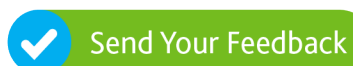


ASSESSMENT

29 March 2024



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Japan Finance Organization for Municipalities

Second Party Opinion – Green Bond Framework Assigned SQS2 Sustainability Quality Score

Summary

We have assigned an SQS2 sustainability quality score (very good) to Japan Finance Organization for Municipalities' (JFM) green bond framework dated March 2024. JFM has established its use-of-proceeds framework with the aim of financing two eligible green project categories. The framework is aligned with the four core components of the International Capital Market Association's (ICMA) Green Bond Principles 2021 (including June 2022 Appendix 1) and demonstrates a significant contribution to sustainability. In addition, the framework is aligned with the Japan Ministry of Environment's Green Bond Guidelines 2022.

Sustainability quality score

SQS2

■ SQS5 Weak
 ■ SQS4 Intermediate
 ■ SQS3 Good
 ▼ SQS2 Very good
 ■ SQS1 Excellent

Alignment with principles USE OF PROCEEDS

Overall alignment

■ Not aligned
 ■ Partially aligned
 ▼ Aligned
 ■ Best practices

FACTORS

ALIGNMENT

Factor	Alignment
Use of proceeds	Aligned
Evaluation and selection	Aligned
Management of proceeds	Aligned
Reporting	Aligned

Contribution to sustainability

Overall contribution

■ Poor
 ■ Limited
 ■ Moderate
 ▼ Significant
 ■ High

Expected impact Relevance and magnitude

ADJUSTMENTS

ESG risk management	No adjustment
Coherence	No adjustment

POINT-IN-TIME-ASSESSMENT

Scope

We have provided a Second Party Opinion (SPO) on the sustainability credentials of JFM's green bond framework, including the framework's alignment with the ICMA's Green Bond Principles (GBP) 2021 (including June 2022, Appendix 1). Under its framework, the organization plans to issue use-of-proceeds green bonds to finance two eligible green project categories as outlined in Appendix 2 of this report. We have also provided a supplementary opinion on the framework's alignment with the Japan Ministry of Environment's Green Bond Guidelines 2022. We performed a full review in the context of the standard, covering all four core components. 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 latest version of JFM's framework dated March 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 agency.

We produced this SPO based on our [Framework to Provide Second Party Opinions on Sustainable Debt](#), published in October 2022.

Issuer profile

Japan Finance Organization for Municipalities (JFM) is a financial institution dedicated to providing long-term, low-cost funding to Japanese regional and local governments (RLGs). Established in 2008 based on the Japan Finance Organization for Municipalities Act², it is jointly owned by Japanese RLGs.

JFM has increased its lending to cover the RLGs' tax-supported activities since 2009, in addition to increasing its traditional lending to the RLGs' public enterprise funds that manage non-tax-supported, fee-based operations, such as water, sewerage and mass transportation.

As of the end of March 2023, sewerage-related lending accounted for the largest share at 28.5%³ of the total outstanding loans extended, followed by water supply which accounted for 12.8% (excluding temporary financial countermeasures funding).

Strengths

- » Financing of wastewater management projects, which is likely to have a high contribution to sustainability
- » Comprehensive and transparent project evaluation and selection process, including robust environmental and social risk mitigation practices
- » Clearly defined and relevant environmental objectives associated with the eligible category
- » Granular reporting, which includes a list of financed projects and detailed impact metrics
- » Short allocation period of no more than 12 months

Challenges

- » Reporting will only be conducted until full allocation of proceeds
- » There is no commitment to undertake verification or an independent review of the allocation, or impact reporting

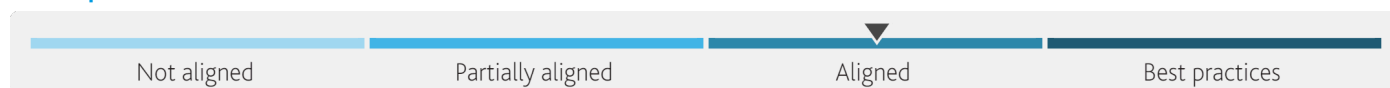
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Alignment with principles

JFM's green bond framework is aligned with the four core components of the ICMA's Green Bond Principles 2021 (including June 2022 Appendix 1). Additionally, the framework is aligned with the Japan Ministry of Environment's Green Bond Guidelines 2022.

- Green Bond Principles (GBP)
- Social Bond Principles (SBP)
- Green Loan Principles (GLP)
- Social Loan Principles (SLP)
- Sustainability-Linked Bond Principles (SLBP)
- Sustainability Linked Loan Principles (SLLP)

Use of proceeds



Clarity of the eligible categories – BEST PRACTICES

JFM has clearly and comprehensively communicated the nature of the spending, the eligibility and exclusion criteria for the financed projects, and the anticipated location of the projects. The organization plans to extend loans to municipalities to finance the sustainable water and wastewater management projects (both water supply and wastewater treatment) across Japan. The assets are expected to comply with relevant Japanese laws, which set the detailed standards and requirements of sewerage and water supply systems in Japan.

Clarity of the environmental or social objectives – BEST PRACTICES

JFM has clearly outlined the environmental objectives associated with the eligible categories. These objectives include conservation of water resources, and reduction of greenhouse gas emissions. The organization also referenced the UN Sustainable Development Goals (SDGs) as shown in Appendix 1 in articulating the objectives of the eligible category, and the objectives are coherent with the SDGs.

Clarity of expected benefits – ALIGNED

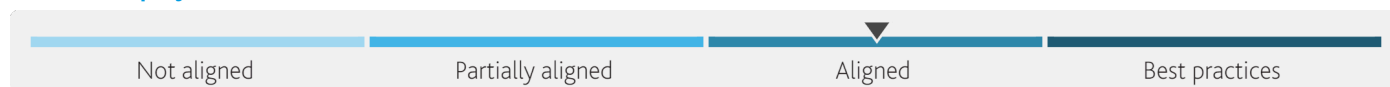
JFM has identified clear, relevant and measurable expected environmental benefits, which include pollution prevention and control, water resource conservation, energy use of sewerage sludge, sewerage sludge recycle, and effective utilization and conservation of water resources. The organization plans to report on these quantitative benefits in its ongoing reporting.

The organization does not disclose the expected share of refinancing in its framework; however, it states that the look-back period is 36 months and the organization commits to reporting on the share of refinancing in its impact report.

Best practices identified - use of proceeds

- » Eligibility criteria are clearly defined for all project categories
- » Objectives set are defined, relevant and coherent for all project categories
- » Relevant benefits are identified for all project categories
- » Benefits are measurable and quantified for most projects, either ex-ante with clear baselines or with a commitment to do so in future reporting
- » Commitment to transparently communicate the associated lookback period(s) where feasible

Process for project evaluation and selection



Transparency and quality of process for defining eligible projects – ALIGNED

JFM has established a clear process for determining the eligibility of projects and disclosed the details in its public framework. In addition to following the standard loan screening procedure, which includes the loan department confirming that the borrower has fulfilled the requirements of Japanese laws related to the water supply and sewerage projects, the Sustainability Working Group will be responsible for evaluating and selecting the projects to be financed by any specific green bond. In evaluating and selecting the projects, the working group will conduct surveys to understand the impact. The roles and responsibilities for project evaluation and selection are clearly disclosed and include relevant expertise.

The monitoring of continued compliance will be done through an on-site inspection. The process for evaluation, selection and monitoring is documented and internally traceable.

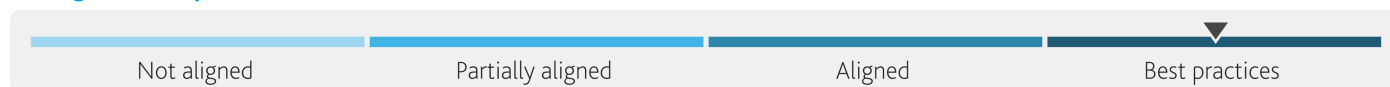
Environmental and social risk mitigation process – ALIGNED

The inclusion of the environmental and social risk mitigating process is required by Japanese sewerage-related laws and water supply service act, and JFM will only extend loans to projects that fulfill this requirement and receive consent or approval from the relevant authorities. The breach of applicable laws, including those related to water quality standards, could lead to legal actions. Furthermore, JFM conducts surveys to ensure that the loans are exclusively used for the stated projects, and can request a full repayment if the results are unsatisfactory.

Best practices identified - process for project evaluation and selection

- » The roles and responsibilities for project evaluation and selection are clearly defined and include relevant expertise
- » The process for project evaluation and selection is traceable
- » Material environmental and social risks for most project categories are identified
- » Presence of corrective measures to address environmental and social risks across projects

Management of proceeds



Allocation and tracking of proceeds – BEST PRACTICES

JFM has defined a clear allocation and tracking process, which is disclosed in the framework. Net proceeds from any bonds issued under the framework will be placed in JFM's general treasury account and will be separately tracked under a formalized internal process to ensure that the proceeds are used for eligible projects only. The working group will ensure that the balance of the net proceeds will match allocations to eligible projects by extending loans that have longer maturities than the green bonds. In case the loans are redeemed, the organization commits to replacing such projects.

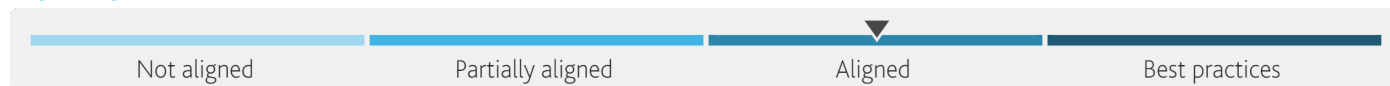
Management of unallocated proceeds – BEST PRACTICES

Temporarily unallocated proceeds will be kept as cash and cash equivalents. Based on the law⁴ that regulates JFM's investment policy and JFM's internal rule, the unallocated proceeds will not be invested in carbon-intensive or controversial activities.

Best practices identified - management of proceeds

- » Broad disclosure of a clearly articulated and comprehensive management of proceeds policy to external stakeholders; bondholders or lenders at a minimum
- » Short allocation period, for example typically less than 24 months
- » Disclosure on temporary placement and presence of exclusion criteria toward environmentally or socially harmful activities
- » Commitment to reallocate proceeds to projects that are compliant with the framework

Reporting



Transparency of reporting – ALIGNED

JFM will report annually on the allocation and impact of the bonds issued under its framework, and this reporting will be made publicly available on the organization's website. Reporting will occur until the full allocation of the funds and in the event of significant developments.

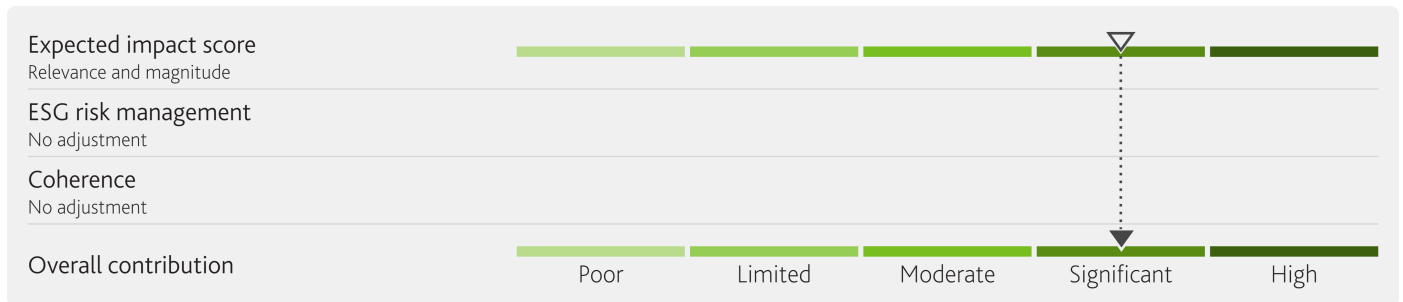
The reporting will be exhaustive, covering the amount of net proceeds, breakdown of projects, environmental reporting indicators that are clear and relevant such as water management capacity, and case studies. The methodologies and assumptions used to report on the environmental impacts will follow the relevant standards and guidelines stipulated by the Japanese laws.

Best practices identified - reporting

- » Reporting covers material developments and issues related to the projects or assets
- » Reporting on allocation of proceeds and benefits done at least at eligible category level
- » Clear and relevant indicators to report on the expected environmental/social impact of all the projects, where feasible, or eligible categories
- » Disclosure of reporting methodology and calculation assumptions to bondholders or lenders at a minimum

Contribution to sustainability

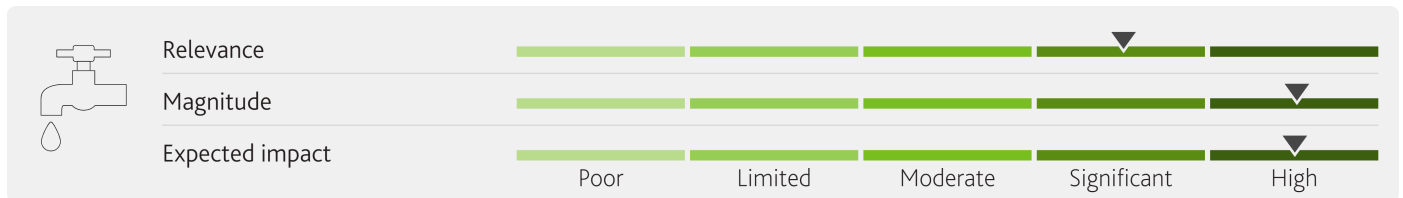
The framework demonstrates a significant expected contribution to sustainability.



Expected impact

The expected impact of the eligible projects on environmental objectives is significant. A detailed assessment is provided below. Based on the information provided by the issuer, we assigned more weight to the sustainable water and wastewater management (sewerage business).

Sustainable water and wastewater management (sewerage business)



The project exhibits significant relevance overall. The continued investments in sewerage-related assets are very important to Japan's efforts to manage wastewater, especially because the country is prone to natural disasters. Typhoons and extreme rains could overwhelm the sewerage systems and earthquakes could damage them, and therefore, the facilities need to be maintained well to minimize the impact of such natural disasters. In addition, the facilities need to be renewed or upgraded, or both, because these were mostly constructed in 1960-80. Furthermore, sewage treatment is an energy-intensive process, accounting for 35%⁵ of total greenhouse gas (GHG) emissions by the Metropolitan Government of Tokyo in 2020, for example. Therefore, use of sewage sludge as an energy source and recycling of sewage sludge are crucial to reducing GHG emissions. On the other hand, the sewerage system in Japan is already well-established, with a penetration of 92.9%⁶ as of the end of March 2023.

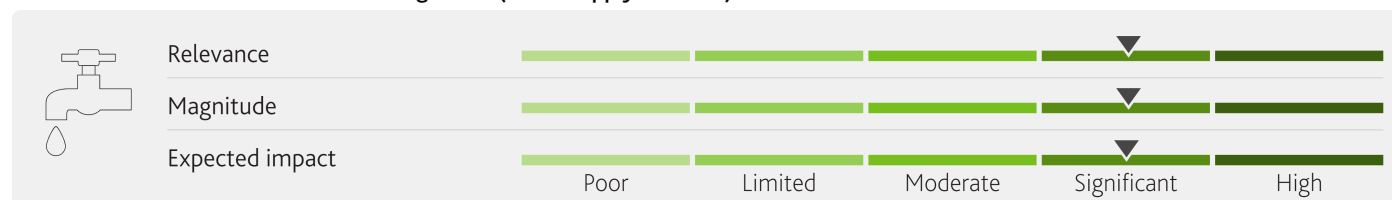
The category is likely to have a high magnitude and a highly positive impact in terms of preventing water pollution. With very strict standards on water quality in Japan following the several water quality issues during the 1950s-70s, the funded projects that follow the standards are likely to effectively minimize the water pollution. Furthermore, the use of sludge as an energy source would help reduce GHG emissions. It will play an important role in achieving net zero emissions under the Japanese government's plan to decarbonize the

sewerage facilities⁷, and municipalities are likely to establish and follow plans to reduce GHG emissions based on the Act on Promotion of Global Warming Countermeasures⁸.

Overall, this category is highly likely to advance the environmental objectives of pollution prevention and control, water resource conservation, use of sewage sludge as an energy source and recycling of sewage sludge.

In addition, the category is likely to help Japan adapt to the impact of the climate change, though this is not explicitly included in the framework. The upgrade and maintenance of the sewerage facilities are highly important because the expected change in the precipitation pattern, including the typhoons, could undermine the wastewater treatment capacity.

Sustainable water and wastewater management (water supply business)



The relevance is significant because the investments in municipal water supply system is critical to minimize the water loss. The system is expected to require a significant investment to maintain the current level of efficiency in upcoming years because the majority of water supply system including water pipes are aging as they were developed during 1950s-1970s when the Japanese economy was booming. For example, in 2020, it is estimated that more than 20% of water pipes in Japan exceeds the statutory useful life of 40 years. While 1.03% of water pipes in Japan needs to be replaced every year assuming the useful life of 60 years, only 0.65% of total pipes in Japan are replaced in 2020. At the same time, the significant score also reflects the fact that the current water supply system in Japan is already one of the best in the world with a very high penetration rate, high water quality and low non-revenue water ratio.

The magnitude is significant because the projects are expected to aid municipalities maintain the current level of highly efficient water supply system in Japan. We expect the project to effectively minimize the amount of possible non-revenue water by. This reflects our view that the majority of the proceeds will likely be allocated to extend the life of water supply systems, mainly water pipes, or to replace existing water supply system, given the high investment needs in Japan. At the same time, the score also reflects the lack of clear additional thresholds related to water loss or efficiency gains, leading to limited visibility to determine its contribution to corresponding environmental objectives.

ESG risk management

We have not applied a negative adjustment for ESG risk management to the expected impact score. The water supply and sewerage business are regulated by Japan's related laws, and JFM will review necessary consent/approvals to prevent and minimize the relevant negative externalities.

Coherence

We have not applied a negative adjustment for coherence to the expected impact score. The project to be financed under JFM's framework aligns with its broader sustainability priorities because water supply and sewerage-related lending was the largest loan category as of the end of March 2023 (excluding temporary financial countermeasures funding).

Appendix 1 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The eligible categories included in JFM's framework is likely to contribute to seven of the United Nations' Sustainable Development Goals (SDGs), namely:

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 3: Good Health and Well-being		3.9: Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution
GOAL 6: Clean Water and Sanitation		6.3: Improve water quality by reducing pollution, eliminating dumping and minimizing hazardous chemicals and materials
GOAL 11: Sustainable Cities and Communities		11.5: Reduce deaths, people affected and economic losses caused by disasters, particularly for people in vulnerable situations
GOAL 12: Responsible Consumption and Production	Sustainable Water and Wastewater Management (Sewerage business and water supply business)	12.2: Achieve the sustainable management and efficient use of natural resources
		12.5: Substantially reduce waste generation through prevention, reduction, recycling and reuse
GOAL 13: Climate Action		13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
GOAL 14: Life Below Water		14.1: Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities
GOAL 15: Life on Land		15.1: Ensure the conservation and sustainable use of terrestrial and inland freshwater ecosystems and their services

The United Nations' Sustainable Development Goals (SDGs) mapping in this SPO consider the eligible project categories (or key performance indicators) 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 2 - Summary of eligible categories in JFM's framework

Eligible Category	Description	Sustainable Objectives	Impact Reporting Metrics
Sustainable water and wastewater management (Sewerage business)	Development, construction, maintenance, updates, operation of sewerage related assets, which comply with sewerage drainage standards set by Japanese law	Pollution Prevention and Control Water Resource Conservation Energy use of sewerage sludge, sewerage sludge recycle	<ul style="list-style-type: none"> - Project description - Total project cost - Population of the covered area - Water management capacity and water quality impact (where relevant) - Newly constructed pipe length and/or total pipe length (where relevant) - Other positive environmental impacts
Sustainable water and wastewater management (Water supply business)	Development, construction, maintenance, renewal, and operation of water supply-related facilities that meet the standards prescribed by Japanese law	Effective utilization and conservation of water resources through reduction of water leakage in water distribution.	<ul style="list-style-type: none"> - Project descriptions - Total project costs - Population of the covered area - Water supply/purification/intake volumes (m3) - Water Efficiency Rate in certain water treatment area - Newly constructed pipe length and/or total pipe length (where relevant) - Other positive environmental impacts

Appendix 3 - Alignment with the Japan Ministry of Environment's Green Bond Guidelines 2022

Aligned

We have provided a supplementary opinion on the framework's alignment with the Japan Ministry of Environment's Green Bond Guidelines 2022, as defined in the Scope section. This appendix covers requirements in the Japan Ministry of Environment's Green Bond Guidelines 2022 that extend beyond the requirements in the Green Bond Principles 2021 (including the June 2022 Appendix 1). Commensurate requirements that exist in both have been assessed in the Alignment with Principles section. As detailed in this Appendix, we consider the framework to be aligned with the Japan Ministry of Environment's Green Bond Guidelines 2022.

Use of proceeds: Aligned

- » While the guideline requires the issuer to disclose the asset's age, remaining useful life, and the amount to be refinanced, this is only applicable when green bonds are issued multiple times to refinance an asset that requires long-term maintenance, which is not expected in this framework.

Reporting: Aligned

- » While the guideline requires the issuers to disclose information on the amount or share of unallocated proceeds, the expected timing of allocation, and the management of unallocated proceeds, this is not applicable to this framework because the issuer intends to allocate the proceeds fully by the end of each fiscal year.

Endnotes

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

[2](#) [The Japan Finance Organization for Municipalities Act](#)

[3](#) [Annual Report 2023](#).

[4](#) Article 45 of [Japan Finance Organization for Municipalities Law](#).

[5](#) [Committee on reducing the GHG emissions from sewerage system by half](#).

[6](#) [The sewerage system penetration as of the end of March 2023](#), accessed on 12 December 2023

[7](#) [Report on contributing to the net-zero society](#), March 2022.

[8](#) [Act on Promotion of Global Warming Countermeasures](#).

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