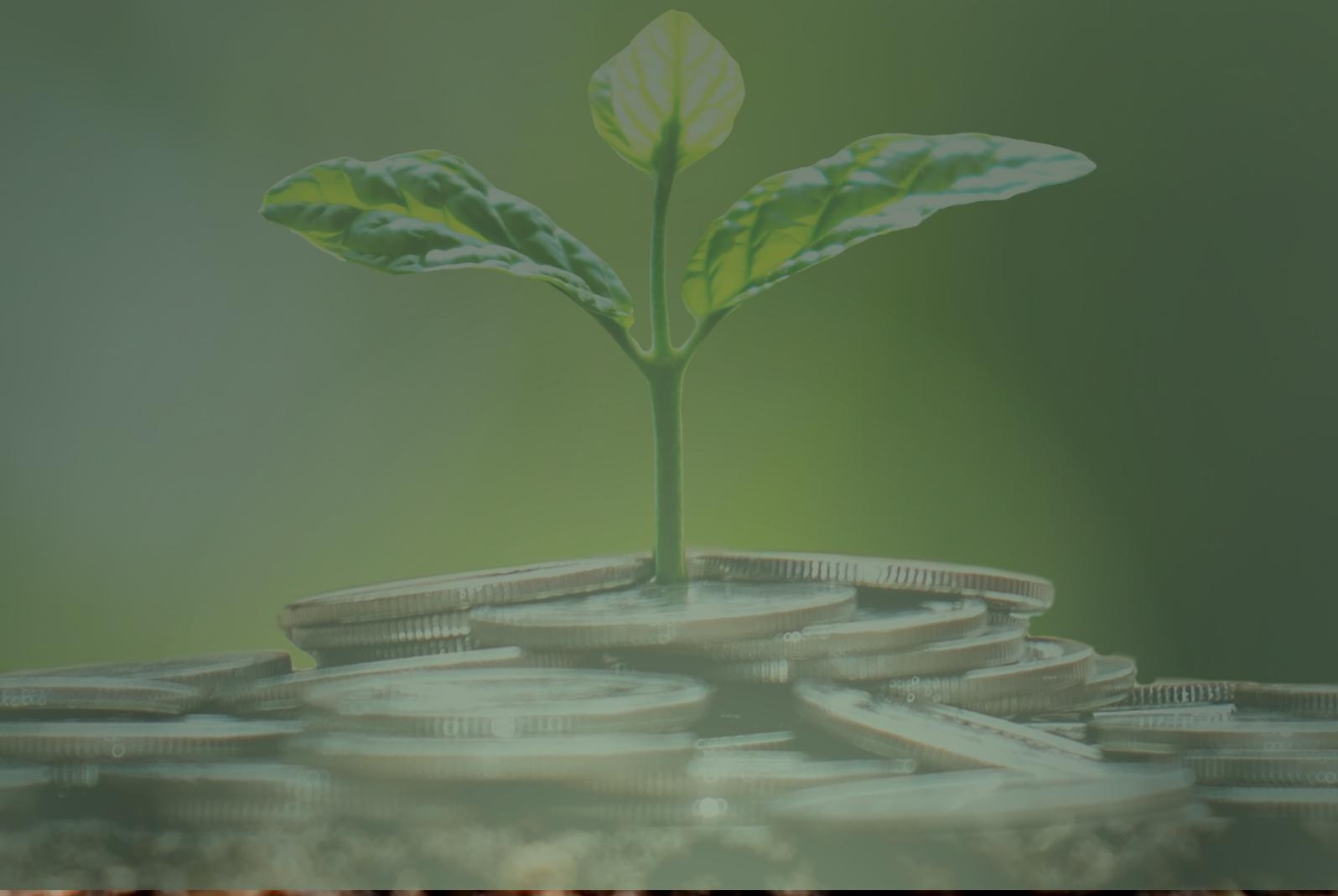




Debt and Biodiversity: A Chinese Leadership Opportunity

Consultation Document

April 2021



April 2021

Debt and Biodiversity: A Chinese Leadership Opportunity

Consultation Document

About this report

This report sets out the opportunity for China to engage with emerging international policy and market developments around nature and biodiversity and its role in debt markets. China's international leadership on the environment and its development of sophisticated green financial architecture puts it in a key position to rapidly learn from international best practice and capitalise on evolving market developments around a new class of nature performance bonds.

The growth of these products in sovereign and corporate bond markets offers China global opportunities to deploy these instruments in the current crisis and to integrate the pricing of nature-related risks and opportunities more broadly into financial markets. The report concludes with recommendations about how China can effectively engage with these developments.

This report draws on a series of reports published by Finance for Biodiversity (F4B), including:

- [Greening Sovereign Debt: Building a Nature and Climate Sovereign Bond Facility](#)
- [Recapitalising Sovereign Debt: Technical Paper and Policy Briefing](#)
- [Emerging Market Debt Crisis: Biodiversity as a Lever for Building Back Better](#)

Comments and queries about this proposal, and other work of F4B, can be addressed to contact@f4b-initiative.net.

Acknowledgements

This report has been developed as a contribution to the Special Policy Study on Green Finance of the China Council on International Cooperation on Environment and Development (CCICED). It is written by Ashley Gorst, Robin Smale, Simon Zadek and Mark Hallé, with thanks to Louis de Montpellier and Jason Eis from the Finance for Biodiversity Initiative and to Chenghui Zhang, Ping Wei, Margaret Kuhlow, Christoph Nedopil and Sagarika Chatterjee for helpful comments.

About Finance for Biodiversity

Finance for Biodiversity (F4B) aims to increase the materiality of biodiversity in financial decision-making, and so better align global finance with nature conservation and restoration. F4B is advancing five workstreams that create and amplify the feedback signals that increase the value of biodiversity in private and public financing decisions:

- **Market efficiency and innovation:** including a leadership role in the Task Force on Nature Related Financial Disclosure, and support to a number of data and fintech-linked initiatives
- **Biodiversity-related liability:** with a particular focus on the place of extended environmental legal liabilities for financial institutions, as well as financial policy and regulatory initiatives.
- **Citizen engagement and public campaigns:** advancing data and fintech-led instruments to catalyse shifts in citizen behaviour as consumers, savers, pension holders, insurers and capital owners.
- **Responses to the COVID crisis:** advancing measures and advocacy linked to stimulus and recovery spending, and the place of nature in sovereign debt markets.
- **Nature markets:** catalysing nature markets by developing new revenue streams and robust governance innovations.

F4B has been established with support from the MAVA Foundation, which has a mission to conserve biodiversity for the benefit of people and nature. F4B is also funded in part by the Gordon and Betty Moore Foundation through The Finance Hub, which was created to advance sustainable finance.



This work is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>

Executive Summary

China is increasingly prioritising nature as a central component of its policy making. Domestic and international commitments recognise the role of nature and impacts of climate change in driving economic prosperity. China's target to reach net zero emissions by 2060 and the hosting of the 15th Convention on Biological Diversity this year on a post-2020 Global Biodiversity Framework underline China's global leadership on the environment.

Across emerging markets there is a growing debt and nature crisis. Half of low-income countries are either at high risk of or in debt distress, creating the need for immediate fiscal space and resources to drive economic growth. Many of these nations are dependent on nature to drive productivity and service debt payments, fuelling international discussions about potential solutions to address debt and nature issues together. The G20 is advancing discussions on the range of solutions to address both crises, with China's role as a creditor putting it in a position to engage in discussions on how to support debtors through the crisis.

There is an opportunity to integrate economic risks and opportunities posed by nature and climate into debt markets, while supporting international commitments and economic recovery. Mismanagement of this 'natural capital' has tangible economic impacts on valuable and productive assets, such as the degradation of land for agriculture and tourist revenues. Not pricing nature-related risks and opportunities into debt markets creates misaligned incentives to manage these assets effectively and will not generate the funds required to meet international biodiversity and climate targets at scale or meet immediate fiscal recovery needs.

A new generation of sovereign debt instruments capture the financial risks and opportunities of posed by nature and climate. Nature performance bonds refer to instruments that link debt terms to nature outcomes, providing ways for issuers and investors to build green considerations into financial markets. These range from sustainability-linked instruments which link debt terms with performance outcomes, to more established green bonds focused on financing nature positive investments.

Sustainable debt issuance has grown rapidly across international and Chinese financial markets. Global sustainability-aligned debt now exceeds US\$1.5 trillion and is expected to make up 10% of global issuance in 2021. China is a global leader in green bonds, with the domestic bond market worth US\$120 billion, the second largest market in the world. The sophisticated architecture and implementation capacity China has developed to rapidly advance this market puts it at the forefront of emerging developments in global debt markets.

China is uniquely positioned to seize the opportunity to rapidly develop a programme to support the uptake of sovereign and domestic nature performance bonds. To advance this, China can undertake practical steps to consolidate emerging international best practice and build on its strong domestic experience in green bond markets. The following paper sets out three key recommendations that China could carry out to advance this agenda:

1. A technical analysis of international experience of instruments and their short- and longer-term potential for improving biodiversity outcomes.
2. Engagement with international processes and discussions about instruments and architecture around greening sovereign debt markets.
3. Launching a nature-linked set of sovereign, sub-sovereign or domestic debt deals using nature performance bonds.

Contents

CHINA’S OPPORTUNITY FOR GLOBAL LEADERSHIP ON NATURE AND BIODIVERSITY	5
THE GROWING PRESSURE ON GLOBAL SOVEREIGN DEBT MARKETS.....	6
ADDRESSING DEBT AND BIODIVERSITY THROUGH NEW FINANCIAL TOOLS.....	7
NATURE PERFORMANCE BONDS.....	8
CHINA’S UNIQUE ROLE AND POTENTIAL TO DEVELOP A NEW ASSET CLASS OF NATURE PERFORMANCE BONDS.....	11
HOW CHINA CAN SHOW GLOBAL LEADERSHIP IN DEVELOPING GREEN SOVEREIGN DEBT MARKETS	12
RECENT PUBLICATIONS SUPPORTED BY F4B	17
REFERENCES	18

China's opportunity for global leadership on nature and biodiversity

China has put nature at the forefront of its domestic and international policymaking. Ever since China embedded a policy of *shentai wenming* ("[ecological civilization](#)") into its constitution in 2018, the concept of prioritising the environment has taken greater hold, particularly under President Xi Jinping. This has been one of the ways China has demonstrated its ambition to ensure nature is not simply consumed, but that its environmental and social dimensions in economic activity are placed at a centre of decision-making.

China's leadership in 2021 is likely to shape international commitments to climate and biodiversity. China's strong domestic commitments on climate include reaching net zero emissions by 2060. The hosting of the Convention on Biological Diversity (COP-15) in Kunming this year will set global post-2020 ambition for maintaining biodiversity for the coming decades. In the run up to this event, China has elevated the importance of the creating strong implementation and enabling conditions to ensure greater support for developing countries in terms of resource mobilization, technology and capacity building.¹

That principle of ecological civilization is aligned with a growing global consensus that nature plays a critical role in economic growth and resilience. Nature, and the biodiversity that supports it, determines the quality of the air, the availability of fresh water and soils, pollination and pest control, and mitigates the impact of natural hazards. The World Economic Forum (WEF) estimates that 40% of global GDP depends on nature, with this share higher in many developing countries.² The recent Dasgupta Review in the UK on the economics of biodiversity highlights the increasing importance of nature's role in supporting resilience and economic productivity.³ Research by WWF, the Global Trade Analysis Project (GTAP) and the Natural Capital Project has shown that there is a clear correlation between the decline in services nature is able to provide and GDP growth.⁴

The link between nature and the drivers of economic growth are increasingly understood and measurable, and of immediate relevance to policy makers and investors. Nature is central to mitigating climate and other physical risks, and creates a growing number of economic opportunities, including carbon credits and sustainable tourism. For instance, the United Nations Food and Agriculture Organisation estimates that 95% of agriculture relies on the productivity of soils⁵, while nature-based tourism contributes between 10-20% of GDP to Kenya and Namibia.⁶ The Food and Land Use Coalition estimates a global commercial opportunity of US\$200 billion from protecting and restoring nature by increased conservation and the restoration of 300 million hectares of tropical forests by 2030.⁷

Yet nature conservation efforts have to date fallen far short of what is needed to sustain its vital contribution to economies and broader well-being. Nature's health and the impacts of climate change pose both immediate and long-term risks to investors, particularly those in sovereign debt markets which depend on 'natural capital' to drive economic productivity and resilience of national economies. While there is growing recognition that nature and biodiversity have a critical role to play in the health of economies, debt markets lag behind in allowing investors ways to integrate nature into the attractiveness and risk of a country's sovereign debt. Currently 80% of financial resources available for conservation are from public sources, illustrating the large gap and opportunity to align private finance with nature.⁸

The growing pressure and opportunity in global debt markets

These considerations have great relevance at a time when many developing countries are saddled with large, accumulated debt. The COVID-19 pandemic has reduced the growth prospects of most emerging market countries, while global recession and containment measures to stop the spread of coronavirus has led the International Monetary Fund (IMF) to estimate that economic growth in emerging markets will contract by 5.7% in 2020.⁹

The combined effect of increased public spending and reduced government income has put a large fiscal strain on many economies, leading to an urgent need to secure liquidity. The fiscal impacts of COVID-19 have increased the already large debt burden pushing many countries towards the risk of default. The cost of debt service in 2020 and 2021 will be over US\$3 trillion across emerging economies, raising concerns in financial markets about debt sustainability in some of the poorest countries. In 19 sub-Saharan African countries, the debt-to-GDP ratio reached 71% in 2020 compared with 26% in 2012.¹⁰ Debt restructurings in Ecuador, Argentina, Belize, Suriname, Zambia and Angola are examples of the pressure on developing and emerging markets, with the IMF warning that over half of low-income countries are either at high risk of or in debt distress.¹¹

The global debt crisis has been particularly severe in countries with greater economic dependence on nature, and high levels of biodiversity. Work by the International Institute for Environment and Development highlights the countries where a deterioration in debt terms intersects with areas of critical global biodiversity and climate vulnerability.¹² These include low-income Sub-Saharan African countries such as Kenya, Madagascar, Mozambique, Uganda, Angola and Cameroon and middle-income Asian countries such as Vietnam, Laos and Bhutan. To date, the response to the twin crises of sovereign debt, and climate and nature, has been both insufficient to restore strong economic growth, while deteriorating natural capital raising longer-term risks to growth and resilience.

There is an opportunity for an integrated approach to pricing economic risks and opportunities posed by nature and climate into debt markets, while supporting international commitments and economic recovery. Currently debt markets do not price in nature-related risks and

opportunities, creating misaligned economic incentives for issuers to manage natural capital effectively. Creating financial mechanisms for issuers to leverage and benefit from better management of these valuable assets will be central to reducing adverse economic impacts of nature degradation and benefiting from the creation of new income opportunities from nature markets. At the same time, this can also enable countries to raise funds to meet international biodiversity and climate targets at scale and respond to immediate economic recovery needs from the pandemic.

Addressing debt and biodiversity through new financial tools

Sovereign debt instruments today offer little or no opportunity for borrowers to capitalise on improvements in their natural capital, or for investors to seek better nature performance.

There are growing calls to facilitate a transition towards incorporating nature and climate into emerging and global debt markets, providing issuers and investors with the tools to respond to better aligning the cost of capital with natural capital. The recent growth of sustainability-aligned debt now exceeds US\$1.5 trillion and is expected to make up 10% of global issuance in 2021, illustrating growing global demand for these investments.¹³ Initiatives such as the Task Force on Nature-related Financial Disclosures (TNFD) and related policy and regulatory developments have exemplified and accelerated greater investor awareness and accountability.¹⁴

Investments in nature can also provide greater assurance of debt-sustainability and management of nature-related risks. According to the IMF, better management of natural capital can reduce expected productivity and resilience to future risks, hence improving the credit conditions of the debt issuing country even as it issues greater volumes of debt.¹⁵¹⁶ Investments in nature also offer an economically efficient way to achieve countries' commitments to increase biodiversity and meet other environmental goals, especially emissions reductions. Achieving these goals will become increasingly expensive if countries delay action.¹⁷

There is both a short- and long-term imperative to better integrate nature into sovereign debt markets. In the short-term, there is the opportunity to use a new set of debt instruments to repurpose existing unsustainable debt or issue new debt in ways that drive a nature-positive economic recovery. In the long-term, there is the potential to begin a transition towards embedding nature risks and opportunities into sovereign debt arrangements. As noted by Hank Paulson in September 2020, *"As governments rebuild... policymakers must learn to value nature, providing the right conditions and incentives to drive change. One important step would be to create a new asset class comprised of things such as productive soils, crop pollination, and watersheds."*¹⁸

There are now mature policy and market initiatives to green sovereign debt markets. Several national governments, including members of the G20, are discussing green sovereign debt options for emerging markets. The World Bank and other international organisations including the IMF, the OCED and the UN are working to develop a facility to catalyse a set of new debt

instruments that respond to short-term emerging market needs, as well as facilitating a transition to integrating nature more broadly into sovereign debt markets.¹⁹ These developments are backed up by proposals from international organisations, including the United Nations Economic Commission on Africa, which aims to provide African nations with the tools to meet immediate liquidity needs and develop a medium-term green stimulus investments supported by nature and climate financing instruments.²⁰

Nature Performance Bonds

An emerging set of debt instruments, nature performance bonds (NPBs), offers a solution for linking debt payments with nature and climate outcomes. These instruments possess the potential to fund immediate liquidity needs and form a structural solution that enables better long-term and sustainable growth.²¹ NPBs would be structured in various ways to provide sovereign and corporate issuers and their investors with options to build nature into their financing decisions. These instruments range from:

- **KPI-linked or sustainability-linked bonds**, which allow a general use of proceeds but incentivise performance towards nature outcomes by providing a deduction on the principal of the bond value or a reduction in the coupon in exchange for meeting nature-based outcomes.
- **Use of proceeds bonds**, such as green bonds, which link the funds raised through bond issuance to specific nature-based projects.

These instruments could build on existing green bond models, and support a range of nature-based outcomes, such as restoring wetlands, protecting forests from encroachment, and reducing threats to wildlife and plant species. The central features of these instruments are:

Provision of liquidity to direct resources to economic recovery measures.

- In the case of a sustainability-linked bond, this would generate funds for general purpose use to fund immediate economic and social priorities. On issuance of the bond, the debtors would receive the full amount of funds released, which could be used by debtors to fund immediate fiscal needs or capital spending. The debtor's performance against the agreed performance indicators would then determine how much debt is repaid to creditors annually and at maturity of the bond. Pakistan is amongst the first sovereign issuers to pledge to use this instrument to fund a recovery package.²²
- In the case of a use of proceeds bond, this would generate funds to support strategic investments in nature-based investments, which could be linked to short- and long-term economic productivity drivers. Up to November 2020, 22 governments have issued use of proceeds bonds in the last four years²³, including in the developed countries of France,

Germany and South Korea, as well as in middle-income countries including Indonesia, Nigeria and the Seychelles.²⁴

NPBs can be structured around a set of standardised nature outcomes that can be regularly and consistently monitored and used across the market.

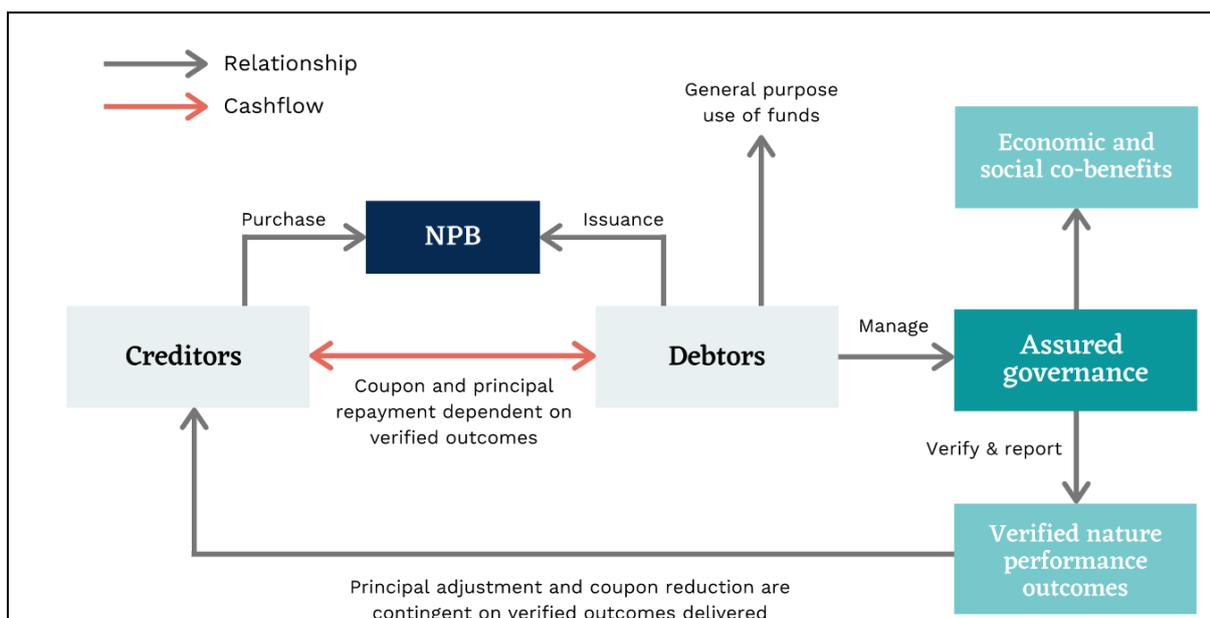
- Reporting and verification of performance outcomes would be designed to be transparent and robust, and linked to emerging natural capital, biodiversity and climate standards and protocols to allow sovereigns and investors to benchmark performance indicators against internationally recognised metrics.
- Central to building a scalable asset class is a structure that aligns with emerging nature and climate performance measurement standards. This would enable the bonds to have the potential to be used across countries with different biodiversity and climate opportunities, allowing for maximum investor potential.

NPBs provide the debt-issuer with flexibility over how most effectively to achieve nature and biodiversity outcomes, suited to their circumstances.

- In contrast to use of proceeds models, sustainability-linked bonds would provide issuers the incentive to meet performance outcomes at least cost, which would give creditors the added incentive to fund nature and biodiversity outcomes that represent better value for money.

An overview of the structure of a sustainability-linked bond is summarised in Figure 1.

Figure 1: How a sustainability-linked bonds connects nature and climate outcomes to sovereign debt repayment terms



NPBs can be supported by blended public-private finance in some circumstances:

- Public creditors may wish to use the instruments to re-purpose unsustainable debt to generate immediate liquidity for debtors, or may be willing to forgo some financial returns in exchange for assured nature performance.
- Initial involvement of private sector investors could be supported by blended or concessional finance, where the public investor is willing to pay for a nature performance outcome.
- The involvement of the private sector in the market for NPBs will evolve as the bonds become increasingly standardised and liquid. Private creditors would be increasingly interested in these assets if they are convinced that nature performance outcomes materially affect solvency risks.

Box 1: The parallel development of sustainability-linked bonds in corporate debt markets

A number of similar instruments are emerged in parallel with the opportunity to develop NPBs, which helps to demonstrate the feasibility of NPBs and potential range of applications. These are chiefly Sustainability-Linked Bonds which have been issued by a range of international corporate firms:

- In January 2021, Hong Kong property developer New World Development Co issued the first sustainability-linked bond in Asia, worth US\$200m over 10 years.
- In 2019, the Italian energy group Enel issued a US\$1.5 billion five-year, sustainability-linked bond. The bond rate is subject to it having achieved a target of at least 55% of its installed capacity in renewable energy by 2021. If the 55% goal is not reached by end 2021, the coupon will be increased by 25bps until the bond matures.
- This initial activity has been followed by other firms issuing these bonds, including LafargeHolcim (November 2020), Suzano (September 2020) and Novartis (September 2020).

China's unique role and potential to develop a new asset class of nature performance bonds

China now has an opportunity to consolidate emerging international best practice and build on existing green financial market experience. Specifically, China can use expertise from developing green debt markets, coupled with its global environmental leadership to explore the potential of this new asset class, with the potential to become the standard in sovereign debt markets.

China can do this spearheading the design and application of new financial instruments, Nature Performance Bonds. There are at least four reasons why China is in a unique position to lead a shift to nature-positive sovereign debt markets in this way, thus driving a positive shift out of the current debt and nature crises.

- 1. China is already leading global ambitions for biodiversity conservation.** China's domestic policies have demonstrated how quickly a country can move toward building back nature, and its hosting of the Convention on Biological Diversity (COP-15) in Kunming this year could set global ambition for maintaining biodiversity for the coming decades. This is further reinforced by China's strong recent commitments on climate change, including reaching net zero emissions by 2060 set out in the 14th Five-Year Plan.
- 2. China plays a central role in the sovereign debt markets.** It is by far the largest single official creditor to emerging economies. Since the beginning of this year, China has actively participated in and implemented the G20 Debt Service Suspension Initiative (DSSI) initiative to suspend debt repayments of the poorest countries and has announced a moratorium on debt repayments for 77 developing countries and regions.
- 3. China has already demonstrated its ability to accelerate the development of green sovereign debt instruments, starting with large green bond issuances in 2015.** It is now a global leader, with Chinese domestic bond market currently worth US\$120 billion, making it the second largest in the world, according to the Climate Policy Initiative report *The State and Effectiveness of the Green Bond Market in China*.²⁵ China also has a unique scheme of green finance pilot zones programme, incorporating six provinces and nine region. The programme is being used to test green finance options locally prior to being used nationally.²⁶
- 4. China has established the capacity and institutional infrastructure to design, rate and structure green debt instruments through a regulatory framework and supporting institutional infrastructure that allows markets to rapidly scale.** Key institutions include the People's Bank of China (PBOC), the Green Finance Committee and the National Association of Financial Market Institutional Investors. These bodies play a central role in setting standards on the design, structure and certification of green bonds, opening the way for these institutions to play a central role in leveraging existing capacity to develop similar architecture for nature performance bonds.

How China can show global leadership in developing green sovereign debt markets

To address the current debt and nature crisis, and garner the long-term debt and nature sustainability benefits of NPBs, China can act quickly to develop this new asset class. This new market segment could quickly rival the size of its growing green bond market and lead a global movement to fully integrating nature and climate into sovereign debt markets. The key recommendations for capitalising on this opportunity are:

Recommendation 1: A technical analysis of international experience of instruments and their short- and longer-term potential for improving biodiversity outcomes.

China could commission and oversee work to gather existing and emerging international best practice on the set of nature-linked debt instruments. By doing this, China could quickly assess the short and long-term market size and potential of these instruments by:

- **Engaging with key international initiatives and stakeholders involved in the design of the new generation of nature-linked debt instruments.** China could rapidly engage with leading initiatives and networks at the intersection of finance and biodiversity to collate international best practice. To do this effectively, it could link with key knowledge partners, including the Finance for Biodiversity Initiative, who play a role in convening key international stakeholders.
- Conducting a technical analysis of the short and long potential existing and emerging nature-linked debt instruments. Following engagement with international initiatives and financial institutions, China could synthesise international best practice and understand the size of the opportunity for developing a market for new nature-linked debt instruments. This would involve a detailed examination of:
 1. The set of instruments that link debt to nature and climate performance indicators, including sustainability-linked bonds, nature performance bonds, green and blue bonds.
 2. International examples and case studies of where instruments have been used, incorporating both experience of sovereign, sub-sovereign and corporate debt markets.
 3. Types of nature and climate indicators that could be used in a new generation of performance instruments, including the metrics and frameworks to monitor and verify nature performance outcomes and work to align these with corporate sustainability-linked bond issuances worldwide to increase investor appeal.

4. A review of the market infrastructure, regulatory frameworks and stakeholders likely to be involved in the development of instruments in China and internationally, building on work on the *Guidelines for Establishing the Green Financial System* jointly conducted across seven ministries.

This would enable China to quickly draw together international experience to plan prior to the emergence of these nature-linked debt markets internationally. This could enable China to benefit from its existing experience in green financial markets by assessing the potential for these instruments to play a role in discussions about resource mobilisation in post-2020 biodiversity framework discussions at COP15 and to capitalise on market developments.

Recommendation 2: Engage with international process and discussions about instruments and architecture around greening sovereign debt markets.

China can engage with the G20 on the design of international policy to address the emerging market sovereign debt crisis. China can use its leadership position to facilitate discussions about the potential to integrate debt with nature and climate by engaging with other G20 members, debtor countries and financial institutions. China's role as the Co-Chair of the Sustainable Finance Study Group (SFSG), means it could work with like-minded nations to build leadership and share learning. Specifically, it can work with members of the G20 to assess the role that scalable nature-linked debt can play in the development of the Common Framework for Debt Treatments.

China can play a central role in the design of an initiative by the World Bank to develop a new facility to support the issuance of nature and climate-linked sovereign bonds. The facility would establish the conditions and coordinate stakeholders to scale the integration of nature into sovereign debt markets, in both the immediate context of the debt crisis for the longer term. This could catalyse a global market for nature performance bonds of which China could play a central role in. China could play a key international leadership role as G20 SFSG Co-Chair by engaging with the World Bank to ensure alignment with G20 policy. It can also ensure that the facility is developed to meet the needs of the post-2020 biodiversity framework by ensuring the facility supports mobilisation of public and private finance for biodiversity outcomes.

China can also engage with leading nature finance practitioners to further assess the short and long run potential to support these instruments. Several initiatives bring together leading practitioners and draw on the combined expertise of international stakeholders about how to design and implement these debt instruments. This includes the Learning Group on Debt and Nature convened by Finance for Biodiversity, which aims to discuss the market and technical barriers and opportunities for deploying nature performance debt instruments across many different contexts worldwide. China could act as an observer in these groups to understand challenges and opportunities and monitor emerging international best practice.

Recommendation 3: Launch nature-linked set of sovereign, sub-sovereign or domestic debt deals using NPBs

China could engage in a one-year programme work to launch a pilot scheme for NPBs internationally. A well-designed initiative by China could pilot these instruments internationally in the context of debt restructuring or issuance new debt in which nature and biodiversity outcomes are greatly improved, and countries' ability to sustain their debt is enhanced. China is already engaging with many emerging economies considering the current global debt situation, opening up the opportunity for China to negotiate debt terms that are mutually advantageous. The scheme could also support the issuance of NPBs to finance domestic companies, building on China's developed market infrastructure around green bonds.

Rapidly identifying countries where China has mutual interests in supporting fiscal and nature outcomes could pave the way for significant discussions about how NPBs could support Chinese debtors. This could support highly vulnerable debtors in need of liquidity, while driving nature improvements linked to China's existing or planned BRI investments. China has already begun a strategic shift to support sustainable, green growth, recognising the long-term benefits to those countries. As shown in Box 2, several Chinese debtor countries are at risk of defaulting also have an identified set of biodiversity projects or initiatives in the pipeline which could be undertaken rapidly.

China has also made clear its ambition for greening the Belt and Road Initiative (BRI). In April 2019, the BRI International Green Development Coalition (BRIGC) was set up, which include initiatives and partnerships to foster objectives including: biodiversity and ecosystem management, green finance and investments, and environmental legislation and standards.²⁷ By identifying countries where China has mutual interests in supporting biodiversity or climate outcomes, China could pave the way for significant discussions about the use of NPBs to support highly vulnerable debtors, while driving nature improvements linked to China's existing or planned BRI investments.

Box 2: Countries with high levels of Chinese debt that are high in biodiversity.

A large portion of China's current official debt holdings are relevant for NPBs. According to research by the International Institute for Green Finance²⁸, China holds US\$102 billion across 52 BRI countries that also qualify for DSSI support, which means these countries face significant debt burden risks alongside significant nature and biodiversity loss risks.

The five countries with the most outstanding debt owed to China were: Pakistan (US\$20 billion), Angola (US\$15 billion), Kenya (US\$7.5 billion), Ethiopia (US\$6.5 billion) and Laos (US\$5 billion).

Additional work by the Global Development Policy Center has identified 41 countries that have the highest potential for Chinese debt relief linked to biodiversity and climate potential.²⁹ This work identifies Angola, Cambodia, Laos, Myanmar, Uganda and the Solomon Islands as having the highest potential for mutually advantageous biodiversity or climate outcomes and high dependency on China for lending.

China could also leverage its strong domestic financial architecture and innovation capacity to launch domestic nature performance bond pilots. China's unique Green Finance Pilot Zones Programme, incorporating six provinces and nine regions, creates the opportunity to trial nature performance bonds to support domestic municipalities or firms in achieving nature-based performance objectives. The first municipal green bond issuance by Ganjiang New Area in Jiangxi Province to finance smart utility pipelines was 12 times oversubscribed, highlighting strong investor demand.³⁰ Widening this pilot programme to finance China's nature priorities could further broaden the domestic green debt market.

Through a focused effort, the first instrument issuance could take place by the end of the year in partnership with key debtor countries or domestic firms. This would align with broader international discussions about debt relief, highlighting China's commitment to international efforts to addressing debt and biodiversity, and advancing ecological civilisation on a global basis. Chinese leadership could be highly catalytic in encouraging other creditor nations to examine the potential for linking improvements on debt terms to biodiversity outcomes.

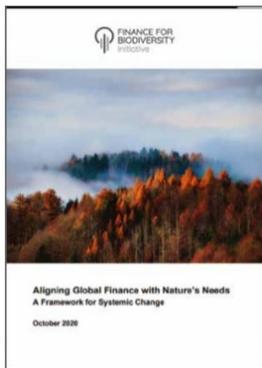
China can, in parallel, plan new market and regulatory infrastructure that can be applied to support scaling up of new debt markets. This would encourage companies and investors rapidly to develop and issue nature- and climate-linked performance debt instruments and quickly to become a leading market for these instruments. China can play a significant role in the strengthening of a green and sustainability bond market that delivers on climate and biodiversity outcomes through application of standards that align with the 1.5°C ambition of the Paris Agreement on Climate and the targets of the Convention on Biological Diversity. As the green bond market grows internationally, investors are increasingly interested in credible delivery of outcomes. International standards are improving, and alongside science-based approaches on climate, they will increasingly incorporate science-based targets for other environmental matters. China has a role to play in strengthening those standards and increasing their application.

China can engage and coordinate key domestic regulators to plan and develop capacity to issue these new instruments. This could include the People's Bank of China for financial intermediary issuers, China Securities Regulatory Commission for exchange-traded corporate green bonds, National Development and Reform Commission for public-sector issuers, and the National Association of Financial Market Institutional Investors and China Securities Regulatory



Commission. By enabling these institutions quickly to develop capacity to issue this new asset class, China could broaden both a domestic and international market for this potentially large RMB-dominated global debt market segment.

Recent Publications Supported by F4B



Aligning Global Finance With Nature's Needs

[Click to access publication >](#)

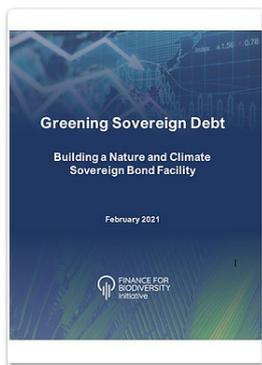


Aligning Development Finance with Nature's Needs

[Click to access publication >](#)

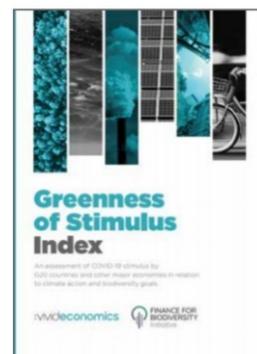
:vivideconomics

basic roots
consulting
MAKING BUSINESSES
BETTER



Greening Sovereign Debt

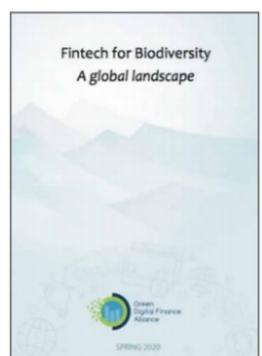
[Click to access publication >](#)



Greenness of Stimulus Index

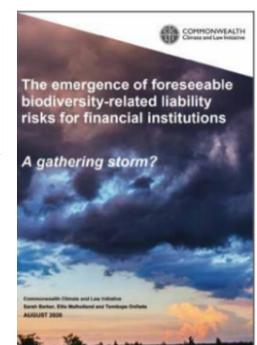
[Click to access publication >](#)

:vivideconomics



Fintech for Biodiversity: A Global Landscape

[Click to access publication >](#)



The emergence of foreseeable biodiversity-related liability risks for financial institutions:

[Click to access publication >](#)



For a full list of F4B and F4B-supported publications,
visit f4b-initiative.net

References

¹ <http://www.chinese-embassy.org.uk/eng/zgyw/t1816598.htm>

² World Economic Forum, 2020. *Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy*, Switzerland.

³ [The Economics of Biodiversity: The Dasgupta Review](#) (2021)

⁴ Johnson, J.A., Baldos, U., Hertel, T., Liu, J., Nootenboom, C., Polasky, S., and Roxburgh, T. 2020. Global Futures: modelling the global economic impacts of environmental change to support policy-making. Technical Report, January 2020.

<https://www.wwf.org.uk/globalfutures>

⁵ FAO (2020). [State of knowledge of soil biodiversity - Status, challenges and potentialities](#)

⁶ World Bank (2015). [Harnessing the Potential for Nature-Based Tourism for Poverty Reduction](#).

⁷ Food and Land Use Coalition (2019). [Growing Better: Ten Critical Transitions to Transform Food and Land Use](#).

⁸ Global Canopy (2021): [‘The Little Book of Investing in Nature’](#)

⁹ IMF, 2020. World Economic Outlook.

<https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020>

¹⁰ Fitch Ratings, 2020. Sub-Saharan Africa Sovereigns See Record Downgrades in 2020, Pressures Remain

<https://www.fitchratings.com/research/sovereigns/sub-saharan-africa-sovereigns-see-record-downgrades-in-2020-pressures-remain-27-10-2020>

¹¹ <https://www.imf.org/en/Publications/Policy-Papers/Issues/2020/02/05/The-Evolution-of-Public-Debt-Vulnerabilities-In-Lower-Income-Economies-49018>

¹² <https://pubs.iied.org/16674iied>

¹³ Institute for International Finance. 2020. Global Debt Monitor.

<https://www.iif.com/Research/Capital-Flows-and-Debt/Global-Debt-Monitor>

¹⁴ <https://tnfd.info/>

¹⁵ Cevik, S. and Jalles, J.T. *This Changes Everything: Climate Shocks and Sovereign Bonds*. 2020. IMF Working Paper. Washington D.C.

<https://www.imf.org/en/Publications/WP/Issues/2020/06/05/This-Changes-Everything-Climate-Shocks-and-Sovereign-Bonds-49476#:~:text=Summary%3A,risk%20to%20the%20global%20economy.&text=That%20is%2C%20countries%20that%20are,risks%20associated%20with%20climate%20change.>

Volz, U. and Beirne, J. and Ambrosio Preudhomme, N. and Fenton, A. and Mazzacurati, E. and Renzhi, N. and Stampe, J. 2020, Climate Change and Sovereign Risk. London, Tokyo, Singapore, Berkeley: SOAS University of London, Asian Development Bank Institute, World Wide Fund for Nature Singapore, Four Twenty Seven.

https://eprints.soas.ac.uk/33524/1/Climate%20Change%20and%20Sovereign%20Risk_final.pdf

Buhr, B., U. Volz, C. Donovan, G. Kling, Y. Lo, V. Murinde, and N. Pullin. 2018. Climate Change and the Cost of Capital in Developing Countries. Geneva and London: UN Environment, Imperial College London and SOAS University of London. <https://eprints.soas.ac.uk/26038/>

Kling, G., Y. Lo, V. Murinde, and U. Volz. 2018. Climate Vulnerability and the Cost of Debt. Mimeo. London: SOAS University of London.

<https://eprints.soas.ac.uk/26045/1/Kling%20Climate%20Vulnerability%20and%20the%20cost%20of%20debt.pdf>

¹⁶ Feeling the Heat: Climate Shocks and Credit Ratings. Serhan Cevik ; João Tovar Jalles. December 18 2020. IMF Working Paper.

https://www.imf.org/en/Publications/WP/Issues/2020/12/18/Feeling-the-Heat-Climate-Shocks-and-Credit-Ratings-49945?utm_medium=email&utm_source=govdelivery

¹⁷ <https://www.vivideconomics.com/wp-content/uploads/2021/02/210211-The-Urgency-of-Biodiversity-Action.pdf>

¹⁸ <https://www.paulsoninstitute.org/key-initiatives/financing-nature-report/>

¹⁹ <https://www.f4b-initiative.net/publications-1/greening-sovereign-debt%3A-a-new-paper%3A-building-a-nature-and-climate-sovereign-bond-facility>

²⁰ Building Forward Together FINANCING A SUSTAINABLE RECOVERY FOR THE FUTURE OF ALL. United Nations Economic Commission for Africa. 2020

<https://www.uneca.org/archive/publications/building-forward-together>

²¹ <https://www.f4b-initiative.net/publications-1/recapitalising-sovereign-debt%3A-technical-paper>

²² <https://www.weforum.org/agenda/2021/02/pakistan-green-recovery/>

²³ Climate Bonds Initiative. 2021. Sovereign Green, Social, and Sustainability Bond Survey 2021.

<https://www.climatebonds.net/resources/press-releases/2021/01/sovereign-green-social-and-sustainability-bond-survey-2021>

²⁴ OECD. Growing momentum for sovereign green bonds 2020.

<http://www.oecd.org/coronavirus/en/data-insights/growing-momentum-for-sovereign-green-bonds>

²⁵ <https://www.climatepolicyinitiative.org/wp-content/uploads/2020/06/The-State-and-Effectiveness-of-the-Green-Bond-Market-in-China.pdf>

²⁶ https://www.climatebonds.net/system/tdf/reports/cbi_gfo_china_05b.pdf?file=1&type=node&id=54717&force=0

²⁷ <https://green-bri.org/belt-and-road-initiative-green-coalition-brigc/>

²⁸ https://green-bri.org/wp-content/uploads/2020/12/2020_China_Debt_Belt_and_Road_BRI-1.pdf

²⁹ <https://www.bu.edu/gdp/china-debt-sustainability-environment/>

³⁰ <https://chinasdg.org/2020/06/08/jiangxis-ganjiang-new-district-issues-chinas-first-green-municipal-special-bond/>