



The People's Republic of China Sovereign Green Bond Framework

Second-Party Opinion

Report Type

Sovereign Green Bond
Framework Second-Party
Opinion

Analytical Standards

- » China Green Bond Principles (2022 Edition)
- » Green Bond Principles (2021 Edition (with June 2022 Appendix 1))

Industry

Sovereign

Country/Region

China

Report Date

11th February 2025

Summary

| Not Aligned | Aligned | Good | Excellent |
|-------------|---------|------|-----------|
|-------------|---------|------|-----------|

| Pillar | Alignment |
|--|-----------|
| Use of Proceeds | Excellent |
| Process for Project Evaluation and Selection | Excellent |
| Management of Proceeds | Excellent |
| Information Disclosure | Excellent |
| External Reviews | Excellent |

Lianhe Green Development Company Limited ("Lianhe Green") has reviewed a series of documents including the People's Republic of China Sovereign Green Bond Framework ("Framework") by the Ministry of Finance of the People's Republic of China ("MOF"), and assessed the issuer's relevant work in respect of the Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, Information Disclosure, and External Reviews. The Framework has received an assessment opinion of "Excellent" from Lianhe Green. Lianhe Green considers that the Framework and the green projects listed in the Framework are in compliance with the *China Green Bond Principles (2022 Edition)* and the *Green Bond Principles (2021 Edition (with June 2022 Appendix 1))*. At the same time, Lianhe Green's assessment includes the contributions of the project categories to the relevant United Nations Sustainable Development Goals ("UNSDGs")¹.

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¹ According to the definitions of (A/RES/70/1 - Transforming our world: the 2030 Agenda for Sustainable Development)



About the Issuer

The State Council, that is, the Central People's Government, of the People's Republic of China ("China") is the executive body of the highest organ of state power; it is the highest organ of state administration.

MOF is a ministry under the State Council. MOF implements the decisions and policies of the Central Committee of the Communist Party of China in the area of public finance, and adheres to the centralized and unified leadership of the Communist Party of China on fiscal work.

MOF implements the decisions and plans of the Central Committee of the Communist Party of China and the State Council. It makes great efforts to work around the principles of "increasing financial support, deepening systemization and making refinements when applicable", and aims to expand fiscal support, enhancing mechanisms and tools such as taxation, government procurement, resource utilization fees, and ecological conservation compensation. These efforts aim to support environmental protection, establish a secure ecological framework, and accelerate the green and low-carbon transition.

In September 2021, the Central Committee of the Communist Party of China and the State Council issued the [*Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy*](#). This document puts forward guiding principles emphasizing that "We must follow the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implementing the guiding principles from the 19th Communist Party of China National Congress and the second through fifth plenary sessions of the 19th Communist Party of China Central Committee, and thoroughly applying Xi Jinping's thought on ecological civilization. We need to ground our work in the new stage of development, apply the new development philosophy, and foster a new pattern of development. By applying systematic thinking, we will strike a balance between development and emissions reduction, between overall and local imperatives, and between short-term and longer-term considerations. Endeavors to peak carbon dioxide emissions and achieve carbon neutrality must be incorporated into the overall economic and social development framework. In this way, we aim to effect a comprehensive green transformation in respect of economic and social development, with a special focus on the development of green and low-carbon energy, with a view to expediting the development of industrial structures, production modes, living patterns, and spatial zones that will conserve resources and protect the environment. We are firmly committed to a green, low-carbon and high-quality development path that gives primacy to ecological civilization. This will ensure that the carbon dioxide peaking and carbon neutrality goals are achieved as planned."

In December 2023, the Central Committee of the Communist Party of China and the State Council jointly issued the [*Development of a 'Beautiful China' to be promoted comprehensively*](#). The guiding principles are to comprehensively promote the development of a "Beautiful China". It emphasizes the need to be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, especially Xi Jinping's thought on ecological civilization. It calls for in-depth implementation of the guiding principles of the 20th National Congress of the Communist Party of China and the deployment of the National Conference on Ecological and Environmental Protection. It advocates for firmly establishing and practicing the philosophy of "Lucid waters and lush mountains are invaluable assets", while effectively managing the relationships between high-quality development and high-level protection, targeted challenges and collaborative governance, natural restoration and artificial remediation, external constraints and internal motivation, as well as the relationship between "dual carbon" commitments and nationally determined actions. The document promotes coordinated efforts in adjusting industrial restructuring, pollution control, ecological conservation, and climate response, while promoting concerted efforts to cut carbon emissions, reduce pollution, expand green development, and pursue economic growth. It aims to safeguard national ecological security, strengthen eco-environmental conservation, and support high-quality development with a high-quality ecological environment. Ultimately, it seeks to accelerate the formation of a new construction pattern of the development of a "Beautiful China" that is oriented toward achieving the modernization of harmony between humanity and nature, thereby laying a solid ecological foundation for the Chinese Dream of national rejuvenation.



Sustainability Strategy

Since 2013, China has recognized the critical role of Ecological Civilization in national governance, integrating it into its Five-Sphere Integrated Plan, which comprehensively covers economic, political, cultural, social, and ecological civilization construction, aiming to promote the all-round development of the country. China has proposed a new development philosophy of “innovative, coordinated, green, open and shared development”. It has also incorporated the principle of “adhering to harmony between humanity and nature” into the foundation of developing socialism with Chinese characteristics in the new era. The development of a “Beautiful China” is a central goal within China’s effort to build a modern country harmonious to nature.

1. China’s Actions on the Construction of Ecological Civilization

China implements a national strategy to actively address climate change, regarding the fulfillment of its nationally determined contributions as a responsibility for promoting the building of a global community with a shared future and as a crucial means for advancing ecological civilization construction and achieving high-quality development.

At the international level, as a party to the United Nations Framework Convention on Climate Change and its Paris Agreement, China has been striving to ensure full and effective implementation of the Paris Agreement while contributing significantly to the global response to climate change.

On September 22, 2020, President Xi Jinping announced at the General Debate of the 75th Session of the United Nations General Assembly that China would scale up its Nationally Determined Contributions by adopting more robust policies and measures. China aims to achieve carbon peaking by 2030 and carbon neutrality by 2060. On December 12, 2020, at the Climate Ambition Summit, President Xi Jinping announced further environmental goals, including targets for carbon dioxide emissions, forest stock volume, and clean energy capacity.

At the national level, the Central Committee of the Communist Party of China and the State Council have made key policy goals towards the development of a “Beautiful China” and Accelerating the Comprehensive Green Transformation of Economic and Social Development², including:

By 2027, green and low-carbon development will have been advanced in depth, with a continuous decrease in the total discharge of major pollutants, improvements in the quality of its ecological environment, optimization in national territory development and conservation landscape, enhancing ecosystem functions, improving urban and rural living environment, strengthening of national ecological security and governance systems, developing a number of practical models, and achieving remarkable results in the development of a “Beautiful China”;

By 2030, positive progress will be made in key areas of green transformation. Green methods of production and ways of life will have become a new norm, pollution and carbon emissions will be significantly reduced, major resource utilization efficiency further improved, policy system supporting green development perfected, and comprehensive green transformation of economic and social development will have made notable progress;

By 2035, green methods of production and ways of life will have been developed broadly, carbon emissions will have peaked and be in steady decline, and the country’s ecological environment will have improved fundamentally, new landscape of national territory development and conservation formed, the stability and diversity of the ecosystem significantly enhanced, national ecological security level strengthened, the modernization of the ecological governance system and capabilities realized, and the goal of the development of a “Beautiful China” will be fundamentally achieved;

Looking ahead to the middle of the century, China’s ecological civilization will have improved comprehensively, its green development and lifestyles will have taken full shape, and the deep decarbonization of its key areas will have been realized. The country’s ecological environment will also

² “Opinions of the Central Committee of the Communist Party of China and the State Council on the development of a ‘Beautiful China’ to be promoted comprehensively” (27 December 2023); and “Opinions of the Central Committee of the Communist Party of China and the State Council on accelerating the comprehensive green transformation of economic and social development” (31 July 2024)



be healthy and beautiful by that time, its ecological and environmental governance system and capacity will be fully modernized, and the development of a “Beautiful China” will have been built in all respects.

2. Ministry of Finance’s Role in Driving Green Development

Green and low-carbon development is central to addressing climate change, achieving sustainable progress, and supporting high-quality development in China. MOF implements national planning, innovates and perfects policy systems, and comprehensively utilizes diverse policy measures such as financial allocation, taxation, and green procurement to support the Construction of Ecological Civilization. Key roles of MOF include:

1) Strengthen policy frameworks of financial support for green and low-carbon development.

Finance is the foundation and an important pillar of national governance. MOF has continuously improved relevant fiscal policies and measures in recent years as aligned with national decisions, refining the overall policy framework down to the specific fiscal policies. This includes coordinating efforts from fiscal expenditures to green taxation, supporting resolution of prominent environmental issues, and facilitating deeper economic and social transformation. Through these efforts, MOF aims to promote an all-rounded green and low-carbon development with solid progress. Moreover, to foster such economic and social transformation, MOF is continuously refining top-level design, enhancing the green fiscal and taxation systems, and solidifying sustainable mechanisms which promote green and low-carbon development.

2) Improve the investment mechanism and strengthen financial guarantee for green and low-carbon development.

MOF prioritizes environmental protection and low-carbon development as key areas of its fiscal expenditures, ensuring financial support transfer payments to local governments for pollution control, ecological restoration and low-carbon development. Over the past five years, the fiscal expenditures on ecological protection and green development have ranged from 500 billion to 650 billion yuan annually. In additions, a total of nearly 300 billion yuan has been allocated in the past five year, to support the campaign of “blue skies, clear water and pure land” with an average annual growth rate of 7%. Some highlighted initiatives include: 88 northern cities carried out clean heating transformation, promoting the energy efficiency and saving; protection projects in key river basins such as the Yangtze River and Yellow River were conducted, along with soil pollution control; the *Key Ecological Protection and Restoration and Management Fund* was launched to support 27 protection and restoration projects of mountains, rivers, forests, farmlands, lakes, grasslands and deserts (“MRFFLGD”), as well as 49 ecological restoration projects of historical abandoned mines; the *Marine Ecological Protection and Restoration Fund* was launched to support the implementation of 83 marine ecological protection and restoration projects. China’s ecological environment quality continues to improve with the support of relevant funds.

3) Enhance fund management to support the green and low carbon development strategy.

While MOF continues to increase fiscal investment, it also strives to promote innovation in ecological and environmental protection projects, manage operating mechanisms, and improve the efficiency of ecological and environmental protection funds.

Enhancing pertinence: to accurately allocate funds based on projects, MOF has established a central ecological and environmental protection transfer payment project reserve system which standardizes assessment and review process and facilitates resultant physical workload from financial investment. This ensures that projects are carried out and closely monitored, so that the funds are sufficiently and properly allocated.

Setting benchmarks: MOF strives to promote benchmark projects through fairly considering a variety of environmental projects from landscape conservation, rivers and lakes protection, afforestation, marine ecological restoration, clean heating in northern areas, ecological industrialization, and rural environmental remediation.

Implementing accountability: MOF tracks the performance during and after the deeds, and evaluates performance throughout into the entire process of project implementation. Moreover, MOF conducts interviews with areas showing low performance scores and rankings and deducts the relevant transfer payment funds, while rewarding the areas showing good performance scores and significant results.



About The People's Republic of China Sovereign Green Bond Framework

The Framework is developed and structured in accordance with the *China Green Bond Principles (2022 Edition)*³ issued by the Green Bond Standard Committee, and the *Green Bond Principles (2021 Edition) (with June 2022 Appendix 1)* issued by the International Capital Markets Association ("ICMA"). MOF will issue China's Sovereign Green Bonds ("Sovereign Green Bonds") based on this Framework.

Adhering to the above principles, Sovereign Green Bonds issued under the Framework will conform to the following four core components: Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, and Information Disclosure.

In this Second-Party Opinion, Lianhe Green has specifically examined the Framework but has not reviewed any transaction-specific legal documents or marketing materials. Nevertheless, the Framework does provide a description of the green projects.

This Framework addresses the five pillars including Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, Information Disclosure, and External Reviews.

A. Use of Proceeds

Issuer Materials

The proceeds raised by the Sovereign Green Bonds issued under the Framework will be fully used to finance and/or refinance eligible green expenditures from MOF's fiscal budget ("Green Expenditures"). Green Expenditures, as defined under the Framework, should contribute to the achievement of one or more of the environmental objectives below:

- Climate Change Mitigation
- Climate Change Adaptation
- Natural Resource Conservation
- Pollution Prevention and Control
- Biodiversity Conservation

Green Expenditures of the Sovereign Green Bonds issued under this Framework should meet the relevant requirements of the Green Bond Endorsed Projects Catalogue (2021 Edition)⁴ jointly issued by the People's Bank of China ("PBoC"), the National Development and Reform Commission ("NDRC") and the China Securities Regulatory Commission ("CSRC"). This Catalogue clearly defines the eligible green projects, ensuring that Green Expenditures are in line with the national green development policies.

Green Expenditures may include direct project investments, project operating expenditures, capital transfers from the Central Government to Local Governments, and tax rebates.

For the avoidance of doubt, Green Expenditures already financed by dedicated forms of revenue or financing, expenditure of other government agencies, and expenditures financed by local government bonds that support sustainable developments will not be eligible under this Framework.

³ *China Green Bond Principles (2022 Edition)* issued by the Green Bond Standard Committee:
<https://www.nafmii.org.cn/gqzt/gg/202207/P020220801631427094313.pdf>

⁴ *Green Bond Endorsed Projects Catalogue (2021 Edition)*, and its relevant updated versions, jointly issued by the PBoC, NDRC and CSRC:
<http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/4342400/2021091617180089879.pdf>



Green Expenditures - the following table outlines the Eligibility Criteria of the Green Project Categories and provides a list of Green Expenditures. The Green Project Categories are also mapped to the *Green Bond Endorsed Projects Catalogue (2021 Edition)*.

| Green Project Category | Eligibility Criteria | MOF's Green Expenditures | Mapping with the China Green Bond Endorsed Projects Catalogue (2021 Edition) |
|-----------------------------|---|---|---|
| Clean Transportation | <ul style="list-style-type: none"> <u>Construction, maintenance, acquisition, research and development, and subsidies for clean energy vehicles</u> (such as electric vehicles, fuel cell vehicles, plug-in hybrid (including extended range) vehicles, and dedicated infrastructure) <u>Manufacture of key assets, systems, and core components for clean energy vehicles</u> <u>Construction and development of dedicated charging facilities and infrastructure</u> (including electric vehicles charging stations and hydrogen refueling stations) <p>Note: excluding any projects dedicated to the transportation of fossil fuels</p> | <ul style="list-style-type: none"> <i>Support Fund for Energy Saving and Emission Reduction</i>⁵: limited to the new energy vehicles, recharging infrastructure, and the demonstration of fuel cell vehicles applications | <ul style="list-style-type: none"> 1.6.1.1 Manufacturing of Key Components of New Energy Vehicles and its Industrialization 1.6.1.2 Manufacturing of Facilities for Charging, Battery Replacement, and Hydrogenation 3.2.1.7 Production of Fuel Cell Equipment |

⁵ Interim Measure on Administration of Support Fund for Energy Saving and Emission Reduction, are effective until 2025. Eligible Green Expenditures in the Interim Measure on Administration of Support Fund for Energy Saving and Emission Reduction, or any future revisions thereto, must be consistent with the eligibility criteria of the "Clean Transportation" category.



**Sustainable
Water and
Wastewater
Management**

- Improvement of rural living environment (such as rural household sewage treatment and the remediation and treatment of black and malodorous water bodies in rural areas)
- Water resources protection and restoration (such as groundwater extraction management, comprehensive treatment of soil erosion, management of dirt and sand retention dams, restoration and recovery of the Interconnected River and Lake System Network, desilting of reservoirs and rivers, and the implementation of the River and Lake Chief System ⁶ to strengthen management and protection)
- Flood and drought disaster prevention (such as management of small and medium-sized rivers, reservoir risk prevention and reinforcement, rain and water situation monitoring, construction of dam safety monitoring facility, mountain torrent disaster prevention, and the
- *Rural Areas' Environmental Remediation Fund*: expenditures to support rural household sewage treatment and remediation and treatment of black and malodorous water bodies in rural areas
- *Water Conservancy Development Fund*: expenditures on drought and flood prevention and control, conservation and intensive utilization of water resources, water resources protection and restoration; Central Budgetary Investment in the Program for Guaranteeing Water Security: limited to the risk prevention and reinforcement of medium- and large-scale dangerous reservoirs and construction of essential hydrological facilities
- 1.3.5.2 Improvement of Rural Living Environment
- 1.4.1.1 Desalination of Seawater and Brackish Water
- 1.4.1.2 Rainwater Collection, Treatment, and Utilization
- 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands
- 4.2.1.7 Protection and Restoration of National Ecological Security Barriers
- 4.2.1.10 Comprehensive Treatment of Desertification, Rocky Desertification and Soil Erosion
- 4.2.1.11 Drought and Flood Management for Water-Related Ecosystem
- 4.2.1.12 Management and Restoration of Groundwater Overdrawn Zones
- 6.2.2.2 Provision of Services for Water-use Rights Transactions

⁶ Under the River and Lake Chief system, specific officials are assigned to take charge of the management and protection of rivers and lakes, ensuring the effective governance of water resources.



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| | <p>development of water conservancy projects, along with the construction of essential hydrological facilities)</p> | | |
| <p>Environmentally Sustainable Management and Restoration of Living Natural Resources and Land Use</p> | <ul style="list-style-type: none"> • <u>Conservation or restoration of natural landscapes</u> (management of various natural ecological elements such as mountains, rivers, forests, farmlands, lakes, grasslands and deserts (“MRFFLGD”)), protection of wildlife and conservation areas, and sustainable forestry practices (such as afforestation, reforestation, and the sustainable use of plant genetic resources) • <u>Grassland ecological protection facilities</u> (such as the integrated protection and restoration of forests, grasslands, wetlands and wastelands, and efforts to prevent and control desertification) | <ul style="list-style-type: none"> • <i>Forest Ecological Protection and Restoration Fund</i>: transfer payments for shared fiscal powers, such as for national parks, other nature reserves and wildlife protection, forest ecological protection and rehabilitation, and ecological rangers • <i>Forestry and Grassland Reform and Development Fund</i>: transfer payments for shared fiscal powers, such as for national afforestation, and the cultivation of forestry and grasslands • <i>Three-North Shelterbelt Forest Program Fund</i>: special transfer payments, such as for the integrated protection and restoration of | <ul style="list-style-type: none"> • 4.2.1.1 Protection of Natural Forest Resources • 4.2.1.2 Protection of Animal and Plant Resources • 4.2.1.3 Construction and Operation of Nature Reserves • 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands • 4.2.2.5 Protective Operation of National Parks, World’s Heritages, National Scenic Spots and Historic Interest Areas, National Forest Parks, National Geo-Parks, and National Wetland Parks • 4.1.1.3 Protection of Forest Genetic Resources • 4.1.1.5 Pest Prevention and Control • 4.2.1.1 Protection of Natural Forest Resources • 4.2.1.5 Projects of Turning Farmlands Back to Forests or Grasslands and Restoring Grazing Lands to Grasslands • 4.2.1.7 Protection and Restoration of National Ecological Security Barriers • 4.2.1.10 Comprehensive Treatment of Desertification, Rocky |



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| | | forests, grasslands, wetlands and wastelands, and desertification prevention and control, compensation for desertified land with sealed protection, ecological industrialization in the Three-North regions (northwest, north and northeast China) | Desertification and Soil Erosion |
| | | <ul style="list-style-type: none"> • <i>Key Ecological Protection, Restoration and Management Fund</i>: expenditures for the integrated protection and restoration of MRFFLGD, and remediation of historically abandoned industrial and mining lands | <ul style="list-style-type: none"> • 4.2.1.7 Protection and Restoration of National Ecological Security Barriers • 4.2.1.9 Ecological Restoration of Degraded Mining Areas |
| Marine Ecosystem Protection and Restoration | <ul style="list-style-type: none"> • <u>Protection of fragile ecosystems or ecosystem with excellent quality</u> (such as coastal zones, mangrove forests and seas and islands) • <u>Restoration and management</u> (such as mangrove forests, coastlines, coastal zones, seas and islands) to enhance the ecological function of coastal zones | <ul style="list-style-type: none"> • <i>Marine Ecological Protection and Restoration Fund</i>: limited to expenditures that support the protection and rehabilitation of marine ecosystems in key areas that are vital for ensuring ecological security and provide extensive ecological benefits | <ul style="list-style-type: none"> • 4.2.1.14 Comprehensive Management of Sea Areas, Coastal Zones and Islands |
| Pollution Prevention and Control | <ul style="list-style-type: none"> • <u>Support for air pollution prevention and control; and collaboration in combating climate</u> | <ul style="list-style-type: none"> • <i>Air Pollution Control and Prevention Fund</i>: limited to expenditures that focus on | <ul style="list-style-type: none"> • 1.3.1.2 Equipment Manufacturing for Air Pollution Prevention and Control • 1.3.1.8 Manufacturing of Environmental |



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| | <u>change</u> | atmospheric environmental governance and management, and coordinated control of fine particulate matter (PM2.5) and ozone (O ₃) | Monitoring Instruments and Emergency treatment Equipment |
| Resource Utilization and Recycling | <ul style="list-style-type: none"> <u>Waste treatment, recycling and resource utilization projects</u> (such as facilitating the comprehensive utilization of resources, promoting circular development, and supporting the treatment of waste electrical and electronic products) | <ul style="list-style-type: none"> <i>Disposal of Waste Electrical and Electronic Products Earmarked Fund</i>: expenditures for guiding local governments to support the development of the waste electrical and electronic product recycling and treatment industry | <ul style="list-style-type: none"> 1.5.2.2 Recycling of Waste and Discarded Resources |

Opinion of Lianhe Green

| | | | |
|-------------|---------|------|-----------|
| Not Aligned | Aligned | Good | Excellent |
|-------------|---------|------|-----------|

Lianhe Green, in accordance with the relevant assessment criteria, reviewed the Framework and other related documents, and the issuer's policies on use of proceeds.

Lianhe Green compared the Green Project Categories listed in the Framework with the China's *Green Bond Endorsed Projects Catalogue (2021 Edition)* and the United Nations Sustainable Development Goals respectively.






After the assessment, Lianhe Green considers the Green Project Categories listed in the Framework align with China's *Green Bond Endorsed Projects Catalogue (2021 Edition)*.

The following table illustrates the significant contributions of Green Project Categories to the United Nations Sustainable Development Goals⁷:

| Green Project Category | United Nations Sustainable Development Goals | UNSDGs Logo |
|------------------------|--|-------------|
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⁷ Based on the Lianhe Green's methodology, we evaluate each green project category of the issuer against the United Nations Sustainable Development Goals, and selected goals with a significant contribution to the United Nations Sustainable Development Goals. In addition, the issuer's Green Project Categories may also contribute to other goals of the United Nations Sustainable Development Goals.



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|---|---|---|
| Clean Transportation | <p>11 Sustainable Cities and Communities</p> <ul style="list-style-type: none"> 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons |  |
| Sustainable Water and Wastewater Management | <p>6 Clean Water and Sanitation</p> <ul style="list-style-type: none"> 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate |  |
| Environmentally Sustainable Management and Restoration of Living Natural Resources and Land Use | <p>15 Life on Land</p> <ul style="list-style-type: none"> 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems 15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation |  |
| Marine Ecosystem Protection and Restoration | <p>14 Life Below Water</p> <ul style="list-style-type: none"> 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans |  |
| Pollution Prevention and Control | <p>11 Sustainable Cities and Communities</p> <ul style="list-style-type: none"> 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management |  |



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| Resource Utilization and Recycling | <p>12 Responsible Consumption and Production</p> <ul style="list-style-type: none"> ▪ 12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries ▪ 12.2 By 2030, achieve the sustainable management and efficient use of natural resources ▪ 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse |  |
|------------------------------------|--|---|

Lianhe Green’s assessment of MOF’s Use of Proceeds is “Excellent”, which meets the requirements of the assessment criteria.

1) Green Project Category: Clean Transportation

Eligibility Criteria

- Construction, maintenance, acquisition, research and development, and subsidies for clean energy vehicles (such as electric vehicles, fuel cell vehicles, plug-in hybrid (including extended range) vehicles, and dedicated infrastructure)
- Manufacture of key assets, systems, and core components for clean energy vehicles
- Construction and development of dedicated charging facilities and infrastructure (including electric vehicles charging stations and hydrogen refueling stations)

Note: excluding any projects dedicated to the transportation of fossil fuels

MOF’s Green Expenditures

- *Support Fund for Energy Saving and Emission Reduction*: limited to the new energy vehicles, recharging infrastructure, and the demonstration of fuel cell vehicles applications

Green Project Categories in the Corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*

- 1.6.1.1 Manufacturing of Key Components of New Energy Vehicles and its Industrialization
- 1.6.1.2 Manufacturing of Facilities for Charging, Battery Replacement, and Hydrogenation
- 3.2.1.7 Production of Fuel Cell Equipment

Green Standards

- *Green Bond Principles (2021 Edition (With June 2022 Appendix 1))*: Clean transportation (such as electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions);

Lianhe Green’s Opinion

Lianhe Green believes that the description of the Eligibility Criteria and the MOF’s Green Expenditures under the Green Project Category in the Framework aligns with the Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*:

1. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.6.1.1 Manufacturing of Key Components of New Energy Vehicles and its Industrialization (“1.6.1.1”), which includes manufacturing of core components of new energy vehicles and the construction and operation of its industrial facilities, as well as the definition for new energy vehicle under the *Administrative Provisions on the Admission of New Energy Vehicle Enterprises and*



Products

- **Eligibility Criteria:** Lianhe Green considers the description of “Clean energy vehicles (such as electric vehicles, fuel cell vehicles, plug-in hybrid (including extended range) vehicles)” under Eligibility Criteria aligns with the definition of new energy vehicles under the *Administrative Provisions on the Admission of New Energy Vehicle Enterprises and Products* in the condition of 1.6.1.1, which refers to vehicles that use new power systems and are completely or mainly driven by new energy sources, including plug-in hybrid (including extended range) vehicles, pure electric vehicles and fuel cell vehicles. The description of “Manufacture of key assets, systems and core components for clean energy vehicles” under Eligibility Criteria also aligns with the condition of 1.6.1.1.
 - **MOF’s Green Expenditures:** According to the [Interim Measure on Administration of Support Fund for Energy Saving and Emission Reduction](#), the fund supports energy saving and emission reduction, and the scope of support includes new energy vehicle promotion and application subsidy funds. Lianhe Green believes that electric vehicles have no direct tailpipe emissions, and plug-in hybrid vehicles (including extended range) have carbon emissions that are significantly lower than transitional fossil fuel vehicles, such projects are in line with the purpose of the *Support Fund for Energy Saving and Emission Reduction*, which promotes energy saving, improves energy efficiency, protects and improves the environment. It also meets the definition of new energy vehicles under the conditions of 1.6.1.1.
 - **Relevant Government Policies:** In October 2020, the General Office of the State Council issued the [New Energy Vehicle Industry Development Plan \(2021-2035\)](#). The Plan mentions the need to improve basic key technologies, advanced basic processes, basic core components, key basic materials and other research and development capabilities.
2. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.6.1.2 Manufacturing of Facilities for Charging, Battery Replacement, and Hydrogenation (“1.6.1.2”), which includes equipment manufacturing, facility building and operation of distributed AC charging piles, centralized fast charging stations, power exchange facilities, station hydrogenation and hydrogen storage equipment, etc.
- **Eligibility Criteria:** Lianhe Green considers the description of “Construction and development of dedicated charging facilities and infrastructure (including electric vehicles charging stations and hydrogen refueling stations)” under Eligibility Criteria aligns with the condition of 1.6.1.2.
 - **MOF’s Green Expenditures:** According to the [Interim Measure on Administration of Support Fund for Energy Saving and Emission Reduction](#), the subsidy funds support energy saving and emission reduction, and the scope of support includes charging infrastructure and fuel cell vehicle application demonstration. Hence, Lianhe Green believes that the description of the *Support Fund for Energy Saving and Emission Reduction* meets the condition of 1.6.1.2.
 - **Relevant Government Policies:** In January 2022, the National Development and Reform Commission and other departments jointly issued the *Implementation Opinions on Further Improving the Service Guarantee Capability of Electric Vehicle Charging Infrastructure*. In particular, the Opinions mention the optimization of financial support policies, to give financial support to the construction of charging piles as public facilities. Local governments are encouraged to establish operating subsidy standards linked to service quality, and further tilt towards high-quality terminals.
3. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 3.2.1.7 Production of Fuel Cell Equipment (“3.2.1.7”), which includes manufacturing of fuel cells using proton exchange membrane, direct methanol, alkaline fuel, molten carbonic acid fuel, phosphoric acid fuel, and solid oxide
- **Eligibility Criteria:** Lianhe Green considers the description of “Clean energy vehicles, such as fuel cell vehicles” and “Construction and development of dedicated infrastructure (including hydrogen refueling stations)” under Eligibility Criteria aligns with the condition of 3.2.1.7.
 - **MOF’s Green Expenditures:** According to the [Interim Measure on Administration of Support Fund for Energy Saving and Emission Reduction](#), the subsidy funds support energy saving and emission reduction, and the scope of support includes charging infrastructure and fuel cell vehicle demonstration applications. Hence, Lianhe Green believes that the description of the *Support Fund for Energy Saving and Emission Reduction* meets the condition of 3.2.1.7.
 - **Relevant Government Policies:** In March 2022, the National Development and Reform Commission and the National Energy Administration issued the [Medium and Long-Term Plan for the Development of the Hydrogen Energy Industry \(2021-2035\)](#). The Plan mentions accelerating the technological innovation of proton exchange membrane fuel cells, developing key materials, improving main performance indicators and mass production capacity, and continuously improving the reliability, stability, and durability of fuel cells.



Lianhe Green believes this green project category contributes positively to the United Nations Sustainable Development Goals (UNSDGs). In particular, it makes significant contributions to Target 11.2 of Goal 11 (Sustainable Cities and Communities): “By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons”.

2) Green Project Category: Sustainable Water and Wastewater Management

Eligibility Criteria

- Improvement of rural living environment (such as rural household sewage treatment and the remediation and treatment of black and malodorous water bodies in rural areas)
- Water resources protection and restoration (such as groundwater extraction management, comprehensive treatment of soil erosion, management of dirt and sand retention dams, restoration and recovery of the Interconnected River and Lake System Network, desilting of reservoirs and rivers, and the implementation of the River and Lake Chief System to strengthen management and protection)
- Flood and drought disaster prevention (such as management of small and medium-sized rivers, reservoir risk prevention and reinforcement, rain and water situation monitoring, construction of dam safety monitoring facility, mountain torrent disaster prevention, and the development of water conservancy projects, along with the construction of essential hydrological facilities)

MOF's Green Expenditures

- *Rural Areas' Environmental Remediation Fund*: expenditures to support rural household sewage treatment and remediation and treatment of black and malodorous water bodies in rural areas
- *Water Conservancy Development Fund*: expenditures on drought and flood prevention and control, conservation and intensive utilization of water resources, water resources protection and restoration; Central Budgetary Investment in the Program for Guaranteeing Water Security: limited to the risk prevention and reinforcement of medium- and large- scale dangerous reservoirs and construction of essential hydrological facilities

Green Project Categories in the Corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*

- 1.3.5.2 Improvement of Rural Living Environment
- 1.4.1.1 Desalination of Seawater and Brackish Water
- 1.4.1.2 Rainwater Collection, Treatment, and Utilization
- 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands
- 4.2.1.7 Protection and Restoration of National Ecological Security Barriers
- 4.2.1.10 Comprehensive Treatment of Desertification, Rocky Desertification and Soil Erosion
- 4.2.1.11 Drought and Flood Management for Water-Related Ecosystem
- 4.2.1.12 Management and Restoration of Groundwater Overdrawn Zones
- 6.2.2.2 Provision of Services for Water-use Rights Transactions

Green Standards

- *Green Bond Principles (2021 Edition (With June 2022 Appendix 1))*: Sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation);



Lianhe Green's Opinion

Lianhe Green believes that the description of the Eligibility Criteria and the MOF's Green Expenditures under the Green Project Category in the Framework aligns with the Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*:

1. Green Project Category in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.3.5.2 Improvement of Rural Living Environment ("1.3.5.2"), which includes construction and operation of rural household waste and sewage treatment facilities, comprehensive treatment of rural river courses, toilet sewage treatment

- Eligibility Criteria: Lianhe Green considers the description of "Improvement of rural living environment (such as rural household sewage treatment and the remediation and treatment of black and malodorous water bodies in rural areas)" under Eligibility Criteria aligns with the condition of 1.3.5.2.
- MOF's Green Expenditures: According to the [Rural Areas' Environmental Remediation Fund Management Measures](#), the scope of funding support includes the treatment of rural domestic sewage and black-odor water bodies. Hence, Lianhe Green believes that the description of the *Rural Areas' Environmental Remediation Fund* meets the condition of 1.3.5.2.
- Relevant Government Policies: In December 2023, the General Office of the Ministry of Ecology and Environment, the General Office of the Ministry of Water Resources and the General Office of the Ministry of Agriculture and Rural Affairs jointly issued the [Guide to the Treatment of Black and Malodorous Water Bodies in Rural Areas](#). This Guide includes relevant national standards and guides local organizations to address black and malodorous water bodies in rural areas, aiming to resolve prominent water environment problems in these regions.

2. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.4.1.1 Desalination of Seawater and Brackish Water ("1.4.1.1"), which includes construction and operation of seawater and brackish water desalination facilities

- Eligibility Criteria: Lianhe Green considers the description of "construction of essential hydrological facilities" under Eligibility Criteria aligns with the condition of 1.4.1.1.
- MOF's Green Expenditures: According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes expenditures on the conservation and intensive utilization of water resources, as well as expenditures related to the rigid constraints and scheduling of water resources. Meanwhile, the scope of fund usage covered by the [Central Budget Investment Special Management Measures for Water Safety Guarantee Projects](#) includes expenditures on hydrological infrastructure projects. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 1.4.1.1.
- Relevant Government Policies: In May 2021, the National Development and Reform Commission and the Ministry of Natural Resources, in collaboration with relevant departments, drafted the [Action Plan for the Development and Utilization of Seawater Desalination \(2021-2025\)](#). The Plan includes promoting the high-quality development of the seawater desalination industry, applying seawater desalination technology appropriately to the construction of desalination projects for estuarine and underground brackish water, improving the comprehensive utilization of concentrated brine, and advancing the development, protection, and utilization of water resources in brackish water areas.

3. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.4.1.2 Rainwater Collection, Treatment, and Utilization ("1.4.1.2"), which includes construction and operation of rainwater collection, treatment and utilization facilities

- Eligibility Criteria: Lianhe Green considers the description of "construction of essential hydrological facilities" under Eligibility Criteria aligns with the condition of 1.4.1.2.
- MOF's Green Expenditures: According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes expenditures on the conservation and intensive utilization of water resources, as well as expenditures related to the rigid constraints and scheduling of water resources. Meanwhile, the scope of fund usage covered by the [Central Budget Investment Special Management Measures for Water Safety Guarantee Projects](#) includes expenditures on hydrological infrastructure projects. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 1.4.1.2.
- Relevant Government Policies: In June 2021, the National Development and Reform Commission, along with the Ministry of Housing and Urban-Rural Development and the Ministry of Ecology and Environment, researched and drafted the [14th Five-Year Plan for Urban Sewage Treatment and Resource Utilization Development](#). The Plan includes promoting the renovation of rainwater and sewage separation system in old urban areas in arid and semi-arid regions.



4. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands (“4.2.1.6”), which includes management, restoration, and conservation projects that improve the ecological integrity and sustainability of river, lake, and wetland original ecosystems

- Eligibility Criteria: Lianhe Green considers the description of “the implementation of the River and Lake Chief System to strengthen management and protection” under Eligibility Criteria aligns with the condition of 4.2.1.6.
- MOF’s Green Expenditures: According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes expenditures related to the implementation of the River and Lake Chief System to strengthen the protection and management of rivers and lakes, as well as the enhancement of water resource protection and restoration. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 4.2.1.6.
- Relevant Government Policies: In November 2021, the General Office of the Ministry of Ecology and Environment issued the [Technical Guidelines for the Protection and Restoration of Ecological Buffer Zones for Rivers and Lakes](#). The basic principles of these Guidelines include focusing on maintaining the authenticity and integrity of river and lake ecosystems, adhering to natural laws, and protecting and restoring the ecological functions of rivers and lakes.

5. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.7 Protection and Restoration of National Ecological Security Barriers (“4.2.1.7”), which includes systematic and comprehensive ecosystem management and restoration activities such as watershed environmental protection governance, river and lake system inter-connection

- Eligibility Criteria: Lianhe Green considers the description of “restoration and recovery of the Interconnected River and Lake System Network” under Eligibility Criteria aligns with the condition of 4.2.1.7.
- MOF’s Green Expenditures: According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes rehabilitation of river and lake system connectivity. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 4.2.1.7.
- Relevant Government Policies: In June 2020, the National Development and Reform Commission and the Ministry of Natural Resources jointly issued the [Master Plan for Major National Projects for the Protection and Restoration of Important Ecosystems \(2021-2035\)](#). In particular, the Plan mentions that by 2035, the national ecological security barrier system will be basically established, and efforts will be made to protect and restore the national ecological security barrier and important ecosystems, laying a solid ecological foundation for basically realizing the goal of socialist modernization and the development of a “Beautiful China”.

6. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.10 Comprehensive Treatment of Desertification, Rocky Desertification and Soil Erosion (“4.2.1.10”), which includes soil erosion comprehensive treatment activities such as trench management (e.g., dirt dams, sand retention dams), and small water conservancy projects, and by biological measures, such as afforestation and grass planting, with the development model of soil and water conservation agriculture production projects

- Eligibility Criteria: Lianhe Green considers the description of “comprehensive treatment of soil erosion, management of dirt and sand retention dams” under Eligibility Criteria aligns with the condition of 4.2.1.10.
- MOF’s Green Expenditures: According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes expenditures related to comprehensive treatment of soil and water loss, as well as treatment of sediment storage dam. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 4.2.1.10.
- Relevant Government Policies: In December 2022, the General Office of the Central Committee of the Communist Party of China and the State Council issued the [Opinions on Strengthening Soil and Water Conservation in the New Era](#). In particular, the Opinions mention comprehensively strengthening the prevention and control of soil and water loss, and by 2025, the soil and water conservation system and working system will be improved, the management efficiency will be further improved, human-induced soil and water loss will be effectively controlled, soil and water loss in key areas will be effectively controlled, soil and water loss will continue to improve, with 73% of the nation’s territory being without soil erosion.

7. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.11 Drought and Flood Management for Water-Related Ecosystem (“4.2.1.11”), which includes the construction and operation of restoration of natural water system



connectivity, water conservancy facilities, wetland restoration, disaster warning information platform, and other water ecosystem disaster prevention and response facilities

- **Eligibility Criteria:** Lianhe Green considers the description of “restoration and recovery of the Interconnected River and Lake System Network, desilting of reservoirs and rivers, flood and drought disaster prevention (such as reservoir risk prevention and reinforcement, rain and water situation monitoring, construction of dam safety monitoring facility, mountain torrent disaster prevention, and the development of water conservancy projects)” under Eligibility Criteria aligns with the condition of 4.2.1.11.
- **MOF’s Green Expenditures:** According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes expenditures related to rehabilitation of river and lake system connectivity, the dredging of reservoirs and ponds, as well as flood and drought disaster prevention, including projects which enhance the capacity to defend against water and drought disasters, such as the reservoir risk prevention and reinforcement, as well as the construction of hydrological forecast and dam safety monitoring facilities, flash flood disaster prevention and control, and the maintenance and repair of water conservancy projects. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 4.2.1.11.
- **Relevant Government Policies:** In May 2022, the General Office of the State Council issued a notice of the [National Emergency Plan for Flood Control and Drought Relief](#), mentioning that the water damage projects affecting the safety of flood control and urban and rural water supply should be repaired as soon as possible. Flood control projects should strive to restore the main function before the next flood; Drought-resistant water source project should be restored as soon as possible.

8. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.12 Management and Restoration of Groundwater Overdrawn Zones (“4.2.1.12”), which includes treatment and restoration in groundwater overdrawn areas including water-saving transformation projects of irrigation areas in the groundwater overdrawn areas (e.g., north China, northeast China), high-efficiency water-saving field irrigation projects, structural adjustment of crop planting species for water-saving purposes, industrial water-saving transformation, urban water supply pipe network reconstruction, recycling water utilization projects, water transfer and water conservancy projects, groundwater source replacement projects, and ecological water replenishment projects, etc.

- **Eligibility Criteria:** Lianhe Green considers the description of “small and medium-sized rivers, the construction of essential hydrological facilities, groundwater extraction management” under Eligibility Criteria aligns with the condition of 4.2.1.12.
- **MOF’s Green Expenditures:** According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes expenditures on the conservation and intensive utilization of water resources. These are used for the construction and water-saving transformation of medium-sized irrigation areas, the construction of small reservoirs and small water diversion projects, and other small water source engineering projects, as well as for the rigid constraints and scheduling of water resources, and related expenditures on comprehensive agricultural water price reforms. This scope also includes expenditures on the protection and restoration of water resources, used for the comprehensive management of overexploitation of groundwater. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 4.2.1.12.
- **Relevant Government Policies:** In May 2023, the State Council issued the [Outline of the National Water Network Construction Plan](#). The Outline proposes to establish ecological flow targets for rivers and lakes based on the requirements for reshaping and maintaining the healthy life forms of rivers, strengthening water conservation and the optimized allocation of water resources, reducing the ecological water consumption of rivers and lakes, conducting ecological replenishment for key rivers, lakes, and wetlands, ensuring ecological flows, and maintaining biodiversity. Additionally, in February 2022, the Ministry of Water Resources, the Ministry of Finance, the National Development and Reform Commission, and the Ministry of Agriculture and Rural Affairs jointly issued the [14th Five-Year Plan for the Comprehensive Treatment of Groundwater Overextraction in Key Regions](#), which clearly states that by 2025, the annual groundwater overextraction in key regions will be reduced by about 4.6 billion cubic meters compared with the current level, and the reduction ratio will exceed 40%.

9. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 6.2.2.2 Provision of Services for Water-use Rights Transactions (“6.2.2.2”), which includes providing services related to water-use rights transactions including water rights trading-related feasibility analysis, reference price verification, trading scheme design, platform construction and other related services

- **Eligibility Criteria:** Lianhe Green considers the description of “Water resources protection” under Eligibility Criteria aligns with the condition of 6.2.2.2.



- **MOF's Green Expenditures:** According to the [Water Conservancy Development Fund Management Measures](#), the scope of fund usage includes expenditures related to the integrated agricultural water pricing reform and other measures that promote the conservation and intensive utilization of water resources. Hence, Lianhe Green believes that the description of the *Water Conservancy Development Fund* meets the condition of 6.2.2.2.
- **Relevant Government Policies:** In May 2023, the State Council issued the [Outline of the National Water Network Construction Plan](#). The Outline proposed advancing the reform of water rights and water markets, clarifying and standardizing water-use rights, and improving the market-based trading system for water-use rights. It calls for accelerating the reform of water supply pricing in the water network, innovating and improving the pricing formation mechanism that combines public welfare and commercial water supply, and establishing a sound pricing mechanism that promotes water resource conservation and the efficient operation of water conservancy projects, while being compatible with the reform of the water investment and financing system.

Lianhe Green believes this Green Project Category contributes positively to the United Nations Sustainable Development Goals (UNSDGs). In particular, it makes significant contributions to Target 6.3 of Goal 6 (Clean Water and Sanitation): “By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally”, and to Target 6.5: “By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate”.

3) Green Project Category: Environmentally Sustainable Management and Restoration of Living Natural Resources and Land Use

Eligibility Criteria

- **Conservation or restoration of natural landscapes** (management of various natural ecological elements such as mountains, rivers, forests, farmlands, lakes, grasslands and deserts (“MRFFLGD”)), protection of wildlife and conservation areas, and sustainable forestry practices (such as afforestation, reforestation, and the sustainable use of plant genetic resources)
- **Grassland ecological protection facilities** (such as the integrated protection and restoration of forests, grasslands, wetlands and wastelands, and efforts to prevent and control desertification)

MOF's Green Expenditures

- **Forest Ecological Protection and Restoration Fund:** transfer payments for shared fiscal powers, such as for national parks, other nature reserves and wildlife protection, forest ecological protection and rehabilitation, and ecological rangers
- **Forestry and Grassland Reform and Development Fund:** transfer payments for shared fiscal powers, such as for national afforestation, and the cultivation of forestry and grasslands
- **Three-North Shelterbelt Forest Program Fund:** special transfer payments, such as for the integrated protection and restoration of forests, grasslands, wetlands and wastelands, and desertification prevention and control, compensation for desertified land with sealed protection, ecological industrialization in the Three-North regions (northwest, north and northeast China)
- **Key Ecological Protection, Restoration and Management Fund:** expenditures for the integrated protection and restoration of MRFFLGD, and remediation of historically abandoned industrial and mining lands

Green Project Categories in the Corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*

- 4.1.1.3 Protection of Forest Genetic Resources
- 4.1.1.5 Pest Prevention and Control
- 4.2.1.1 Protection of Natural Forest Resources
- 4.2.1.2 Protection of Animal and Plant Resources



- 4.2.1.3 Construction and Operation of Nature Reserves
- 4.2.1.5 Projects of Turning Farmlands Back to Forests or Grasslands and Restoring Grazing Lands to Grasslands
- 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands
- 4.2.1.7 Protection and Restoration of National Ecological Security Barriers
- 4.2.1.9 Ecological Restoration of Degraded Mining Areas
- 4.2.1.10 Comprehensive Treatment of Desertification, Rocky Desertification and Soil Erosion
- 4.2.2.5 Protective Operation of National Parks, World's Heritages, National Scenic Spots and Historic Interest Areas, National Forest Parks, National Geo-Parks, and National Wetland Parks

Green Standards

- *Green Bond Principles (2021 Edition (With June 2022 Appendix 1))*: Environmentally sustainable management of living natural resources and land use (including environmentally sustainable agriculture; environmentally sustainable animal husbandry; climate smart farm inputs such as biological crop protection or drip-irrigation; environmentally sustainable fishery and aquaculture; environmentally sustainable forestry, including afforestation or reforestation, and preservation or restoration of natural landscapes);

Lianhe Green's Opinion

Lianhe Green believes that the description of the Eligibility Criteria and the MOF's Green Expenditures under the Green Project Category in the Framework aligns with the Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*:

1. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.1.1.3 Protection of Forest Genetic Resources ("4.1.1.3"), which includes construction of the investigation, monitoring and information platform of forestry genetic resources, and the collection and preservation of such resources (in-situ or off-site protection, preservation facilities, construction of protected areas, etc.). Breeding, domestication and bioprospecting projects for native tree species, economic tree species, and fast-growing tree species. Forestry gene (genetic) resource protection projects that conform to national, industry-related policies, norms, and standards, such as improved species utilization projects, invasive species prevention and control, etc.

- Eligibility Criteria: Lianhe Green considers the description of "the sustainable use of plant genetic resources" under Eligibility Criteria aligns with the condition of 4.1.1.3.
- MOF's Green Expenditures: The funding scope of the [Forestry and Grassland Reform and Development Fund Management Measures](#) includes expenditures for the cultivation of tree and grass varieties and pest control. Therefore, the Lianhe Green believes that the description of the *Forestry and Grassland Reform and Development Fund* meets the conditions of 4.1.1.3.
- Relevant Government Policies: In January 2024, the Ministry of Ecology and Environment released the [China Biodiversity Conservation Strategy and Action Plan \(2023-2030\)](#). The Action Plan proposes to comprehensively use both natural restoration and artificial restoration methods, adapting strategies to local conditions and specific times. It aims to implement effective protection for important ecosystems, biological species, and genetic resources, thereby ensuring biodiversity security and ecological safety.

2. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.1.1.5 Pest Prevention and Control ("4.1.1.5"), which includes control of invasive alien species to protect biodiversity, prevention activities for pest invasion and the prevention and the handling of invasive alien species

- Eligibility Criteria: Lianhe Green considers the description of "protection of wildlife and conservation areas" under Eligibility Criteria aligns with the condition of 4.1.1.5.
- MOF's Green Expenditures: According to the [Forestry and Grassland Reform and Development Fund Management Measures](#), the scope of financial support includes pest control. Hence, Lianhe Green believes that the description of the *Forestry and Grassland Reform and Development Fund* meets the condition of 4.1.1.5.
- Relevant Government Policies: In June 2020, the National Development and Reform Commission and the Ministry of Natural Resources jointly issued the [Master Plan for Major National Projects for the Protection and Restoration of Important Ecosystems \(2021-2035\)](#). In particular, the Plan mentions the need to carry out pest control and build pest control capacity.

3. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.1 Protection of Natural Forest Resources ("4.2.1.1"), which includes



maintaining the authenticity and integrity of the natural forest ecosystem, constructing infrastructure for natural forest tending and conservation, and restoring degraded natural forests

- **Eligibility Criteria:** Lianhe Green considers the description of “Conservation or restoration of natural landscapes (management of various natural ecological elements such as MRFFLGD), sustainable forestry practices (such as afforestation or reforestation)” and “Grassland ecological protection facilities (such as the integrated protection and restoration of forests, grasslands, wetlands and wastelands)” under Eligibility Criteria aligns with the condition of 4.2.1.1.
- **MOF’s Green Expenditures:** The funding scope of the [Forest Ecological Protection and Restoration Fund Management Measures](#) includes expenditures for forest ecological protection and restoration compensation related to the protection management, restoration, and compensation of forest resources. At the same time, the funding scope of the [Forestry and Grassland Reform and Development Fund Management Measures](#) includes expenditures for the forestry and grassland support and security system, which covers disaster prevention and reduction in forestry and grassland, such as forest and grassland fire prevention, pest control, and disaster relief, as well as for the cultivation of tree and grass varieties and the promotion of forestry and grassland technology. Therefore, Lianhe Green believes that the description of the *Forest Ecological Protection and Restoration Fund*, as well as the *Forestry and Grassland Reform and Development Fund*, meets the conditions of 4.2.1.1.
- **Relevant Government Policies:** In August 2021, the National Forestry and Grassland Administration and the National Development and Reform Commission jointly issued the [14th Five-Year Plan for the Protection and Development of Forestry and Grassland](#). The Outline proposes 12 main objectives for the development of forestry and grassland during the 14th Five-Year Plan period, including two binding targets: a forest coverage rate of 24.1% and a forest stock volume of 19 billion cubic meters.

4. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.2 Protection of Animal and Plant Resources (“4.2.1.2”), which includes rescue protection of endangered wild animals and plants, biodiversity protection, fishery resources protection, protection of ancient and notable trees, etc.

- **Eligibility Criteria:** Lianhe Green considers the description of “the sustainable use of plant genetic resources” under Eligibility Criteria aligns with the condition of 4.2.1.2.
- **MOF’s Green Expenditures:** The funding scope of the [Forest Ecological Protection and Restoration Fund Management Measures](#) includes the protection of nationally key wild plants, the protection of nationally key wild animals, the monitoring and prevention of epidemic sources and diseases, harm prevention and compensation, as well as the harm prevention and compensation for other terrestrial wild animals that cause significant damage. Therefore, Lianhe Green believes that the description of the *Forest Ecological Protection and Restoration Fund* meets the conditions of 4.2.1.2.
- **Relevant Government Policies:** In January 2024, the Ministry of Ecology and Environment released the [China Biodiversity Conservation Strategy and Action Plan \(2023-2030\)](#). The Action Plan mentions the implementation of major projects for biodiversity conservation and increasing the intensity of law enforcement and supervision. A significant number of rare and endangered species will receive effective protection, and the diversity, stability, and sustainability of ecosystems will continue to improve.

5. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.3 Construction and Operation of Nature Reserves (“4.2.1.3”), which includes special conservation and management activities for protection purposes in certain legally designated reserves (including core areas, buffer zones, and peripheral areas) of the natural concentrated distribution areas as well as nature relics of representative natural ecosystems and endangered wild animal and plant species

- **Eligibility Criteria:** Lianhe Green considers the description of “Conservation or restoration of natural landscapes (management of various natural ecological elements such as MRFFLGD), protection of wildlife and conservation areas, and grassland ecological protection facilities” under Eligibility Criteria aligns with the condition of 4.2.1.3.
- **MOF’s Green Expenditures:** The funding scope of the [Forest Ecological Protection and Restoration Fund Management Measures](#) includes expenditures for the protection and restoration of other natural reserves and wild flora and fauna, specifically for national nature reserves and nationally important wetlands (including internationally important wetlands). Therefore, Lianhe Green believes that the description of the *Forest Ecological Protection and Restoration Fund* meets the conditions of 4.2.1.3.
- **Relevant Government Policies:** In September 2022, the National Forestry and Grassland Administration drafted the [Regulations on Nature Reserves \(Revised Draft\) \(for public](#)



[consultation](#)). The promulgation and implementation of these Regulations play a crucial role in standardizing the construction and management of nature reserves, protecting natural ecosystems, wildlife resources, and biodiversity, maintaining national ecological security, and promoting ecological civilization. As of 8 September 2024, the regulations have been [submitted](#) to the State Council.

6. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.5 Projects of Turning Farmlands Back to Forests or Grasslands and Restoring Grazing Lands to Grasslands (“4.2.1.5”), which includes planned and stepwise cessation of cultivation in cultivated lands with serious soil erosion, desertification, salinization, and rocky desertification to protect ecological environment, grasslands and forestry restoration according to local conditions, restoring vegetation, and inhibiting deterioration of the ecological environment

- **Eligibility Criteria:** Lianhe Green considers the description of “Conservation or restoration of natural landscapes (management of various natural ecological elements such as MRFFLGD), and sustainable forestry practices (such as afforestation or reforestation)” under Eligibility Criteria aligns with the condition of 4.2.1.5.
- **MOF’s Green Expenditures:** The funding usage scope of the [Forestry and Grassland Reform and Development Fund Management Measures](#) includes expenditures for land greening used for turning farmlands back to forests or grasslands. This includes subsidies for the new round of returning farmland to forest and grassland, extensions of the previous round, and the management of ecological forests following the expiration of the previous policies. Hence, Lianhe Green believes that the description of the *Forestry and Grassland Reform and Development Fund* meets the condition of 4.2.1.5.
- **Relevant Government Policies:** In November 2023, the National Forestry and Grassland Administration issued the [Notice on Improving and Enhancing the Quality and Efficiency of Turning Farmlands Back to Forests or Grasslands](#). The Notice specifies that by 2025, priority will be given to completing urgent and conditionally feasible tasks related to turning farmlands back to forests or grasslands, with the aim of enhancing the overall functionality of forest and grassland ecosystems and increasing the supply capacity of ecological products.

7. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands (“4.2.1.6”), which includes management, restoration, and conservation projects that improve the ecological integrity and sustainability of river, lake, and wetland ecosystems based on local conditions

- **Eligibility Criteria:** Lianhe Green considers the description of “Conservation or restoration of natural landscapes (management of various natural ecological elements such as MRFFLGD), and Grassland ecological protection facilities (such as the integrated protection and restoration of forests, grasslands, wetlands and wastelands)” under Eligibility Criteria aligns with the condition of 4.2.1.6.
- **MOF’s Green Expenditures:** The funding scope of the [Forest Ecological Protection and Restoration Fund Management Measures](#) includes expenditures for other nature reserves and wildlife conservation used for ecological protection compensation and restoration in national nature reserves and nationally important wetlands (including internationally important wetlands). Hence, Lianhe Green believes that the description of the *Forest Ecological Protection and Restoration Fund* meets the condition of 4.2.1.6.
- **Relevant Government Policies:** In December 2021, the Ministry of Water Resources issued the [Guiding Opinions on the Restoration of River and Lake Ecosystems](#). According to these Guiding Opinions, by 2025, a certain amount of ecological water uses previously occupied in the Haihe River, Liaohe River, and Northwest Inland Rivers will be restored. Efforts will be made to achieve full flow in key rivers such as the Grand Canal, Hutuo River, and Yongding River, and the water surface of key shrinking or dried-up lakes will have been restored to a certain extent. In October 2022, the National Forestry and Grassland Administration and the Ministry of Natural Resources jointly issued the [National Wetland Protection Plan \(2022-2030\)](#). The Plan proposes that by 2025, the overall area of wetlands in the country will remain stable, the wetland protection rate will reach 55%, degraded wetlands will be scientifically restored, the scale and quality of mangroves will be increased, a sound legal framework and regulations for wetland protection will be established, wetland monitoring and regulatory capabilities will be enhanced, and the quality and stability of wetland ecosystems will improve.

8. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.7 Protection and Restoration of National Ecological Security Barriers (“4.2.1.7”), which includes ecological conservation and restoration projects of mountains, rivers, forests, land, and lakes in the core areas associated with ecological security in a bid to secure the national ecological barriers, e.g. ecologically fragile areas in the western plateau and wind-sand source areas in the north. Examples of eligible projects include land remediation and vegetation restoration

- **Eligibility Criteria:** Lianhe Green considers the description of “Conservation or restoration of



natural landscapes (management of various natural ecological elements such as MRFFLDG), protection of wildlife and conservation areas, and grassland ecological protection facilities (such as the integrated protection and restoration of forests, grasslands, wetlands and wastelands, and efforts to prevent and control desertification)” under Eligibility Criteria aligns with the condition of 4.2.1.7.

- **MOF’s Green Expenditures:** According to the [Key Ecological Protection, Restoration and Management Fund Management Measures](#), the scope of support for governance funds includes the implementation of integrated protection and restoration projects for mountains, rivers, forests, farmlands, lakes, grasslands, and deserts, as well as the improvement of the ecological security barrier system. At the same time, the funding usage scope of the [Three-North Shelterbelt Forest Program Fund Management Measures](#) includes expenditures for integrated protection and restoration of forests, grasslands, wetlands, and deserts, aimed at the restoration of degraded forests, restoration of degraded grasslands, nurturing of young and middle-aged forests, and wetland protection and restoration, as well as expenditures to consolidate achievements in desertification control, including the management and maintenance of newly treated desertified land (artificial afforestation), irrigation, and replanting. Hence, Lianhe Green believes that the description of the *Key Ecological Protection, Restoration and Management Fund* and the *Three-North Shelterbelt Forest Program Fund* meets the condition of 4.2.1.7.
- **Relevant Government Policies:** In June 2020, the National Development and Reform Commission and the Ministry of Natural Resources jointly issued the [General Plan for Major Projects in the Protection and Restoration of Important National Ecosystems \(2021-2035\)](#). The Plan mentions that by 2035, the national ecological security barrier system will be basically established, with efforts made to effectively protect and restore the national ecological security barrier and important ecosystems, thereby laying a solid ecological foundation for the fundamental realization of socialist modernization and the goal of the development of a “Beautiful China”.

9. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.9 Ecological Restoration of Degraded Mining Areas (“4.2.1.9”), which includes examples of eligible projects include remediation of mining wasteland, vegetation restoration, backfilling of mines, boreholes, and abandoned mines near important facilities/infrastructures such as rivers, lakes, and sea defenses, land reclamation at mining areas, restoration of subsidence areas, air, water and soil pollution prevention and treatment at mining areas, etc.

- **Eligibility Criteria:** Lianhe Green considers the description of “Conservation or restoration of natural landscapes” under Eligibility Criteria aligns with the condition of 4.2.1.9.
- **MOF’s Green Expenditures:** According to the [Key Ecological Protection, Restoration and Management Fund Management Measures](#), the scope of support for governance funds includes the remediation of historically abandoned industrial and mining lands. This is particularly focused on key ecological areas that play an important role in ecological safety and have a wide range of ecological benefits. It involves the remediation of abandoned industrial lands and mining wastelands that are historically abandoned and for which responsibility cannot be assigned. The measures include the implementation of regional land remediation demonstrations, revitalization of existing construction land, enhancement of land conservation and intensive use levels, and the restoration of the living environment. Hence, Lianhe Green believes that the description of the *Key Ecological Protection, Restoration and Management Fund* meets the condition of 4.2.1.9.
- **Relevant Government Policies:** In June 2020, the National Development and Reform Commission and the Ministry of Natural Resources jointly issued the [General Plan for Major Projects in the Protection and Restoration of Important National Ecosystems \(2021-2035\)](#). The Plan mentions accelerating the ecological restoration of historically abandoned mines through comprehensive remediation projects, including geological environmental management, terrain reshaping, soil reconstruction, and vegetation restoration, to restore the ecological environment of the mines.

10. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.10 Comprehensive Treatment of Desertification, Rocky Desertification and Soil Erosion (“4.2.1.10”), which includes treatment of desertification, based on local conditions, including sand control measures (such as closing sand areas for cultivating forests and grassland, planting grass and afforestation, etc); sand control measures by physical measures, (such as building mechanical sand barriers as well as plant barriers, etc.); sand control measures using chemical measures in barren areas due to scarce water resource (such as using soil coagulants to consolidate quicksand surface)

- **Eligibility Criteria:** Lianhe Green considers the description of “efforts to prevent and control desertification” under Eligibility Criteria aligns with the condition of 4.2.1.10.
- **MOF’s Green Expenditures:** The funding usage scope of the [Three-North Shelterbelt Forest](#)



[Program Fund Management Measures](#) includes expenditures to consolidate achievements in desertification control, such as the management and maintenance of newly treated desertified land (artificial afforestation), irrigation, and replanting. This scope also includes expenditures for “two transformations” demonstrations under the Three-North Program, aimed at promoting “ecological industrialization and industrial ecologization”, which are coordinated by local authorities to carry out related desertification control efforts. Hence, Lianhe Green believes that the description of the *Three-North Shelterbelt Forest Program Fund* meets the condition of 4.2.1.10.

- **Relevant Government Policies:** In January 2023, seven departments including the National Forestry and Grassland Administration, the National Development and Reform Commission, the Ministry of Finance, the Ministry of Natural Resources, the Ministry of Ecology and Environment, the Ministry of Water Resources, and the Ministry of Agriculture and Rural Affairs jointly issued the [National Sand Control and Desertification Prevention Plan \(2021-2030\)](#). This Plan states that by 2025, the task of desertification control for 100 million mu of land will be completed, with 30 million mu of desertified land being protected through sealing off. By 2030, this Plan aims to complete the desertification control task for 186 million mu of land, with 90 million mu of desertified land being protected through sealing off.

11. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.2.5 Protective Operation of National Parks, World’s Heritages, National Scenic Spots and Historic Interest Areas, National Forest Parks, National Geo-Parks, and National Wetland Parks (“4.2.2.5”), which includes development and construction for the purpose of protecting forests, grasslands, deserts, wetlands, oceans, and other natural ecosystems, including construction and operation of national parks, world natural heritage sites, forest parks, wetland parks, desert parks, etc.

- **Eligibility Criteria:** Lianhe Green considers the description of “Conservation or restoration of natural landscapes (management of various natural ecological elements such as MRFFLGD), protection of wildlife and conservation areas, and sustainable forestry practices (such as afforestation or reforestation), and grassland ecological protection facilities (such as the integrated protection and restoration of forests, grasslands, wetlands and wastelands, and efforts to prevent and control desertification)” under Eligibility Criteria aligns with the condition of 4.2.2.5.
- **MOF’s Green Expenditures:** The funding scope of the [Forest Ecological Protection and Restoration Fund Management Measures](#) includes expenditures for national parks, which are used for ecosystem protection and restoration, establishment and operational management, coordinated development, conservation research and public education, as well as international cooperation and social participation. Hence, Lianhe Green believes that the description of the *Forest Ecological Protection and Restoration Fund* meets the condition of 4.2.2.5.
- **Relevant Government Policies:** In December 2022, the National Forestry and Grassland Administration, the Ministry of Finance, the Ministry of Natural Resources, and the Ministry of Ecology and Environment jointly issued the [National Park Spatial Layout Plan](#). The Plan adheres to the principles of prioritizing ecological protection, national representation, and public welfare in national parks, aiming to achieve the authenticity and integrity of natural ecosystems, maintain national ecological security, and lay a solid ecological foundation for the development of a “Beautiful China” and achieving harmony between humanity and nature. By 2025, a unified, standardized, and efficient management system will be fundamentally established. By 2035, the construction tasks for the spatial layout of national parks will be largely completed, and the world’s largest national park system will be fundamentally established.

Lianhe Green believes this Green Project Category contributes positively to the United Nations Sustainable Development Goals (UNSDGs), particularly to Goal 15 (Life on Land). Specifically, it contributes to Target 15.3: “By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land degradation-neutral world”; Target 15.4: “By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development”; Target 15.5: “Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species”; Target 15.a: “Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems”; and Target 15.b: “Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation”.

4) Green Project Category: Marine Ecosystem Protection and Restoration



Eligibility Criteria

- Protection of fragile ecosystems or ecosystem with excellent quality (such as coastal zones, mangrove forests and seas and islands)
- Restoration and management (such as mangrove forests, coastlines, coastal zones, seas and islands) to enhance the ecological function of coastal zones

MOF's Green Expenditures

- *Marine Ecological Protection and Restoration Fund*: limited to expenditures that support the protection and rehabilitation of marine ecosystems in key areas that are vital for ensuring ecological security and provide extensive ecological benefits

Green Project Categories in the Corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*

- 4.2.1.14 Comprehensive Management of Sea Areas, Coastal Zones and Islands

Green Standards

- *Green Bond Principles (2021 Edition (With June 2022 Appendix 1))*: Terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine and watershed environments);

Lianhe Green's Opinion

Lianhe Green believes that the description of the Eligibility Criteria and the MOF's Green Expenditures under the Green Project Category in the Framework aligns with the Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*:

› Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 4.2.1.14 Comprehensive Management of Sea Areas, Coastal Zones and Islands ("4.2.1.14"), which includes comprehensive sea area management, natural shoreline restoration, bay remediation projects for the purpose of protecting the natural resources, ecological environment and biodiversity of coastal waters, coasts, and islands

- Eligibility Criteria: Lianhe Green considers the description of "Protection of fragile ecosystems or ecosystem with excellent quality (such as coastal zones, mangrove forests and seas and islands), and restoration and management (such as mangrove forests, coastlines, coastal zones, seas and islands) to enhance the ecological function of coastal zones" under Eligibility Criteria aligns with the condition of 4.2.1.14.
- MOF's Green Expenditures: According to the [Marine Ecological Protection and Restoration Fund Management Measures](#), the scope of funding support includes marine ecological protection and restoration governance. This involves the protection and restoration of ecosystems in key areas such as sea areas, islands, and coastal zones, aimed at enhancing the ecological functions and disaster reduction capabilities of island and coastal areas. Hence, Lianhe Green believes that the description of the *Marine Ecological Protection and Restoration Fund* meets the condition of 4.2.1.14.
- Relevant Government Policies: The [14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Outline of Long-Term Goals for 2035](#) proposes to focus on areas such as the Yellow and Bohai Seas, the Yangtze River Delta, the coastal areas of Guangdong, Fujian and Zhejiang, the Guangdong-Hong Kong-Macao Greater Bay Area, Hainan Island, and the Beibu Gulf, with a goal of restoring and rehabilitating 400 kilometers of coastline and 20,000 hectares of coastal wetlands. The "14th Five-Year Plan for Marine Ecological Protection and Restoration Action" issued by the Ministry of Natural Resources states that at least 20,000 hectares of coastal wetlands will be restored, including the creation of 9,050 hectares of mangroves, and that at least 400 kilometers of coastline will be restored, with a preservation rate of natural coastlines reaching over 35%.

Lianhe Green believes this Green Project Category contributes positively to the United Nations Sustainable Development Goals (UNSDGs). In particular, it makes significant contributions to Target



14.2 of Goal 14 (Life Below Water): “By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans”.

5) Green Project Category: Pollution Prevention and Control

Eligibility Criteria

- Support for air pollution prevention and control; and collaboration in combating climate change

MOF's Green Expenditures

- *Air Pollution Control and Prevention Fund*: limited to expenditures that focus on atmospheric environmental governance and management, and coordinated control of fine particulate matter (PM_{2.5}) and ozone (O₃)

Green Project Categories in the Corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*

- 1.3.1.2 Equipment Manufacturing for Air Pollution Prevention and Control
- 1.3.1.8 Manufacturing of Environmental Monitoring Instruments and Emergency Treatment Equipment

Green Standards

- *Green Bond Principles (2021 Edition (With June 2022 Appendix 1))*: Pollution prevention and control (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/emission-efficient waste to energy);

Lianhe Green's Opinion

Lianhe Green believes that the description of the Eligibility Criteria and the MOF's Green Expenditures under the Green Project Category in the Framework aligns with the Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*:

1. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.3.1.2 Equipment Manufacturing for Air Pollution Prevention and Control (“1.3.1.2”), which includes manufacturing and trading of the equipment for flue gas dedusting, desulfurization and denitrification, treatment of volatile organic pollutants (VOCs), post-treatment of motor vehicle exhaust, food industry fume purification, and the equipment for greenhouse gas emission reduction such as the power switching equipment for SF₆ replacement

- Eligibility Criteria: Lianhe Green considers the description of “Support for air pollution prevention and control; and collaboration in combating climate change” under Eligibility Criteria aligns with the condition of 1.3.1.2.
- MOF's Green Expenditures: According to the [Air Pollution Control and Prevention Fund Management Measures](#), the scope of funding support includes atmospheric environmental governance and management, and the coordinated control of fine particulate matter (PM_{2.5}) and ozone (O₃) pollution. Hence, Lianhe Green believes that the description of the *Air Pollution Control and Prevention Fund* meets the condition of 1.3.1.2.
- Relevant Government Policies: In November 2023, the State Council issued the [Action Plan for Continuous Improvement of Air Quality](#). The Action Plan proposes to synergistically promote carbon reduction, pollution reduction, green expansion, and economic growth, with a focus on improving air quality. It emphasizes reducing the number of days under heavy air pollution and addressing prominent air quality issues affecting the public, with the main goal of lowering the concentration of fine particulate matter (PM_{2.5}) while vigorously promoting the reduction of nitrogen oxides and volatile organic compounds (VOCs).

2. Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.3.1.8 Manufacturing of Environmental Monitoring Instruments and Emergency treatment Equipment (“1.3.1.8”), which includes manufacturing and trading of equipment and instruments for monitoring and testing of ecological environment including air, motor vehicle emission



(including remote sensing monitoring and PEMS testing) and other environmental emergency testing

- Eligibility Criteria: Lianhe Green considers the description of “Support for air pollution prevention and control; and collaboration in combating climate change” under Eligibility Criteria aligns with the condition of 1.3.1.8.
- MOF’s Green Expenditures: According to the [Air Pollution Control and Prevention Fund Management Measures](#), the scope of funding support includes atmospheric environmental governance and management, and the coordinated control of fine particulate matter (PM2.5) and ozone (O₃) pollution. Hence, Lianhe Green believes that the description of the *Air Pollution Control and Prevention Fund* meets the condition of 1.3.1.8.
- Relevant Government Policies: In November 2021, the Central Committee of the Communist Party of China and the State Council issued the [Nationwide Battle to Prevent and Control Pollution](#). The Opinions emphasized achieving synergistic effects of pollution reduction and carbon reduction as the main approach, focusing on improving ecological and environmental quality. It advocates for precise, scientific, and lawful pollution control, coordinating pollution management, ecological protection, and climate change response. The aim is to maintain momentum, extend depth, and broaden scope, setting higher standards to effectively safeguard “blue skies, clear waters, and clean land”. The document also emphasizes promoting high-quality development and creating a high-quality life through high-level protection, striving to the development of a “Beautiful China” where humanity and nature coexist harmoniously.

Lianhe Green believes this Green Project Category contributes positively to the United Nations Sustainable Development Goals (UNSDGs). In particular, it makes significant contributions to Target 11.6 of Goal 11 (Sustainable Cities and Communities): “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management”.

6) Green Project Category: Resource Utilization and Recycling

Eligibility Criteria

- Waste treatment, recycling and resource utilization projects (such as facilitating the comprehensive utilization of resources, promoting circular development, and supporting the treatment of waste electrical and electronic products)

MOF’s Green Expenditures

- *Disposal of Waste Electrical and Electronic Products Earmarked Fund*: expenditures for guiding local governments to support the development of the waste electrical and electronic product recycling and treatment industry

Green Project Categories in the Corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*

- 1.5.2.2 Recycling of Waste and Discarded Resources

Green Standards

- *Green Bond Principles (2021 Edition (With June 2022 Appendix 1))*: Circular economy adapted products, production technologies and processes (such as the design and introduction of reusable, recyclable and refurbished materials, components and products; circular tools and services); and/or certified eco-efficient products;

Lianhe Green’s Opinion

Lianhe Green believes that the description of the Eligibility Criteria and the MOF’s Green Expenditures under the Green Project Category in the Framework aligns with the Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*:

› Green Project Categories in the corresponding *Green Bond Endorsed Projects Catalogue (2021 Edition)*: Condition of 1.5.2.2 Recycling of Waste and Discarded Resources (“1.5.2.2”), which includes



recycling of waste electrical and electronic products

- **Eligibility Criteria:** Lianhe Green considers the description of “Waste treatment, recycling and resource utilization projects (such as facilitating the comprehensive utilization of resources, promoting circular development, and supporting the treatment of waste electrical and electronic products)” under Eligibility Criteria aligns with the condition of 1.5.2.2.
- **MOF’s Green Expenditures:** According to the [Disposal of Waste Electrical and Electronic Products Earmarked Fund Management Measures](#), the funding supports eligible enterprises in the recycling and processing of five categories of waste electrical and electronic products listed in the “Directory of Waste Electrical and Electronic Products”, including televisions, refrigerators, washing machines, air conditioners, and microcomputers. Hence, Lianhe Green believes that the description of the *Disposal of Waste Electrical and Electronic Products Earmarked Fund* meets the condition of 1.5.2.2.
- **Relevant Government Policies:** In July 2021, the National Development and Reform Commission issued the [14th Five-Year Plan for Circular Economy Development](#). The Plan mentions supporting electrical and electronic product manufacturers in establishing recycling systems through self-recycling, joint recycling, or entrusted recycling. It also aims to guide and regulate the sharing of information among production enterprises, recycling companies, and e-commerce platforms, and to direct discarded electrical and electronic products to standardized dismantling enterprises.

Lianhe Green believes this Green Project Category contributes positively to the United Nations Sustainable Development Goals (UNSDGs), particularly to Goal 12 (Responsible Consumption and Production). Specifically, it contributes to Target 12.1: “Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries”; Target 12.2: “By 2030, achieve the sustainable management and efficient use of natural resources”; and Target 12.5: “By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse”.

B. Process for Project Evaluation and Selection

Issuer Materials

Subsequently, the process for project evaluation and selection is crucial to ensure that the proceeds from any Sovereign Green Bonds issued under the Framework are fully used to finance and/or refinance Green Expenditures that meet the definition in Section 2.1 – Use of Proceeds.

MOF is responsible for Project Evaluation and Selection, and will establish a Green Expenditures List. MOF will regularly carry out evaluation and update the Green Expenditures List. Based on these evaluations, MOF will determine the allocation of proceeds in accordance with China’s environmental policies and the Framework’s requirements.

After issuance, MOF will prepare annual information disclosures and periodically review Green Expenditures as long as the Sovereign Green Bonds are outstanding to ensure that the Use of Proceeds is fully compliant with the Framework’s requirements.

Opinion of Lianhe Green

| | | | |
|-------------|---------|------|-----------|
| Not Aligned | Aligned | Good | Excellent |
|-------------|---------|------|-----------|

Lianhe Green, in accordance with the relevant assessment criteria, reviewed the Framework and other related documents, and the issuer’s policies on process for project evaluation and selection.

MOF has established a comprehensive process for screening, evaluating and reviewing green



projects. MOF will determine the allocation of proceeds in accordance with China’s environmental policies and the Framework’s requirements, and periodically review the Green Expenditures as long as the Sovereign Green Bonds are outstanding to ensure the Use of Proceeds is in full compliance with the Framework’s requirements.

According to the *Measures for the Management of Performance Targets in the Budgets of Central Departments* released by MOF, MOF or the central departments will review general projects in conjunction with the departmental budget management process and put forward review opinions. For key projects that attract high social attention, have an important impact on economic and social development, are related to major areas of people’s livelihood or involve complex techniques, MOF or the central departments may, as necessary, entrust them to a third party and organize relevant departments, experts and scholars, research institutes, intermediaries, representatives of the public, etc., to participate in the review and give opinions.

Lianhe Green’s assessment of MOF’s Process for Project Evaluation and Selection is “Excellent”, which meets the requirements of the assessment criteria.

C. Management of Proceeds

Issuer Materials

To ensure accountability of the management of the proceeds, the proceeds raised will be managed by MOF, which will record the use and allocation of proceeds of the Sovereign Green Bonds.

MOF will maintain an internal register which will include the following information of the Sovereign Green Bonds:

- Transaction details of each of the Sovereign Green Bond issuance (e.g. International Securities Identification Number (ISIN), currency, issue amount, tenor, etc.);
- Summary indicating that each Green Expenditure in the internal register meets the requirements of the Framework in accordance with Section 2.2 Process for Project Evaluation and Selection;
- Amount of proceeds allocated to each Green Expenditure;
- Remaining balance of unallocated proceeds;
- Corresponding fiscal year of the relevant Green Expenditure;
- Expected environmental impacts (if applicable).

The proceeds raised will be allocated to Green Expenditures of fiscal budget until fully allocated to the corresponding Green Expenditures. Any unallocated proceeds will be managed in accordance with MOF’s treasury funds use. In addition, unallocated proceeds shall not be invested in any fossil fuel-related assets or highly polluting, energy intensive assets or projects.

All proceeds raised from the Sovereign Green Bonds will be fully allocated to Green Expenditures in the year of issuance (the “Current Fiscal Year”), the next fiscal year and up to three previous fiscal years. At least 50% of the proceeds will be allocated to Green Expenditures in the current and next fiscal year.

Opinion of Lianhe Green

| | | | |
|-------------|---------|------|-----------|
| Not Aligned | Aligned | Good | Excellent |
|-------------|---------|------|-----------|

Lianhe Green, in accordance with the relevant assessment criteria, reviewed the Framework and other related documents, and the issuer’s policies on management of proceeds.

The proceeds raised will be managed by MOF, which will record the use and allocation of proceeds



of the Sovereign Green Bonds. Any unallocated proceeds will be managed in accordance with MOF’s treasury funds use. All proceeds raised from the Sovereign Green Bonds will be fully allocated to Green Expenditures in the year of issuance, the next fiscal year and up to three previous fiscal years. At least 50% of the proceeds will be allocated to Green Expenditures in the current and next fiscal year.

Lianhe Green’s assessment of MOF’s Management of Proceeds is “Excellent”, which meets the requirements of the assessment criteria.

D. Information Disclosure

Issuer Materials

Furthermore, to maintain ongoing transparency, during the period where the Sovereign Green Bonds remain outstanding, MOF will provide annual disclosures until full allocation of the proceeds of any Sovereign Green Bonds issued under the Framework. Timely disclosures will also be made in the event of any material developments.

The annual Sovereign Green Bond Information Disclosure will be published on the official website of MOF, which includes the following:

Allocation Information Disclosure

- Transaction details of each of the Sovereign Green Bond issuance (e.g., ISIN, currency, issue amount, tenor, etc.)
- For each Sovereign Green Bond issued, a brief description on the (1) Green Project Category, (2) Green Expenditure Category (if any), and (3) Use of Proceeds in the Relevant Fiscal Budget Year
- Remaining balance of unallocated proceeds

Environmental Impact Information Disclosure

To the extent possible, MOF will provide investors with the relevant expected environmental impact of Green Expenditures. Indicative environmental impact indicators of Green Projects or Green Expenditures are as follows:

| Green Project Category | Indicative Environmental Impact Indicators |
|---|--|
| Clean Transportation | Support Fund for Energy Saving and Emission Reduction <ul style="list-style-type: none"> • Annual reduction in carbon dioxide and other GHG emissions (in tons) • Proportion of vehicles that meet the operational range requirements • Proportion of vehicles included in the “National Monitoring and Management Platform for New Energy Vehicles” • Consistency of vehicle technical parameters with those defined in the “Catalog of Vehicle Models recommended for the New Energy Vehicle Promotion and Application” |
| Sustainable Water and Wastewater Management | Rural Areas’ Environmental Remediation Fund <ul style="list-style-type: none"> • Number of new administrative villages completing rural sewage treatment • Quantity of black and malodorous water bodies eliminated in rural areas • Quantity of source control and pollution interception control projects implemented |



| | |
|---|--|
| | <p>Water Conservancy Development Fund</p> <ul style="list-style-type: none">• Area of medium-sized irrigation districts retrofitted for water conservation• Additional capacity provided by the newly constructed small reservoirs• Population benefiting from small-scale water diversion projects• Length of small- and medium-sized rivers under management• Number of small dangerous reservoirs with risk removal and reinforcement• Number of counties implementing flash flood disaster prevention and control measures• Area of land under soil erosion management• Number of dirt and sand retention dams under management• Area covered by integrated agricultural water pricing reform• Groundwater extraction capacity• Number of Happiness River and Lake constructed <p>Central Budgetary Investment in the Program for Guaranteeing Water Security</p> <ul style="list-style-type: none">• Number of medium- and large-sized dangerous reservoirs with risk removal and reinforcement• Number of hydrological fundamental facilities constructed |
| <p>Environmentally Sustainable Management and Restoration of Living Natural Resources and Land Use</p> | <p>Forest Ecological Protection and Restoration Fund</p> <ul style="list-style-type: none">• Area of forest resources under management and protection (in 10,000 mu)• Proportion of national park area covered by comprehensive monitoring (percentage of national park area) |
| | <p>Forestry and Grassland Reform and Development Fund</p> <ul style="list-style-type: none">• Area subsidized under the new round of Returning Farmland to Forest Program (in 10,000 mu)• Area of oil-tea plantation (in 10,000 mu) |
| | <p>Three-North Shelterbelt Forest Program Fund</p> <ul style="list-style-type: none">• Area of forests, grasslands, wetlands and wastelands with integrated protection and restoration (in 10,000 mu)• Area of desertified land compensated and with sealed protection (in 10,000 mu) |
| | <p>Key Ecological Protection, Restoration and Management Fund</p> <ul style="list-style-type: none">• Total area with ecological protection and restoration (in 10,000 hectares)• Area of mines with ecological restoration (in 10,000 hectares)• Area of wetlands with ecological restoration (in 10,000 hectares)• Area of forests with ecological restoration (in 10,000 hectares)• Area of grasslands with ecological restoration (in 10,000 hectares)• Area with soil and water loss control (in 10,000 hectares)• Area of land with desertification and rocky desertification control (in 10,000 hectares)• Area of land with comprehensive remediation (in 10,000 hectares)• Area under water pollution management and control (in 10,000 hectares)• Area of habitats under protection (in 10,000 hectares)• Area where ecosystems are under protection (in 10,000 hectares)• Species richness (no. of species per hectare) |



| | |
|--|---|
| | <ul style="list-style-type: none"> • Water conservation area with ecological restoration (in 10,000 hectares) • Area with soil pollution control (in 10,000 hectares) • Length of riverbanks restored (in km) • Number of monitoring points established |
| Marine Ecosystem Protection and Restoration | <p>Marine Ecological Protection and Restoration Fund</p> <ul style="list-style-type: none"> • Total area of ecological restoration completed (in hectare) • Length of shorelines remediated and restored (in km) • Area of coastal wetlands remediated and restored (in hectare) • Area of newly constructed mangrove forests (in hectare) • Area of existing mangrove forests remediated (in hectare) • Area with invasive alien species under control (in hectare) • Number of islands restored • Number of marine ecological condition investigations completed |
| Pollution Prevention and Control | <p>Air Pollution Control and Prevention Fund</p> <ul style="list-style-type: none"> • Reduction in annual average PM2.5 concentration (%) • National air quality rate (%) • Percentage of days under heavy air pollution (%) • Reduction in total nitrogen oxide emissions (%) • Reduction in total volatile organic compounds (VOCs) emissions (%) |
| Resource Utilization and Recycling | <p>Disposal of Waste Electrical and Electronic Products Earmarked Fund</p> <ul style="list-style-type: none"> • Volume of national waste electrical and electronic products disassembled or treated by enterprises • Percentage of hazardous waste from disassembled products (%) • Normative collection rate of environmental sensitive substances in refrigerators and air conditioners (%) |

Opinion of Lianhe Green

| | | | |
|-------------|---------|------|-----------|
| Not Aligned | Aligned | Good | Excellent |
|-------------|---------|------|-----------|

Lianhe Green, in accordance with the relevant assessment criteria, reviewed the Framework and other related documents.

During the period where the Sovereign Green Bonds remain outstanding, MOF will provide annual disclosures until full allocation of the proceeds of any Sovereign Green Bonds issued under the Framework. Timely disclosures will also be made in the event of any material developments. To the extent possible, MOF will provide investors with the relevant expected environmental impact of the Green Expenditures.

Lianhe Green's assessment of the MOF's Information Disclosure is "Excellent", which meets the requirements of the assessment criteria.

E. External Reviews

Issuer Materials



MOF has engaged Lianhe Green Development Co., Ltd. and DNV Business Assurance Limited to assess whether the Framework is in line with the relevant Green Bond Principles, and independent Second-Party Opinion reports have been issued.

MOF will engage an independent third party to publish the external verification report on the annual Sovereign Green Bond Information Disclosure.

Opinion of Lianhe Green

| Not Aligned | Aligned | Good | Excellent |
|-------------|---------|------|-----------|
|-------------|---------|------|-----------|

After assessment, MOF has engaged Lianhe Green to evaluate whether the Framework meets international and local relevant standards and issue a second-party opinion before issuance. At the same time, MOF will engage an independent third party to publish the external verification report on the annual Sovereign Green Bond Information Disclosure.

The *China Green Bond Principles (2022 Edition)* issued by the China Green Bond Standard Committee and the *Green Bond Principles (2021 Edition) (including Appendix 1 from June 2022)* published by the International Capital Market Association both encourage issuers to regularly disclose external review reports issued by third-party evaluation and certification agencies during the period where the bonds remain outstanding. They also recommend the continuous tracking, assessment, and certification of the progress of green projects financed by Sovereign Green Bonds, as well as their actual or expected environmental benefits. Lianhe Green believes that the MOF has followed the recommendations of the *China Green Bond Principles (2022 Edition)* and the *Green Bond Principles (2021 Edition) (including Appendix 1 from June 2022)*.

Lianhe Green's assessment of the MOF's management system for External Reviews is "Excellent", which meets the requirements of the assessment standards.



Analysis of Environmental Benefits

Green Project Category: Clean Transportation

Environmental Benefits

Nowadays, energy and environmental issues are becoming increasingly severe. Developing new energy vehicles vigorously is an effective way to address energy and environmental challenges. According to [information](#) from the National Development and Reform Commission, carbon emissions from automobiles account for approximately 10% of global carbon emissions. Additionally, according to [data](#) from the International Energy Agency, the lifecycle carbon emissions of battery electric vehicles are 54% lower than those of conventional fuel vehicles, while plug-in hybrid electric vehicles emit 32% less carbon than conventional fuel vehicles. Although the manufacturing emissions associated with battery production are relatively high, the cumulative emissions of battery electric vehicles after two years of use are still lower than those of their internal combustion engine counterparts. Furthermore, new energy vehicles significantly reduce on-road emissions, with electric and hydrogen vehicles producing zero emissions, which is beneficial for improving urban air quality.

Moreover, hydrogen, as an emerging energy source, has the characteristic of being a secondary energy carrier that can be produced through the electrolysis of renewable energy sources, such as solar and wind energy. The only byproduct of hydrogen combustion is water, which does not release carbon dioxide or other greenhouse gases. According to analysis by Lianhe Green, the energy density of hydrogen is between 120-142 MJ/kg, while the energy density of the latest lithium batteries on the market is expected to reach 400-700 Wh/kg, equivalent to 1.44-2.52 MJ/kg. When comparing the same volume, the volumetric energy density of liquid hydrogen is 9 MJ/L, compared to 1.5-2.2 MJ/L for lithium batteries, indicating that hydrogen has a higher energy density.

The use of plug-in hybrid electric vehicles and battery electric vehicles can significantly reduce carbon emissions, while hydrogen fuel cell vehicles effectively address the issues of long charging times and difficulties in charging during long-distance transport for battery electric vehicles. Different types of clean energy vehicles can work together to achieve the goal of carbon neutrality.

Green Project Category: Sustainable Water and Wastewater Management

Environmental Benefits

The improvement of rural living environments enhances residents' quality of life by improving water quality and reducing pollution.

According to a [press conference](#) by the Ministry of Ecology and Environment, starting in 2022, the Ministry of Finance and the Ministry of Ecology and Environment launched pilot projects for the treatment of black and malodorous water in rural areas, selecting 39 cities to address over 2,000 such water bodies. By the end of June 2024, over 3,400 large-scale rural black and malodorous water treatment projects had been completed nationwide, achieving over 80% of the goals set in the 14th Five-Year Plan. The treatment of rural domestic sewage is a key component of rural areas' environmental remediation and an important measure of the rural revitalization strategy. The Ministry of Ecology and Environment has thoroughly studied and implemented the experience from the "Green Rural Revival Program", promoting rural domestic sewage treatment tailored to local conditions, which has yielded positive results. By June 2024, the national rate of rural domestic sewage treatment (control) had reached over 45%, significantly reducing the occurrences of sewage flowing in rural areas.

According to the National Bureau of Statistics [website](#), since the beginning of the 14th Five-Year Plan period, the quality of surface water environments has continued to improve, with significant



enhancements in key river basins. In 2023, the proportion of surface water classified as Type I-III standard reached 89.4%, an increase of 6 percentage points compared to 2020.

Lianhe Green believes that through the improvement of rural living environments and sewage treatment, residents' quality of life has significantly improved, while water quality is also continuously enhancing. These measures not only promote the implementation of the rural revitalization strategy but also lay a solid foundation for achieving sustainable development.

Green Project Category: Environmentally Sustainable Management and Restoration of Living Natural Resources and Land Use

Environmental Benefits

Pest and disease control reduces damage caused by pests to forests and grasslands, thereby protecting the stability of ecosystems. According to [China Green Times](#), since 2007, the area affected by forestry pests in China has exceeded 175 million mu annually, accounting for 50.69% of the total area of forestry disasters, which is several times that of forest fire areas, resulting in average annual losses of over CNY 110 billion. Effective pest and disease control can protect crops and forest resources, reducing the use of chemical pesticides.

The protection of natural forest resources helps maintain biodiversity and ecosystem service functions. Protecting natural forests can significantly increase forest coverage and enhance ecological functions such as water conservation and carbon sequestration. The construction and operation of nature reserves help protect endangered species and their habitats, maintaining the stability of ecosystems. Projects for converting farmland back to forest and grassland and for returning grazing land to grassland, help restore vegetation, reduce soil erosion, and improve the ecological environment. According to the [website of the National Forestry and Grassland Administration](#), since the implementation of these projects, the overall forest coverage in the project areas has increased by more than 4 percentage points, and the ecological functions of forest and grassland vegetation, such as water conservation, soil stabilization, sand fixation, and dust reduction, have continuously strengthened, leading to significant improvements in ecological conditions, with an annual total ecological benefit valued at CNY 1.42 trillion. According to the same source, 812 poverty alleviation counties have implemented these projects, accounting for 97.6% of all poverty alleviation counties.

The protection and restoration of rivers, lakes, and wetlands enhance ecosystem resilience by improving water quality, regulating water cycles, and providing habitats. The protective management of national parks, world heritage sites, national scenic areas, national forest parks, national geological parks, and national wetland parks helps protect natural landscapes and biodiversity, provides opportunities for ecotourism, and promotes environmental education. The protection and restoration of national ecological security barriers enhance ecosystem stability and resilience, helping to withstand natural disasters.

Green Project Category: Marine Ecosystem Protection and Restoration

Environmental Benefits

By protecting fragile ecosystems such as coastal zones, mangroves, and marine and island areas, further degradation in these regions can be prevented, maintaining their ecological balance. Ecosystems like mangroves possess powerful carbon sequestration capabilities, able to absorb and store large amounts of carbon dioxide, which helps mitigate climate change. Through the restoration and management of mangroves, coastlines, coastal zones, marine areas, and islands, the ecological functions of these areas can be restored, such as water purification, habitat provision, and wind and sand erosion control. According to [People's Daily](#), as of 2023, 2,000 kilometers of coastline have been restored and rehabilitated, 600,000 mu of coastal wetlands have been restored, and the area of mangroves has



reached 438,000 mu, making China one of the few countries in the world with a net increase in mangrove area.

Green Project Category: Pollution Prevention and Control

Environmental Benefits

According to the [Global Air Quality Guidelines](#) published by the World Health Organization in 2021, there is clear evidence of the damage air pollution inflicts on human health, at even lower concentrations than previously understood. Every year, exposure to air pollution is estimated to cause 7 million premature deaths and result in the loss of millions more healthy years of life. In children, this could include reduced lung growth and function, respiratory infections and aggravated asthma. In adults, ischaemic heart disease and stroke are the most common causes of premature death attributable to outdoor air pollution, and evidence is also emerging of other effects such as diabetes and neurodegenerative conditions. This puts the burden of disease attributable to air pollution on a par with other major global health risks such as unhealthy diet and tobacco smoking. The World Health Organization's Guidelines recommend air quality levels for 6 pollutants, where evidence has advanced the most on health effects from exposure. When action is taken on these so-called classical pollutants - particulate matter (PM), ozone (O₃), nitrogen dioxide (NO₂) sulfur dioxide (SO₂) and carbon monoxide (CO), it also has an impact on other damaging pollutants.

According to the [Action Plan for Continuous Improvement of Air Quality](#) issued by the State Council, the goals are to reduce PM_{2.5} density in cities at the prefecture level and above by 10% by 2025, compared to the 2020 level; to control the proportion of days each year with heavy air pollution to 1% or less; and to cut emissions of nitrogen oxides and volatile organic compounds by over 10%.

Through coordinated efforts in air pollution prevention and climate change, China will significantly reduce emissions of pollutants such as fine particulate matter (PM_{2.5}) and ozone (O₃), improve air quality, and decrease the frequency of heavy pollution events, thereby enhancing public health and quality of life.

Green Project Category: Resource Utilization and Recycling

Environmental Benefits

The resource utilization and recycling is an economic model aimed at minimizing resource consumption and waste generation by emphasizing the reuse and recycling of resources. It seeks to effectively utilize resources, reduce the demand for new raw materials, and mitigate environmental degradation. [The Global E-waste Monitor 2024](#), released by the International Telecommunication Union (ITU) and the United Nations Institute for Training and Research (UNITAR), reports that by 2022, the world generated 62 billion kg of e-waste, or an average of 7.8 kg per capita. Only 22.3% (13.8 billion kg) of the generated e-waste was documented as properly collected and recycled.

At the same time, the resource utilization and recycling promotes economic growth and innovation. Businesses can explore new business models, such as leasing instead of selling, thereby extending product lifecycles. Moreover, the resource utilization and recycling helps alleviate environmental burdens by reducing greenhouse gas emissions and the release of harmful substances, protecting ecosystems and public health. In the face of challenges like resource shortages and climate change, the resource utilization and recycling enhances societal resilience. According to the document [Opinions on Accelerating the Comprehensive Green Transformation of Economic and Social Development](#) issued by the Central Committee of the Communist Party of China and the State Council, by 2030, the annual utilization of major solid waste is expected to reach 4.5 billion tons, and the output rate of key resources will increase by 45%. The document outlines key goals for 2035, including the establishment of a green, low-carbon, circular economy, the widespread adoption of green methods of production and ways of life, and significant progress in synergistic pollution reduction and carbon emission mitigation. By then, major



resource utilization efficiency will reach internationally advanced levels, economic and social development will fully transition to a green and low-carbon trajectory, carbon emissions will peak and then decline steadily, and the goal of the development of a “Beautiful China” will be largely achieved. In summary, Lianhe Green believes that the resource utilization and recycling provides an essential pathway to achieving sustainable development, driving greener consumption and production patterns.



Appendix

About Lianhe Green

Lianhe Green Development Company Limited (“Lianhe Green”) was established in 2023 and is a subsidiary of Lianhe Equator Environmental Assessment Co., Ltd. (“Lianhe Equator”) and Lianhe Credit Management Co., Ltd. (“Lianhe Group”). Lianhe Equator is the largest green and sustainable bond/loan certification provider in mainland China. As an external reviewer recognised under the Hong Kong Monetary Authority’s Green and Sustainable Finance Grant Scheme, Lianhe Green is headquartered in Hong Kong, mainly responsible for green and sustainable finance certification business in international markets, ESG reporting and consulting, ESG training services, and assist in operating carbon market-related businesses within and outside China.

Lianhe Green aims to become an internationally recognized external verifier for sustainable finance through cooperation with Lianhe Equator’s professional and experienced team in this industry. With a goal of “shaping the origin of the earth and sky, and transmitting the civilization of mankind”, Lianhe Green is committed to helping Chinese and foreign enterprises demonstrate their determination in sustainable development, and providing investors with independent and objective third-party certification services. It is our mission to leave green and oceans to our future generations.

Scope of Analysis

Lianhe Green was engaged by the issuer to provide an assessment of The People’s Republic of China Sovereign Green Bond Framework. The assessment is to provide a professional second-party opinion of the compliance of The People’s Republic of China Sovereign Green Bond Framework and does not provide any financial indicators or judgement on the investment values of the issuer’s issuance.

Responsibilities

The Issuer

The issuer’s responsibilities are to accept the interviews from Lianhe Green’s analytical team, to provide relevant data and institutional documents for the analysis, and to ensure that the data and institutional documents provided are true and effective.

External Reviewer

Lianhe Green’s responsibilities are to collect data and documents provided by the Issuer. Lianhe Green will review all important data and documents, and issue conclusions. In addition, Lianhe Green will disclose information collected from the Issuer and relevant parties to demonstrate whether The People’s Republic of China Sovereign Green Bond Framework meets the relevant requirements of the above standards.

Analytical Process

The main aspects of this assessment include the following:

- » Performing a comprehensive review on the persons in charge of the relevant departments to understand the key matters related to the Issuer’s policies and processes;
- » Review The People’s Republic of China Sovereign Green Bond Framework developed by the Issuer;
- » Review relevant disclosure reports;
- » Obtain and review appropriate supporting documentation to support key findings.

Solicitation Status

The Second-Party Opinion was solicited and assigned or maintained by Lianhe Green at the request of the issuer.

Disclaimer



To avoid any ambiguity, please refer to the Chinese version of the report published on the Lianhe Green's Chinese website. The English version is for reference only.

A Lianhe Green SPO is an assessment of The People's Republic of China Sovereign Green Bond Framework of entities. It is not a credit rating.

Please note that individuals identified in an SPO report are not responsible for the opinions stated therein and are named for contact purposes only. Our report is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of financial instruments and securities.

Lianhe Green receives compensation from entities and other market participants for conducting this service. None of the aforementioned entities nor its related parties participated in the review process aside from providing information requested by Lianhe Green.

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