

Scope

We have provided a Second Party Opinion (SPO) on the sustainability credentials of CWA's green and blue finance framework dated December 2024, including the framework's alignment with the ICMA's GBP 2021 (including the June 2022 Appendix 1) and the LMA/APLMA/LSTA's GLP 2023. Under its framework, the company plans to issue use-of-proceeds green financing transactions (GFTs) to finance projects across two eligible green categories, as outlined in Appendix 3 of this report.

We have also provided a supplementary opinion on the framework's alignment with the International Finance Corporation's (IFC) Guidelines for Blue Finance 2022 (IFC Blue Finance Guidelines). The assessment is solely based on information provided or confirmed by the issuer. Our supplementary opinion does not constitute a verification, certification or audit; is distinct from the Alignment with Principles Score; and has no influence on the expressed Sustainability Quality Score.

Our assessment is based on the last updated version of the framework received on 3 December 2024, and our opinion reflects our point-in-time assessment¹ of the details contained in this version of the framework, as well as other public and non-public information provided by the company.

We produced this SPO based on our [Assessment Framework: Second Party Opinions on Sustainable Debt](#), published in November 2024.

Issuer profile

Established in 2003, China Water Affairs Group Limited (CWA) primarily provides city water supply, pipeline direct drinking water and environmental protection services in China. As of 31 March 2024, the group had 160 water plants with a total designed daily water supply capacity of 14.12 million m³ and 25 sewage treatment plants with a total designed daily sewage treatment capacity of 1.31 million m³. The total length of water pipelines under operation and maintenance was more than 149,000 kilometers (km), and the total length of drainage pipelines under operation was more than 1,150 km. CWA serves an estimated population of more than 30 million through its city water supply business and an estimated population of more than 8.30 million through its pipeline direct drinking water business.

The company has exposure to environmental risks associated with its sewage operations, including regulatory compliance issues and water quality concerns. Water shortages and climate change also pose risks. Nonetheless, the highly regulated nature of the water industry and management experience will mitigate such risks. The company's social risks arise mainly from the common demographic and social trends in China, such as focus on water quality and safety, as well as affordability and responsible production on its water supply and sewage treatment service.

Strengths

- » Eligible green and blue projects address important sustainability challenges in China, and are likely to deliver social co-benefits.
- » The company has a robust mechanism in place to assess potential environmental and social (E&S) risks associated with eligible projects throughout project execution.
- » The allocation period is short, at 24 months, in line with market practice.

Challenges

- » Some projects under the sustainable water and wastewater management category remain broadly defined, and lack technical details and thresholds.

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Alignment with principles

CWA's green and blue finance framework is aligned with the four core components of ICMA's GBP 2021 (including the June 2022 Appendix 1) and the LMA/APLMA/LSTA's GLP 2023. For a summary of alignment with principles scorecard, please see Appendix 1. Additionally, the framework is aligned with the IFC Blue Finance Guidelines, as detailed in Appendix 4 of this report.

- | | |
|---|---|
| <input checked="" type="checkbox"/> Green Bond Principles (GBP) | <input checked="" type="checkbox"/> Green Loan Principles (GLP) |
| <input type="checkbox"/> Social Bond Principles (SBP) | <input type="checkbox"/> Social Loan Principles (SLP) |
| <input type="checkbox"/> Sustainability-Linked Bond Principles (SLBP) | <input type="checkbox"/> Sustainability Linked Loan Principles (SLLP) |

Use of proceeds



Clarity of the eligible categories – ALIGNED

CWA has clearly communicated the nature of expenditures, which include only capital spending. The eligibility and exclusion criteria for the two eligible project categories are defined. However, some projects under the sustainable water and wastewater management category lack technical details or thresholds. CWA has confirmed that all of the financed projects will be located in China.

Clarity of the environmental or social objectives – BEST PRACTICES

CWA has outlined the environmental objectives associated with the two eligible categories. Both eligible categories are relevant to the respective environmental objectives to which they are aiming to contribute. The company has referenced the United Nations' (UN) Sustainable Development Goals (SDGs) in articulating the objectives of the eligible categories (see Appendix 2), and the objectives are coherent with these recognized international standards.

Clarity of expected benefits – BEST PRACTICES

CWA has identified clear expected environmental benefits for the two eligible categories, and these are relevant based on the projects likely to be financed under each category. The benefits are measurable and will be quantified in the company's annual post-issuance report. The company has confirmed that it will disclose the estimated share of refinancing to investors verbally before each issuance, with the final share to be disclosed in its post-issuance report. The lookback period for refinancing will be a maximum of 36 months from the time of issuance.

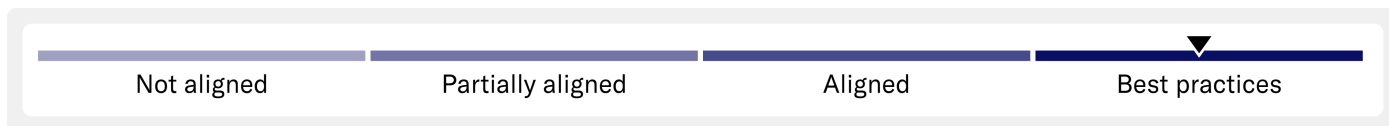
Process for project evaluation and selection



Transparency and clarity of the process for defining and monitoring eligible projects – BEST PRACTICES

CWA has established a clear process for evaluation and selection of eligible projects, with the decision-making criteria disclosed in its public framework. The company has set up an environmental and social management system working group (EWG), which comprises the general manager and representatives from various departments. The EWG will meet at least every 12 months to select and monitor eligible projects in line with the eligibility criteria defined in the framework. CWA is committed to reallocating net proceeds to replacement eligible projects if financed projects are no longer compliant with the eligibility criteria. The company has established an E&S risk mitigation process, including monitoring of controversies. The process is summarized in the framework and articulated in more detail in the company's publicly available [environmental, social and governance \(ESG\) report](#).

Management of proceeds

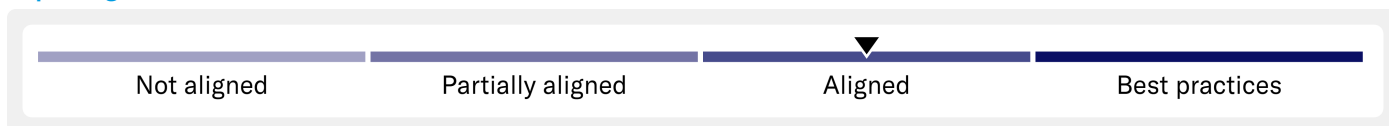


Allocation and tracking of proceeds – BEST PRACTICES

The net proceeds from each GFT issued under the framework will be deposited in general funding accounts and will be earmarked for allocation to eligible projects. CWA will maintain a register to keep track of the use of proceeds for each GFT. CWA will adjust the balance of tracked proceeds to match allocation to eligible projects at least annually. The allocation period will be no greater than 24 months.

Unallocated proceeds will be held in accordance with CWA's liquidity guidelines for short-term time deposits or investments, and will not be invested in carbon-intensive activities or any projects that are in conflict with the eligibility criteria defined in the framework.

Reporting



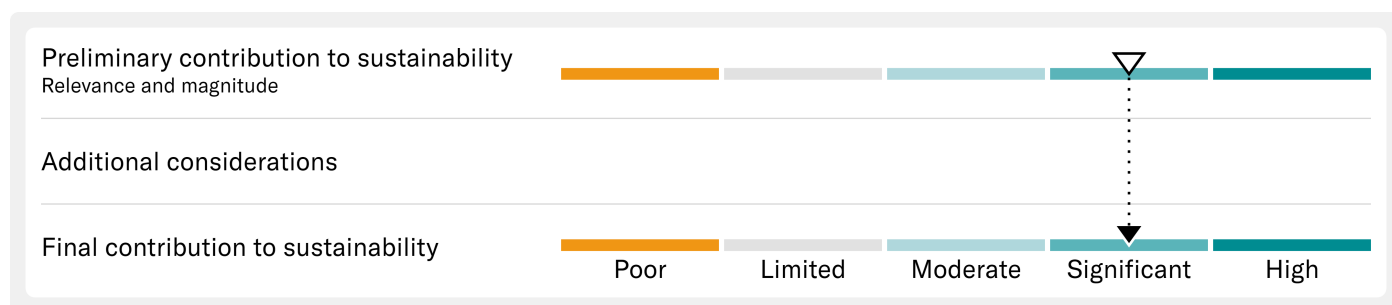
Reporting transparency – ALIGNED

CWA will report annually on the use of proceeds of the GFTs issued under its framework, and this report will be accessible to the public via CWA's official website, within its ESG report, or as part of its annual report. Allocation and impact reporting will occur annually until full allocation of the proceeds and in case of material developments. The company will include examples of eligible green projects, the aggregate amount allocated to eligible green projects, the amount of unallocated proceeds and the share of refinancing.

CWA has also identified relevant environmental reporting indicators for each eligible category and has clearly disclosed these indicators in its framework. The company has communicated through internal documentation that relevant methodologies and assumptions used to report on environmental impacts will also be disclosed. CWA will employ an independent external party to verify the tracking and allocation of funds, as well as the reported environmental benefits associated with the financed projects. This review will occur annually until the full allocation of funds.

Contribution to sustainability

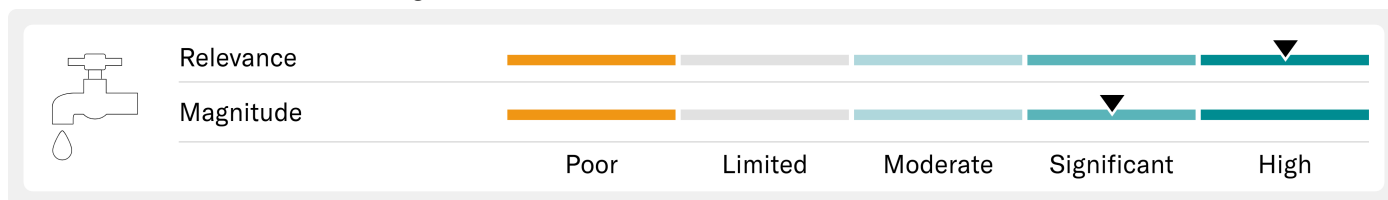
The framework demonstrates a significant overall contribution to sustainability. This reflects a preliminary contribution to sustainability score of significant, based on the relevance and magnitude of the eligible project categories, and we have not made an adjustment to the preliminary score based on additional contribution to sustainability considerations.



Preliminary contribution to sustainability

The preliminary contribution to sustainability is significant, based on the relevance and magnitude of the eligible project categories. We have assigned a significantly higher weighting to the sustainable water and wastewater management category in our assessment of the overall framework's contribution to sustainability, in line with the company's expectation of allocation of proceeds between the two categories. A detailed assessment by eligible category has been provided below.

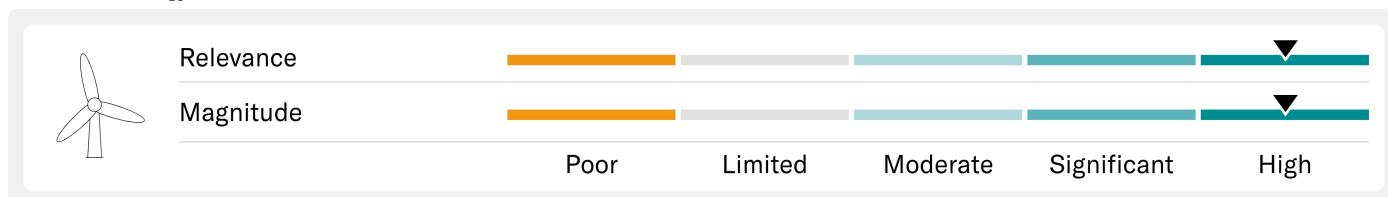
Sustainable water and wastewater management



Projects under this category are highly relevant for addressing water-related challenges in China, including water scarcity and pollution. The country's water resources are under increasing strain from rapid economic growth, urbanization and climate change. The significance of this category is highlighted by its aim to address the inefficiencies in water supply systems. Notably, leakages in these systems not only lead to considerable loss of water resources but also indirectly result in energy wastage. Therefore, investments in enhancing the efficiency of water systems are a critical environmental imperative for both the country and the sector at large.

This category will make a significant contribution to the stipulated environmental objectives, as the projects financed are expected to enhance system efficiency and deliver high-quality outputs. CWA has confirmed that all water and sewage infrastructure projects operate under concession arrangements awarded by local governments and are subject to regulation by local authorities. Moreover, effluents from sewage treatment plants are required to meet the Grade 1-A standard as specified in the [discharge standard of pollutants for municipal wastewater treatment plants](#). Water supply systems are required to achieve an average energy consumption (including abstraction, treatment and distribution) of 0.5 kWh per cubic meter billed/unbilled authorized water supply or less, aligning with the best available technologies in accordance with the EU Taxonomy. New or existing water infrastructure financed under this category is also expected to demonstrate significant water conservation outcomes by achieving at least 20% water savings per unit of service compared with a documented baseline. Regarding wastewater treatment facilities, CWA emphasizes the importance of incorporating energy efficiency across all stages of a sewage treatment plant's life cycle, from the design phase through to operation. However, energy efficiency has not been explicitly listed as an eligibility criterion.

Renewable energy



Projects financed under this category are highly relevant for tackling China's heavy reliance on fossil fuels for electricity generation. As the leading emitter of greenhouse gases globally, China reported that coal-fired power plants accounted for around 60% of its total electricity production in 2023². Renewable energy initiatives, especially those designed for self-consumption, are highly relevant for the sector and align closely with CWA's strategic decarbonization objectives, in light of the water sector's considerable demand for energy.

Projects in this category will have a high contribution to climate change mitigation because they will adopt the best available technologies with limited externalities. CWA confirms that only solar photovoltaic, wind and battery energy storage assets used for renewable energy will be financed under this category, all of which are eligible by project nature in line with EU Taxonomy.

Additional contribution to sustainability considerations

We have not made an adjustment to the preliminary contribution to sustainability score based on additional considerations.

CWA has a robust due diligence process to identify and manage E&S risks associated with the financed projects. CWA has implemented an Environmental and Social Management System (ESMS), establishing standards for its investment and construction projects to adhere to. The ESMS mandates the identification and analysis of potential E&S risks, the development of mitigation strategies and transparent information disclosure throughout project execution. To enhance the governance of E&S aspects within its projects, CWA inaugurated a construction management center in 2019 and established a group-level ESG task force in 2022.

The framework is coherent with the sustainability strategy of the company. The company is committed to reducing its environmental impact through measures such as reducing energy use, enhancing the efficiency of its water supply infrastructure to decrease leakage and minimizing chemical consumption. Furthermore, the framework's eligible categories resonate with CWA's primary business focus on delivering comprehensive water services.

Appendix 1 - Alignment with principles scorecard for CWA's green and blue finance framework

Factor	Sub-factor	Component	Component score	Sub-factor score	Factor score		
Use of proceeds	Clarity of the eligible categories	Nature of expenditure	A	Aligned	Aligned		
		Definition of content, eligibility and exclusion criteria for nearly all categories	A				
		Location	A				
		BP: Definition of content, eligibility and exclusion criteria for all categories	No				
	Clarity of the objectives	Relevance of objectives to project categories for nearly all categories	A	Best practices			
		Coherence of project category objectives with standards for nearly all categories	A				
		BP: Objectives are defined, relevant and coherent for all categories	Yes				
	Clarity of expected benefits	Identification and relevance of expected benefits for nearly all categories	A	Best practices			
		Measurability of expected benefits for nearly all categories	A				
		BP: Relevant benefits are identified for all categories	Yes				
		BP: Benefits are measurable for all categories	Yes				
		BP: Disclosure of refinancing prior to issuance and in post-allocation reporting	Yes				
		BP: Commitment to communicate refinancing look-back period prior to issuance	Yes				
	Process for project evaluation and selection	Transparency and clarity of the process for defining and monitoring eligible projects	Clarity of the process	A		Best practices	Best practices
			Disclosure of the process	A			
Transparency of the environmental and social risk mitigation process			A				
BP: Monitoring of continued project compliance			Yes				
Management of proceeds	Allocation and tracking of proceeds	Tracking of proceeds	A	Best practices	Best practices		
		Periodic adjustment of proceeds to match allocations	A				
		Disclosure of the intended types of temporary placements of unallocated proceeds	A				
		BP: Disclosure of the proceeds management process	Yes				
		BP: Allocation period is 24 months or less	Yes				
Reporting	Reporting transparency	Reporting frequency	A	Aligned	Aligned		
		Reporting duration	A				
		Report disclosure	A				
		Reporting exhaustivity	A				
		BP: Allocation reporting at least until full allocation of proceeds, and impact reporting until full bond maturity or loan payback	No				
		BP: Clarity and relevance of the indicators on the sustainability benefits	Yes				
		BP: Disclosure of reporting methodology and calculation assumptions	Yes				
		BP: Independent external auditor, or other third party, to verify the tracking and allocation of funds	Yes				
		BP: Independent impact assessment on environmental and social benefits	Yes				
Overall alignment with principles score:					Aligned		

Legend: BP - Best practice, A - Aligned, PA - Partially aligned, NA - Not aligned

Appendix 2 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The two eligible categories included in CWA's framework are likely to contribute to three of the UN SDGs, namely:

UN SDG 17 Goals		SDG Targets
GOAL 6: Clean Water and Sanitation	<i>Sustainable Water and Wastewater Management</i>	6.1: Achieve universal and equitable access to safe and affordable drinking water for all <hr/> 6.3: Improve water quality by reducing pollution, eliminating dumping and minimizing hazardous chemicals and materials
GOAL 7: Affordable and Clean Energy	<i>Renewable Energy</i>	7.2: Increase substantially the share of renewable energy in the global energy mix
GOAL 13: Climate Action	<i>Renewable Energy</i>	13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

The UN SDGs mapping in this SPO considers the eligible project categories and associated sustainability objectives/benefits documented in the issuer's financing framework, as well as resources and guidelines from public institutions, such as the ICMA SDG Mapping Guidance and the UN SDG targets and indicators.

Appendix 3 - Summary of eligible categories in CWA's green and blue finance framework

Eligible categories	Description	Sustainability objectives	Impact Reporting Metrics
Sustainable Water and Wastewater Management	Expenditures related to construction, upgrades, renovations or improvements of water supply and wastewater related facilities, infrastructure or systems, including but not limited to: <ul style="list-style-type: none"> - Water supply plants, pumping stations and distribution network to increase efficiency, accessibility of water delivery system, improve water quality and reduce water leakage - Water monitoring systems to detect water leakage - Drainage pipeline network and sewage treatment plants to reduce pollution 	Pollution prevention and control; Climate change mitigation; Natural resource conservation	<ul style="list-style-type: none"> - Absolute (gross) amount of water supplied before and after the project in m³ p.a. - Absolute (gross) amount of reduction in water loss before and after the project in m³ p.a. or % - Absolute (gross) amount of wastewater treated in m³ p.a. - Number of people and cities served
Renewable Energy	New or existing investments in or expenditures on renewable energy production units. Renewable energy and energy storage projects can include solar and wind projects	Climate change mitigation	<ul style="list-style-type: none"> - Annual GHG emissions reduced/avoided (t CO₂ eq p.a.) - Annual renewable energy generation in MWh/GWh (electricity) and GJ/TJ (other energy) - Capacity of renewable energy plant(s) constructed or rehabilitated in MW

Appendix 4 - Alignment with the IFC Blue Finance Guidelines

Aligned

We have provided a supplementary opinion on the framework's alignment with the IFC Blue Finance Guidelines, as defined in the Scope section of this report. This Appendix covers the requirements in the IFC Blue Finance Guidelines that extend beyond the requirements in the GBP (the Requirements). Commensurate requirements that exist in both have been assessed in the Alignment with Principles section of this report.

As detailed below, we consider the framework to be aligned with the IFC Blue Finance Guidelines.

Use of proceeds

- » In line with the Requirements, the issuer has declared that only green bonds that are exclusively earmarked for the protection of critical clean water resources are to be labeled by the issuer as "blue bonds."
- » The issuer has included one blue eligible category in its framework, namely: sustainable water and wastewater management. The issuer has established clear eligibility criteria for the blue eligible category in its framework. Objectives are clear and relevant, likely contributing to the progress on SDG 6.

Exclusion criteria

- » In line with the Requirements, the proceeds will not be allocated to projects that meet the illustrative exclusionary criteria referenced in the IFC Blue Finance Guidelines.

Identification and management of material ESG risks

- » In line with the Requirements, the issuer has adequate measures in place to identify, manage and monitor the material E&S risks associated with the selected projects.
- » As mentioned in the E&S risk management analysis, the issuer's ESMS is a formal risk management process to identify, assess and mitigate E&S impacts from eligible projects, including projects in the blue eligible category. The issuer confirms that its ESMS follows IFC's E&S risk management standards.

Endnotes

[1](#) Point-in-time assessment is applicable only on the date of assignment or update.

[2](#) [China Power: 2023-2024 National Electricity Supply and Demand Analysis and Forecast Report \(in Chinese\)](#), 31 January 2024.

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