitment, markets and others will track actual progress through measurable reporting protocols and tools. While company-led commitments are welcome, implementing net-zero pledges is complex, often with disappointing results. For example, a February 2022 [Nature article](#) notes significant gaps in corporate carbon mitigation plans, often missing Scope 3 emissions entirely and relying on carbon offsets. These gaps are partly explained by weak climate governance within corporate boards: a 2021 [survey by NYU's Stern School of Business](#) showed extremely weak board governance capacity related to climate and environmental, social, and governance (ESG) matters.

PART ONE

Section One: Opportunities for NbS Financing

Financing for NbS

The CCICED 2021 scoping study on [NbS](#) noted the absence of clear, standardized definitions and classifications of NbS projects and policies. The 2022 NBS SPS will reference the IUCN NBS Gold Standard as the basis to classify different NbS projects based in China and internationally.

Increased policy attention to NbS is attracting diverse sources of financing. The UNDP [Human Development Report 2020](#), for example, provides cases studies in which private insurers are partnering with government agencies to provide coral reef insurance in Mexico, a collective financing mechanism to finance green infrastructure in support of freshwater management in Ecuador, a high-resolution ecosystem mapping in Costa Rica to guide development, and other initiatives.

Looking ahead, work is needed to differentiate different kinds of objectives and performance outcomes for NbS. For the purposes of this note, the recent [State of Finance for Nature in the G20 report](#) prepared by UNEP, WEG, ELD, GIZ, and Vivid Economics defines NbS thusly in order to track financing trends and gaps:

Nature-based solutions (NbS) is a category of assets in which businesses, governments and citizens can invest in order to work with nature... NbS places nature at the heart of many societal challenges, such as the climate and biodiversity crises, as well as disaster risk reduction, food security and human health. Through the improvement of carbon sequestration on

agricultural lands and peatlands, defense from flooding by restoring mangrove populations, and the protection of global biodiversity through forest and other land conservation, nature-based solutions can help improve society today and in the future.

A similar definition is used in the 2021 [State of Finance for Nature report](#), which estimates that USD 133 billion is invested annually in NbS. Of this total, 86 percent or USD 115 billion is public financing related to conservation, regeneration of forests, peatlands, agriculture, water conservation, and natural pollution control systems. The report estimates that private sector NbS financing is much lower, at 14 percent of total annual financing—or USD 18 billion per year—with investments dominated by biodiversity offsets, sustainable supply chains, impact investment, and private philanthropy investments.

Increasing Public Sector Nature Financing

The 2021 [State of Finance for Nature](#) report identifies five steps for public finance to close the nature financing gaps:

- Increase overseas development assistance (ODA)
- Reform agricultural subsidies
- Mandate multilateral development banks (MDBs) to increase NbS financing
- Link developing country debt relief with NbS investments
- Support results based NbS public financing linked to green bonds.

There are many other public finance options available to close financing gaps, including de-risking. For example, a recent Third World Network piece on [post-Glasgow financing](#) notes China's use of capital controls to de-link domestic climate financing costs from international trends.

Private Sector Nature Financing

The key to closing the nature finance gap is increasing private sector financing. Estimates by the [Coalition of Private Investment in Conservation](#) (CPIC) indicate conservation-related investments in 2021 remain overwhelmingly dominated by private debt and equity, followed by real assets. By contrast, tools like publicly traded instruments are rarely used in biodiversity-related finance, compared, for example, to renewable energy financing.

The CPIC report notes that the main revenue sources associated with conservation finance are dominated by sustainable commodities, which comprise more than half of all private sector investments, followed by returns from carbon and biodiversity credits. The report notes various barriers to scaling-up biodiversity finance: a lack of project-ready investments, gaps in international design and measurement standards, and small-scale projects of around USD 5 million. CPIC estimates that 99.7 percent of investors are in Australia, Germany, the Netherlands, South Korea, Switzerland, the United Kingdom, and the United States.

Increasing Private Sector Nature Financing

The 2021 [State of Finance for Nature](#) report recommends several steps to increase the proportion of private sector financing:

- Advance nature-related financial disclosure
- Encourage private sector investment portfolios to become more nature positive
- Expand private carbon markets to include ecosystem protection and ecosystem services
- Increase concessional capital needed to de-risk nature-related investments.

In 2021, UNDP's [BIOFIN](#) in China began work to reduce the biodiversity financing gap by delivering better on what is available, reallocating resources from where they harm to where they help, acting early to reduce the need for future investments, and generating additional resources.

Blended Green Finance

A third pathway involves public–private partnerships (PPP) to increase NbS financing. There have been various standards and guidelines related to blended finance, including by the [World Bank International Finance Corporation](#), the [Organization for Economic Co-operation and Development](#) (OECD), and others. There is a growing number of deals involving public and private sector finance.

The [Shandong Green Development Fund](#) (SGDF) is a leading example of an innovative financial mechanism designed to attract and catalyze private investors in climate-friendly infrastructure investments in Shandong. The Shandong Fund establishes a comprehensive climate investment framework with clear interim outcome-based and longer-term targets. For example, the SGDF estimates that, by 2027, climate investments will reduce carbon emission by 3.75 million tons annually, while climate-resilience investments will benefit over 3 million people. It is also among the first financing mechanisms in China to prioritize effective gender mainstreaming. The SGDF is managed by a top-tier fund manager, CICC Capital Management, a subsidiary of a leading investment bank, China International Capital Corporation, which is publicly listed on the Hong Kong Stock Exchange.

An international example is the 2020 agreement between France's AfD and Blackrock to create a USD 500 million [Climate Finance Partnership](#) for climate infrastructure in developing countries.

Section Two: Initiatives and Tools

Business Investment Roadmaps: The January 2022 report [Seizing Business Opportunities in China's Transition Towards a Nature-Positive Economy](#) identifies key transition investment opportunities for businesses in key systems, like food and ocean-use, energy and natural resources, and infrastructure

and the built environment, in which increased nature financing can benefit the economy, jobs, and sustainability. The report estimates that investments in China’s nature-based economy could add USD 1.9 trillion in business value and 88 million new jobs by 2030. The report sets out an important framework and roadmap that should guide CCICED’s future work in this area.

Natural Asset Class: In September 2021, the New York Stock Exchange and the Intrinsic Exchange Group (IEG) launched a [new asset class](#) based on nature and the benefits that nature provides to people—economic productivity as well as multiple intrinsic values—that are examined, for example, in the 2021 UK Government’s *The [Economics of Biodiversity report](#)*. IEG announced work to develop standards to measure and report on the flows of ecosystem services needed to measure this new asset class.

Green Taxonomies: Under the [EU International Platform on Sustainable Finance](#) (IPSF), the China-EU Common Ground Taxonomy initiative issued its first assessment of [Climate Change Mitigation taxonomies](#) in November 2021. The purpose of the IPSF China-EU working group is to build greater comparability and interoperability among different national taxonomies, in order to support common or converging practices of green bond issuers and verifiers; company-level low-carbon roadmaps; banks and other financial institutions aligning their portfolios with low-carbon roadmaps; development finance institutions; reporting entities interested in benchmarking the Common Principles for Climate Mitigation Finance Tracking (see below); and international standard-setting bodies. By 2022, all EU financial products that list some green claim must cross-reference how they align with the EU green taxonomy.

China’s green taxonomy focuses mainly on providing guidance for green bond issuers and covers three main areas²—environmental improvement, climate change measures, and the efficient use of natural resources. China’s green taxonomy is based on the 2021 joint PBOC, NDRC, and CSRC Green Bond Endorsed Projects Catalogue, which identifies several major activities and specific sectors. For conservation- and NbS-related finance, the “ecology and environment related sector” is the most relevant and comprises “ecological agriculture” and “ecological protection and construction.” Given the importance of standards to support green markets, the Chinese taxonomy also includes green services such as auditing, inspection, and evaluation of projects.

The 2021 CGT report identifies common areas between the EU’s and China’s green taxonomies that have the highest impact. Critically, the EU’s green taxonomy forestry sector and China’s taxonomy ecology and environment sector are earmarked as “high priority,” thus underscoring the opportunity to increase investments in NbS. That report notes that principles like “do no significant harm,” various social and human rights issues, and other areas have yet to be addressed, while differing terminology, standards, and safeguards make detailed comparisons difficult.

² The EU taxonomy, by contrast, covers six areas: climate mitigation, climate adaptation, the sustainable use of freshwater and marine resources, transition to a circular economy, pollution prevention and the protection, conservation or restoration of biodiversity to achieve ecosystem integrity.

Do No Harm: The legal principle, also defined as do no significant harm, is defined by UNEP as the duty of a state to prevent, reduce, and control the risk of environmental harm to other states. The principle has been included in numerous [international treaties and agreements](#), especially covering water resource management. As negotiations to complete Article 6 continued, in 2018, the Sustainable Development Dialogue group was formed to examine safeguards to be considered in Articles 6.2, 6.4, and 6.8 related to the do no harm principle.

Overseas Development Assistance

The revised [2021 Common Principles for Climate Mitigation Finance Tracking](#) serves as the basis for MDBs (including ADB, AIIB, and the New Development Bank) and IDFC members to classify climate finance in a comparable manner via the annual [Joint Report on Multilateral Development Banks' Climate Finance](#). Of the total amount tracked in the joint report (USD 66 billion), the majority consists of investment loans (USD 50.4 billion), with much lower levels comprising policy-based lending (USD 4.8 billion) and grants (USD 3.3 billion). Other forms of climate finance are lines of credit (USD 2.1 billion), guarantees (USD 1.9 billion), equity finance (USD 1.4 billion), and results-based finance (\$1 billion).

The tracking report provides various categories to track MDB investments, notably related climate adaptation financing that includes “crop and food production” and “other agricultural and ecological services,” and, in the climate mitigation category, those under “agriculture, aquaculture, forestry and land-use.”

An important outcome of the Glasgow COP was the [Climate Finance Delivery Plan](#) on how to meet the Paris Climate Agreement pledge of USD 100 billion a year. While noting disappointment that the US\$100 billion has not been met, the plan expressed confidence it will be met by 2023, based on [tracking and scenarios prepared by the OECD](#) that point to the need for both MDBs and Export Credit finance to shift current financing and increase climate financing.

Risk Disclosure

There have been significant steps following the 2017 release of the [Task Force on Climate-related Financial Disclosures \(TCFD\) report](#), notably in adopting management rules covering climate-related risks and opportunities. Of note, in June 2021, the G7 agreed to [mandatory climate risk reporting](#) based on the TCFD recommendations.³ In July 2021, the G20 agreed to adopt a “[baseline global reporting standard](#).”

³ There are different approaches to mandatory climate disclosure within the G7. For example, in July 2021, the [U.S. Securities Exchange Commission \(SEC\)](#) announced it was developing new rules for all public companies, thereby differing from the EU Sustainable Financial Disclosure Regulation’s more narrow coverage of asset managers and financial advisors.

In July 2021, PBOC released its [Guidelines on Environmental Information Disclosure for Financial Institutions](#). The PBOC guideline notes:

Financial institutions shall report on their environmental objectives, visions, strategic plans, policies, actions and key outcomes during the year, such as their own operating activities generated by carbon emission controlling targets and achievements, resource consumption, pollution and prevention, climate change mitigation and adaptation, etc.

Risk disclosure is part of [China’s broader climate finance strategy](#), as described by PBOC Governor YI Gang in an October 2021 speech. While primarily focusing on transition and reputational risks linked to carbon assets, the [TCFD technical guidance](#) also covers physical risks such as “the disruption of operations or destruction of property” linked to climate-related extreme weather events, thereby suggesting current risk reporting frameworks can include NbS financing that mitigates climate risks through adaptation.

Initiatives are also underway to include nature risk disclosure reporting, in particular, through the [Task Force on Nature-related Financial Disclosures](#) (TNFD). The objective of the TNFD is to shift investment flows toward nature-positive outcomes.

Two challenges arising from risk disclosure standards are to identify the benefits of integrating climate and nature standards and to harmonize Chinese and international disclosure principles and practices. For example, among the recommendations of the Board of Directors of the Institute of International Finance’s (IIF) 2021 [Statement on Climate Finance](#) is the need to harmonize international risk disclosure rules, as well as support the convergence of green taxonomies, data standards, metrics, and other enabling tools.⁴

ESG Funds and Standards

2021 saw record levels in ESG investments, with asset managers creating a record number of new ESG products. The market analysis group Morningstar Analytics reported an all-time peak in ESG investments in 2021: as of September 2021, sustainable fund assets were more than USD 330 billion. (By comparison, [ESG assets](#) in the third quarter of 2020 were USD 183 billion). The majority of these investments are linked to renewable energy.

The EU regulation came into force in 2021. A related example of central bank guidance on climate risk is the November 2021 [Principles for Effective Management and Supervision of Climate-Related Financial Risk](#) by the Bank for International Settlements (BIS).

⁴ Chinese IIF members are Agricultural Bank of China, China Merchants Bank, Bank of Communications, Industrial & Commercial Bank of China, China Construction Bank, China Everbright Bank, CITIC, China Development Bank, Industrial Bank, and China Guangfa Bank

Various international initiatives have been underway to bring about standardized measurement and reporting to avoid greenwashing. For example, the [Principles for Responsible Investment](#) (PRI) are intended to help investors, asset managers, and others benchmark ESG standards and reporting. In late 2020, PRI issued [guidance linking ESG with negative carbon options](#), notably related to forestry conservation, afforestation, and avoided deforestation. This work complements other PRI guidance, for example, in forestry and science-based biodiversity targets. In addition, in order to move responsible investment from process and business conduct to real-world impacts contributing to the Sustainable Development Goals (SDGs), PRI has outlined a [five-part framework](#) for tangible SDG outcomes. With the same purpose, UNDP has also developed the [SDG Impact Standards](#)—a set of decision-making tools helping investors and enterprises integrate impact management and contributing positively to the SDGs in their strategy, management approach, disclosure, and governance practices.

New EU SFDR regulations will require all asset managers to classify their portfolios as either sustainable or non-sustainable, referencing the EU Taxonomy.

Voluntary Carbon Markets

One of the strongest market signals of NbS investment trends is the growing interest in voluntary carbon markets, through which investors purchase carbon offset credits. Market projections vary widely, with PRI estimating that investments in reforestation and afforestation will reach USD 800 billion in annual revenues by 2050, reflecting assets of over USD 1.2 trillion. Less spectacular forecasts from the January 2021 report of the [Task Force on Scaling Voluntary Carbon Markets](#) estimated carbon offset markets at between USD 5 billion and USD 50 billion by 2030. [2021 recorded voluntary carbon markets](#) of USD 1 billion in trades, with forestry and land use constituting over 60 percent of all investments.

There are over 20 major carbon offset certifying bodies, such as Zongcai Green Financing and China Quality Certification Center, operating in China. Given recent work to ensure carbon offsets are not subject to greenwashing, initiatives like the [Voluntary Carbon Markets Integrity Initiative](#), which issued clear initial recommendations in late 2021, present an opportunity to align Chinese domestic market practices with evolving international standards and best practices.

Recent guidelines and opinions issued by China's State Council, PBOC, and MEE focus on the central role of carbon sequestration markets as a part of China's carbon peaking and neutrality transition pathways, as examined in a recent CCICED background note on [carbon offset markets](#).

Corporate NbS Funds

In the past year, a flurry of company-led funds have been set up related to supply chains and NbS. Examples include:

- [Apple Restore Fund](#) of USD 200 million, launched in April 2021, to finance forestry projects that will remove up to 1 tonne of carbon annually.
- [L’Oreal: Fund for Nature Regeneration](#), a EUR 50 million fund to restore degraded ecosystems and capture 15 million–20 million tonnes of CO₂.
- [Amazon Right Now Climate Fund](#) of USD 100 million for NbS investments.
- [Orange Nature Climate Fund](#) of EUR 50 million to purchase high-quality carbon credits.
- [Kering Regenerative Fund for Nature](#) to support NbS linked to responsible and green supply chains, with a goal of restoring 1 million ha by 2025 and supporting regenerative agriculture.
- [The LEAF Coalition](#), a coalition of the U.S. and British governments and 19 major companies, including Walmart, Bayer, and Unilever, announced it had reached its USD 1 billion target for tropical forest protection in late 2021.

Deforestation-Free Supply Chains

The [2021 CCICED Global Green Value Chains SPS report](#) examined the strong causal link between the sourcing of various soft commodities, such as soy and palm oil, and deforestation, in particular tropical deforestation.

More than a decade ago, hundreds of companies signed onto a zero-deforestation pledge by 2020 under the [Consumer Goods Forum](#). In 2014, the [New York Declaration on Forests](#) promised to half global deforestation rates by 2020. Both targets have been missed by a wide margin, prompting [various assessments](#) to map complex supply chains and prioritize a systems-based approach to sustainable sourcing, including designing inclusive governance systems that deliver financing to local farmers.

Financing local farmers will be critical in meeting new sustainable supply chain promises as well as meeting the new global deforestation Glasgow pledge. Typically, small-scale farmers face higher production costs in meeting sustainable sourcing standards and third-party certification criteria while being hampered by a lack of access to affordable credit, especially in meeting upfront costs.

In the past year, there have been numerous new financing initiatives to implement sustainable supply chain sourcing. For example, the [Responsible Commodities Facility](#) was recently established with the collaboration of WWF, TNC, UNEP, WEF Tropical Forest Alliance, and others to help finance farmers producing sustainable soy in Brazil.

Other examples of NbS-focused financing initiatives include the [Nature+ Accelerator Fund](#), launched by IUCN and the Global Environment Facility (GEF), which is intended to scale up NbS financing toward an eventual goal of USD 160 million from 70 NbS projects by 2030.

At the first meeting of the UN CBD COP 26 in October 2021, China announced a new USD 230 million **Kunming Biodiversity Fund**, inviting other countries to contribute to the fund.

With the [Glasgow Leaders' Declaration on Forests and Land Use](#), signed by China and 140 other countries committed to stopping deforestation within their jurisdictions by 2030, the responsibility to ensure deforestation-free supply chains has shifted to government augmenting private sector actions. A number of jurisdictions, including Norway, France, the EU, the United Kingdom, and others, have introduced regulatory measures to restrict the market access of goods that cannot prove they have been harvested legally or meet certain sustainability standards. [Opposition from various food importers](#) regarding the proposed law and due-diligence procedures is one reason the British bill is delayed.

From a financial reporting perspective, this renewed focus on supply chains now includes climate risk considerations. In announcing its climate risk disclosure draft rules in 2021, the U.S. Securities Exchange Commission indicated it would likely include Scope 3 [greenhouse gas emissions linked to upstream and downstream supply chains](#). An Opinion issued in late 2021 by China's State Council indicated the need to undertake a climate risk assessment to align China's supply chains with carbon peaking and carbon neutrality goals.

Philanthropy

During the September 2021 UN General Assembly, nine philanthropic organizations announced funding of USD 5 billion under the "[Protecting our Planet Challenge](#)" to protect and conserve 30 percent of the planet by 2030.

Reforming Subsidies

The [2021 Financing Nature report](#) highlights the extent to which many agricultural and other harmful subsidies contribute to biodiversity loss, either on the production or consumption side. Examples from that report include subsidies that contribute to freshwater pollution, land degradation, forest and other ecosystem habitat loss, preferential output-based support of single-crop outputs, ineffective waste management, and other impacts. Citing OECD estimates tracking 53 countries, the report notes annual agricultural subsidies in 2016-2017 of USD 703 billion and estimates total "biodiversity-harmful subsidies" in 2019 of between USD 274 billion and USD 542 billion.

There have been numerous efforts over three decades to address harmful subsidies. In 2009, the G20 pledged to identify and eliminate "inefficient fossil fuel subsidies," with little progress either in

defining “inefficient” or reducing levels. Initiatives like [Friends of Fossil Fuel Reform](#), established in 2010, and ongoing analytic work by the International Monetary Fund ([IMF](#)), the World Bank [Energy Subsidy Reform Facility](#), the [Global Subsidies Initiative](#), and others helped pave the way for the inclusion of a commitment by countries to reduce “inefficient fossil fuel subsidies” in the 2021 Glasgow Climate Pact (the first time fossil fuels have been mentioned in any UNFCCC document).

As noted above, initiatives like the *Financing Nature* report have increased policy attention on the harmful effects that many farm subsidies have on nature, biodiversity, ecosystems, and the wider economy. A joint Food and Agriculture Organization of the United Nations ([FAO](#))–[UNDP](#)–[UNEP](#) report from September 2021 recommends repurposing most forms of agricultural subsidies due to their pervasive price-distorting and nature-destructive effects, in addition to negative climate, public health, equity, and trade effects.⁵ The joint report recommends six steps to estimate harmful agricultural subsidies at the national level as the basis to repurpose them. UNDP’s BIOFIN has developed a methodology to estimate domestic farm subsidy levels that are harmful to nature, with case studies underway in numerous countries (such as this [case study in Mongolia](#)). There is an opportunity to highlight subsidy reform during COP 26.

Subsidy reform has been discussed in various World Trade Organization (WTO) committees since its creation in 1995, with no agreement. The ongoing, 20-year WTO negotiations to strike a deal on fishery subsidies underscore the inability of trade policy to reach a consensus to condition and reduce environmentally harmful subsidies.

Among the recommendations of the [CCICED 2021 Green Finance SPS](#) is the importance of reforming China’s subsidy program. Specific recommendations include:

- Reduce subsidies to corn and soybean producers and lower the minimum purchase price standards for rice and wheat.
- Increase subsidies of a universal nature to reduce the damage of subsidies to biodiversity while ensuring that farmers’ income and agricultural output do not decline. This would entail a shift in the structure from direct to indirect subsidies.
- Integrate environmental targets into the criteria for determining subsidies. Environmental targets should be included in the identification criteria of more subsidy policies, including targets to support ecological protection.

⁵ The FAO-UNDP-UNEP report estimates global farm support is projected to increase to almost USD 1.8 trillion in 2030 under a business-as-usual scenario that takes into account the expected economic recovery. About 73 percent of this (USD 1.3 trillion) would be in the form of border measures, which affect trade and domestic market prices. The remaining 27 percent (USD 475 billion) would be in the form of fiscal subsidies that support agricultural producers and could continue to promote overuse of inputs and overproduction.

Section Three: Debt

Sovereign Debt Linkages to Climate, Nature: What are the key challenges and bottlenecks in China?

The January 2022 [World Bank Global Economic Prospects](#) notes that more than half of all middle-income countries are either in debt distress or are approaching debt distress; some countries have already defaulted on their debt; and debt restructuring is underway or has been completed in several countries. Several initiatives have been launched since the pandemic:

- The G20 Debt Service Suspension Initiative (DSSI) provided debt-service relief. DSSI is only available to low-income countries, and it is temporary.
- The IMF-World Bank “Common Framework,” intended to coordinate debt restructuring among Paris Club and non-Paris club creditors, currently involves three countries (Chad, Ethiopia, and Zambia). Reports suggest little progress under the framework.
- The IMF agreed to release USD 650 billion in [Special Drawing Rights](#) to help countries during the crisis. In November 2021, at the China-Africa FOCA summit, [President XI pledged USD 10 billion](#) (of its share of USD 40 billion in new SDRs) to help African countries recover from the pandemic.

Other proposals have been forwarded, including drawing on lessons from the Multilateral Debt Relief Initiative, the Highly Indebted Poor Countries Initiative and HIPC+, or issuing a new version of [Brady Bonds](#).

Linking Debt with Nature, Climate, and the SDGs

Another proposal to help alleviate the rising debt crisis is to align debt discussions, rescheduling, or restructuring with the shared multilateral objectives of protecting biodiversity, mitigating climate change, and broader SDG financing. Examples of green debt include the [Debt Relief for Green and Inclusive Recovery](#) plan, which proposes that the IMF and World Bank integrate climate change and the SDGs into debt analysis frameworks applicable to both low- and middle-income countries, with country-led green recovery plans leading to actual debt reduction in return for meeting targets set out by mutual agreement of debtor and creditors (the latter including both public and private sector debtors). The [Tackling the Triple Crisis Proposal](#) proposes using debt swaps to help debtor countries meet climate, nature, and other goals.

Various multilateral proposals are supportive of green debt initiatives. The [2021 Finance in Common](#) raised the issue of debt alignment to the SDGs. The UNEP State of Green Finance proposes to leverage SDRs to support conservation finance. In 2021, the World Bank, supported by the IMF, announced plans for a new facility to link debt with climate, nature, and other goals. As part of

[CCICED's Conservation Finance SPS](#), a proposal on nature performance bonds in the context of China was prepared as an annex.

Examples to Show Feasibility

The first generation of debt swaps was comprised of bilateral, discrete, and relatively small-scale financing arrangements between a creditor and debtor, which is why a portion of the debt service or principal debt was discounted, exchanged from USD to local currencies, and in return funds were set aside for conservation, protected areas, or other environmental outcomes. First-generation [early debt-for-nature swaps](#) tended to be discrete, stand-alone, and time-limited financing to support tropical forest conservation financing.

Given concerns around the conditionality of past swaps, coupled with the time-limited nature of financing, the second generation of swaps — in which clearer win-win economic and environmental outcomes for both debtor and creditor country are generated—is illustrated through the 2005 Spanish-Uruguay clean energy swap. In that arrangement, and at the request of Uruguay, a portion of the country's outstanding debt was swapped in exchange for the purchase of Spanish solar energy equipment and use of Spanish engineering and other services to install a solar panel farm in Uruguay. Under the agreement, the Spanish government had the first option in purchasing certified emission-reduction credits linked to CDM project financing generated from the solar energy farm (Spain declined the option). In addition to providing short-term debt relief, that arrangement helped [generate additional clean energy investment for Uruguay](#), moving it away from dependence on natural gas imports to being among the cleanest energy producers in Latin America today.

The third generation of debt swaps is being led by TNC. In 2016, TNC arranged a debt conversion of Paris Club (Belgium, France, Italy, and the United Kingdom) debt for Seychelles. Though the transaction was small, Seychelles increased the area of protected ocean in Seychelle waters from 0.04 percent of its Exclusive Economic Zone to 30 percent. The savings created, resulting from a discount from creditor countries and grants sourced by TNC, fund ongoing marine conservation and climate adaptation programs.

A subsequent conservation debt swap involved sovereign bond restructuring. In November 2021, TNC assisted Belize in a debt conversion for marine conservation that enabled Belize to purchase 100% (USD 553 million) of the country's external commercial debt from bondholders at a large discount and replaced it with a loan arranged by TNC. The transaction significantly reduced Belize's debt to GNP ratio. The fiscal savings achieved created reliable and sustainable conservation funding in local currency in the local economy over the next 20 years. Belize also committed to creating an ocean conservation strategy with conservation commitments that included placing 30% of its ocean under protection by 2026, creating a Marine Spatial Plan, and establishing an independent Conservation Fund to disperse the grants.

Design Criteria for Sovereign Debt

In late 2021, the International Institute for Environment and Development (IIED) released a [technical guide](#) on how to link sovereign debt with nature and climate objectives. There have also been a number of expressions of interest from developing countries in green debt options, including Ecuador, Pakistan, Sri Lanka, Costa Rica, and others.

In addition to bilateral options, green debt financing could build cooperation within regional cooperation frameworks. A leading candidate could be the [International Centre for Integrated Mountain Development](#) (ICIMOD), an intergovernmental knowledge and learning centre whose members are Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. The shared Himalayan region is home to four global biodiversity hotspots, over 480 protected areas, and 10 major river basins. The region is also facing increased impacts as well as cascading and concurrent risks of climate change.

It would be useful for CCICED to map out a clear structure of green debt options, with methodologies, criteria regarding case study selection, and an inventory of different structural examples.

Benefits to China

There are different categories of benefits to China in green debt arrangements.

First, direct benefits linked to reduced risk: If China opted to complement its recent announcement to discontinue new international finance for coal-fired plants with debt relief-linked phase-out, direct benefits could, depending on the location of the debtor country, include reduced the long-range transport of certain air pollutants—such as mercury; NO_x, SO_x, and other criteria air pollutants; sand (particularly in Northern China); or downstream freshwater hydrology and quality—by contributing to upstream basin management as [IIED analysis](#) has noted for Lao PDR.

Second, direct benefits linked to preferential carbon market access and financing: In 2021, a number of countries included their tropical forests and other ecosystems as debt collateral. With the completion of Articles 6.2 and 6.4, coupled with its support of carbon offset markets to reach its dual control climate goals, China could benefit from a green debt arrangement in which carbon credits linked to NbS could be paid in lieu of debt-serving payments, thereby providing relatively cheaper credits compared to those generated within China.

Third, direct benefits linked to marine protected areas: The recent Seychelles and Belize debt swaps underscore the importance of innovative financing for marine and oceans stewardship. A direct

benefit to China from similar swaps within its region would include greater security of fish stocks and protected marine mammals.

Fourth, direct benefits of enhanced land restoration Nbs financing: Debt financing to support land restoration, sustainable sourcing, and sustainable food systems within creditor food export countries would increase China’s longer-term food security, particularly by focusing on debt refinancing to bolster climate resilience.

Fifth, economic benefits of long-term economic stability: The potential of many affected countries to further invest in building infrastructure and accelerate trade with China is significantly more limited due to high debt levels. Sovereign debt risks are evaluated high, making export credit insurances more expensive or not available. Through debt restructuring that reduces short- and long-term debt burden, as is the case with debt-for-nature swaps, host country economies have more space to invest and grow.

Sixth, reputational benefits: In keeping with China’s leadership in supporting multilateral action, debt swaps and debt rescheduling that would provide additional fiscal space to debtor countries to meet their NDC and NBSAP targets would enhance China’s reputation. Similarly, given concerns of debt linked to Belt and Road Initiative (BRI) financing, action toward debt relief would enhance China’s green BRI reputation.

Risks If No Debt Relief

As noted above, there are increasing risks of debt default among a growing number of countries. Experts are already warning of another “lost decade” of development. For example, the [2021 report](#) of the UN Secretary-General on the SDGs warns of the “immense financial debt distress and dramatic decreases in foreign direct investment and trade” brought on by the global pandemic.

Among the first casualties of defaults will be the domestic capacity in most debtor countries to meet the Paris, Kunming, and SDG targets. A second casualty will be underutilized economic growth potential risking a negative impact on trade and investment with China. Moreover, if Chinese debt service represents a significant proportion of overall debt payments, countries and others will look—unfairly or not—to blame China for the climate and nature agendas being delayed or derailed.

PART TWO

Short-Term Opportunities

Sovereign Debt: In the short term, given the worsening financial and economic conditions of many developing countries, CCICED should identify how China could work with selected host countries to research the design and implementation of debt-for-nature swaps in the Chinese context and consider pilots involving swaps.

Green Taxonomy: Identify how the current green taxonomy can scale up NbS investments by tracking taxonomy categories of “Ecological Agriculture” and “Ecological Protection and Construction.”

Financial Risk Disclosure: Identify how China’s newly announced mandatory climate risk disclosure can track physical risks related to climate-related extreme weather events (for example, flooding), as well as track how various climate-resilience investments, with a special category for NbS-related climate adaptation investments, can be included in the new disclosure framework.

Economics of Nature Loss: Deepen analysis by financial regulators around risks of biodiversity losses and financial exposure to biodiversity losses, domestically and in overseas engagement, incorporating, for example, the ongoing work of the [Network of Central Banks and Supervisors for Greening the Financial System](#).

Data Supporting Carbon Markets: In support of carbon market approaches to carbon peaking and neutrality, CCICED can examine options in the design of China’s recent commitment to create a comprehensive climate data system to make data related to NbS carbon sequestration systems available to investors, as well as track the development of new ISSB standards as they relate to climate and nature finance.

Article 6 Rules: Following the completion of the Paris Rulebook, review the current portfolio of eligible post-2013 CDM projects and retain those carbon credits that align with the new Article 6.2 and Article 6.4 rules regarding double-counting, additionality, permanence, and transparency.

Financing Sustainable Sourcing Supply Chains: CCICED should help identify existing rural financial support programs, such as eco-compensation programs, to include direct payments to farmers (for example, through well-established financing programs like [China’s Eco-Compensation Scheme](#), preferential loans, or other rural payment schemes to integrate NbS payments). CCICED’s SPS on Sustainable Food Systems is relevant in this regard.

Climate Risk Assessment of China’s Value Chains: As work begins on assessing the climate risk of China’s domestic supply chains, CCICED can help identify risks associated with the potential degradation of forests, wetlands, peatlands, grasslands, and others in relation to their carbon stocks, as well as the extensive de-risking benefits of NbS in relation to climate adaptation and resilience.

Corporate NbS Funds: CCICED can examine how tax incentives and tax treatment, together with other practices, can encourage more company expenditures in NbS projects, with tax incentives linked to both investment levels and actual income flows generated from NbS funds and with credits tied to income revenue that benefits local farmers, communities, and others.

Closing Inequality Gaps: CCICED should identify how NbS financing can help address income, labour, gender, and other inequalities, as this is an integral part of China’s green transition commitment as well as commitments in the 14th Five-Year Plan and more recent economic goals of closing China’s income inequality gaps.

International and South–South Cooperation

Kunming Biodiversity Fund: A strategic investment plan for the Kunming Biodiversity Fund should be finalized during 2022. Options related to its governance system are under consideration. CCICED can help identify innovative options once those governance considerations conclude, for example, by leveraging this funding with funding mechanisms (for example, GEF, GCF, and others), as well as examine funding options like guarantees, equity financing, and results-based financing to support NbS.

Increase Green ODA: The Green BRI has signaled its plan to increase the level of green ODA. CCICED should identify leading practices in MDB financing and project classification related to NbS that should also be used to track BRI financing.

Medium- to Longer-Term Opportunities

By 2030, a number of key climate, nature, and SDG targets are due to be met. China’s carbon peaking is expected to be reached before 2030. Under the Glasgow agreement, China has agreed to zero-deforestation targets by 2030. The expected outcome of the Kunming COP 26 and Global Biodiversity Framework will likely include 30x30 nature protection targets. Moreover, the UN 2030 Development Agenda calls for the 17 SDG goals and targets to be met by 2030.

The following are examples of medium- to longer-term objectives.

Green Taxonomy: Update China’s green taxonomy to include additional and specific categories for conservation finance and NbS investments.

Nature Risk Disclosure: In the next 10 years, adopt the TNFD standards to disclose nature-related risks among all financial sector actors, including asset managers.

Sustainable Supply Chains: Set annual financing levels to support farmers, fishers, and others in ensuring sustainable, nature-positive supply chains. Diversify financing to include grants, equity, and lines of credit to finance the enabling tools needed for traceability of supply chains.

Subsidy Reform: Implement domestic actions to reduce fossil fuel subsidies in support of China’s dual control targets, and increase subsidy support for net-zero agriculture, land use, and forestry management goals. Implement pilot projects to restructure agricultural subsidies to an indirect system

that supports rural livelihoods. It would be useful for CCICED to examine and draw lessons from past attempts at reforming environmentally harmful subsidies.

Sovereign Debt: Complete a comprehensive review of opportunities to align international sovereign debt with carbon-neutral and nature-positive objectives. As a large international creditor committed to South–South principles of non-conditionality and cooperation, China can examine multilateral debt alignment solutions, regional options including through the Green BRI, and bilateral arrangements that provide win–win outcomes for China and partner debtor countries. China can propose 2–3 pilot debt alignment initiatives with countries, with lessons reviewed by 2025, leading to a strategic position by 2026.

SECTION THREE

Green Transition Pathways

Like others, CCICED has focused on the need to set out interim targets and investment roadmaps needed to reach carbon peaking, carbon neutrality, 30x30 nature protection, and other targets. Recent CCICED [SPS reports on climate](#) and [green financing](#) have examined not only the need to increase green asset financing but also to phase out brown assets as part of an overall transition to high-quality, green development.

There are numerous risks associated with the green transition. In their charge to ensure price and macro-prudential stability, central banks are tracking the risks of carbon pricing on inflation, as well as longer-term risks of stranded assets linked to de-carbonization. The [European Central Bank](#) continues to research risks like price volatility and default risks for high-carbon sectors, as well as [transition roadmaps](#). Analysis by the International Renewable Energy Agency (IRENA), International Energy Agency (IEA,) and others continue to examine [coal phase-out financing options](#).

Focusing on specific banking risks related to nature, the 2020 [Indebted to Nature](#) report by the Netherlands Central Bank and Netherlands Environmental Agency identified risks associated with a shift to more sustainable farming and other practices, such as less nitrogen-intensive agricultural inputs, recommending standardized financial risk disclosure and other transition steps.

An important part of the EU’s Green Deal is its [Green Transition program](#), which includes billions in investments to scale up green technologies and sectors, as well as provide support to affected workers and communities, particularly in the coal sector. The G20 2020 Rome final declaration committed members to “formulate Long-Term Strategies that set out clear and predictable pathways” needed to reach carbon neutrality.

CCICED should help identify ongoing green transition risks and opportunities, with a particular focus on how integrated climate–nature financing can advance transition goals.

Recommendations

In addition to the overall recommendation that CCICED prioritize how to integrate nature and climate financing, additional recommendations are:

- Recommendation two: CCICED should identify policies, case studies, standards, and partnerships to scale up financing in high-quality NbS, including forests, mangroves, grasslands, wetlands, regenerative land management and green/sustainable food systems, green and climate-resilient infrastructure, marine and coastal resilience, and other areas.
- Recommendation three: CCICED should identify roadmaps for the private sector to increase climate and nature financing, with the aim of ensuring *overall* financial flows reduce negative impacts on nature/climate. Work can include analysis of emerging standards, safeguards, disclosure practices, green taxonomies, ESG financial products, auditing standards, monitoring and verification standards, and other initiatives, including evolving from the G20 Working Group on Sustainable Finance. Synergies among digitization and sustainability are examined in a complementary CCICED 2022 Scoping Study.
- Recommendation four: CCICED should identify opportunities to increase and leverage public sector finance both within China—including involving state-owned enterprises—as well as via international public finance involving bilateral, regional, or MDB finance; export finance; and other areas.
- Recommendation five: CCICED should examine opportunities for public–private partnerships and related blended nature and climate finance, including options to integrate compliance and voluntary carbon markets.
- Recommendation six: CCICED should deepen the analysis of options for the systemic, comprehensive reform of environmentally harmful subsidies in support of integrated nature–climate finance. Special consideration should be placed on addressing jobs, income, and other inequalities in fiscal policy reform.
- Recommendation seven: CCICED should analyze practical and innovative financial instruments for overseas sovereign debt restructuring that combine environmental and economic outcomes with mutual benefits for China and the host country.