Japan Finance Organization for Municipalities (JFM)
Green Bond Framework

March, 2024

Table of Contents

1. Introduction

Japan Finance Organization for Municipalities (JFM) is a joint funding organization for all local governments, wholly owned by Japanese local governments under the special law, with a mission of "Supporting Local Governments through Finance to Create a Future for Regions". Under the management philosophy of "Being Responsive to Local Government Needs," "Strengthening Confidence from the Capital Markets," and "Ensuring Responsible Corporate Governance as a Joint Organization of Local Governments," JFM provides Japanese local governments[1] with long-term funding at low interest rates and contributes to the sound financial operation of local governments and improve the welfare of citizens.

2. Approach to Sustainability

2.1 Local Government in Japan and JFM's contribution

In Japan, the national government focuses on affairs relating to Japan as a nation in the international community and affairs relating to various activities of the people that should be handled in a uniform, nationwide manner. Meanwhile, local governments, based on the fundamental principle of promoting the welfare of citizens, autonomously and comprehensively undertake regional administration, and provide administrative services broadly which are closely related to the daily lives of citizens, such as social welfare, education, fire defense, and the development of infrastructure, including roads and waterways in accordance with the standards established by the national government. Local expenditure accounts for approximately 60% of the total fiscal expenditure in Japan, highlighting the significant role that local governments play in the daily lives of citizens.

The national government formulates the Local Government Finance Programme (LGFP) each fiscal year based on assessments of local government finance scale and forecasts of overall revenues and expenditures. In response to annual national budget plans, the national government balances the total amount of local government revenues and expenditures in the LGFP. Under this Programme, revenue sources for all local governments, including local allocation tax as well as local government borrowings, are secured so that local governments can ensure uniform public service standards. Local government borrowings are bonds and loans to be issued by local governments for securing necessary external funds in accordance with the Local Government Borrowing Programme (LGBP)[2], which is an annual plan that the national government prepares for local government funding.

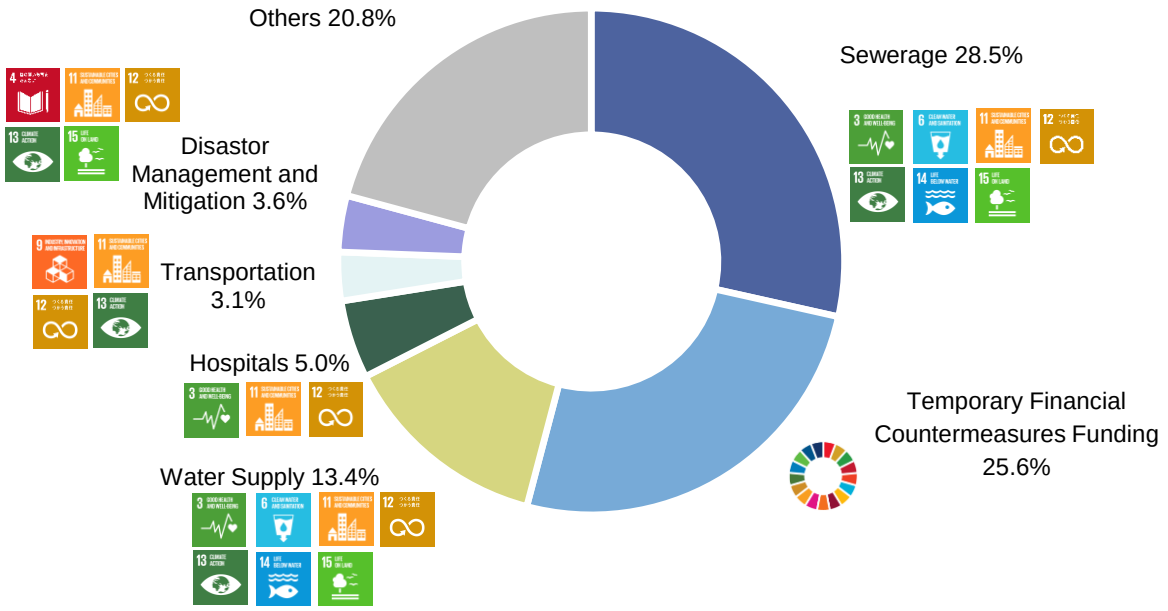
JFM provides funds exclusively to local governments based on LGBP, with the aim of efficiently and effectively complementing local government fund-raising from the capital market. JFM funds are classified as public funds in LGBP, and provided to local governments which obtain consents from approval of the Minister for Internal Affairs and Communications or the respective prefectural governors.

[1] Local governments include prefectures, cities and special wards of Tokyo, government- designated cities, towns and villages, and some local government associations

[2] It specifies the amount and sources of local government fundraising each fiscal year in parallel with the national budget, and each local government raises funds in accordance with the LGBP.

As of 31 March 2023, JFM's total outstanding loans stood at JPY 23.3tn (USD 174.6bn)[3], of which over JPY 6.6tn (USD 49.8bn)[3] was for sewerage and JPY 3.0tn (USD 22.2bn)[3] was for water supply, i.e., projects that are characterized as sustainable water and waste management.

Figure 1: SDGs Mapping – Fund Usage by JFM[4]



2.2 JFM's Initiative for Sustainability

Sustainability, which aims to achieve a sustainable society, is attracting growing global interest. In the international community, each country is implementing initiatives based on the goal set by the Paris Agreement, to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. The Japanese Government is, in line with the Paris Agreement, working on creating a sustainable and recycling-oriented society, setting a goal to achieve carbon neutrality by 2050 through reducing greenhouse gas emissions by 46% in fiscal year 2030 from its fiscal year 2013 levels and continuing strenuous efforts in its challenge to meet the lofty goal of cutting emissions by 50%[5]. In addition to climate change measures, various initiatives such as the Sustainable Development Goals (SDGs) are being pursued to achieve a sustainable, diverse, and inclusive society.

In light of these circumstances, JFM has established a system to promote sustainability initiatives, recognizing the importance of contributing to the realization of sustainability as a joint funding organization for local governments. The "Sustainability Committee," chaired by the president and CEO and composed of all senior executive directors, deliberates, and promotes sustainability initiatives throughout the organization. Under the " Sustainability Policy of Japan Finance Organization for Municipalities", which sets forth the basic policy, the organization is committed to contributing to the sustainable development of local communities, while incorporating and practicing considerations of ESG factors such as "Consideration for the Environment," "Fulfilling

[3] USD 1 = JPY 133.48 as of 31 March 2023
[4] As of 31 March 2023
[5] Agency for Natural Resources and Energy

Social Responsibility," and "Robust Governance" throughout its business activities. It also aims to actively engage in dialogue with stakeholders such as local municipalities and investors and to promote information disclosure.

In addition, local municipalities recognize the growing importance of working towards sustainable community development and regional revitalization in the face of a declining population. They are addressing issues such as measures against the declining birthrate and aging population, revitalization of regions, renovation of deteriorating public infrastructure, and measures against large-scale and intensifying natural disasters. As a joint funding organization for local government borrowings, JFM will support local governments' projects in line with the SDGs, such as sewerage and water supply projects, through the issuance of green bonds and loans using the funds raised from green bonds and others.

3. Background of Green Bond Issuance

3.1 Eligible Projects of JFM's Green Bond

Local governments, which are responsible for the administration of matters closest to the lives of residents, provide a wide range of administrative services, including school education, fire protection, and the maintenance of roads and rivers. The sewerage and water supply projects carried out by local governments play a crucial role in contributing to sustainable economic development and public health. JFM provides loans for sewerage and water supply projects undertaken by numerous local governments[6]. By raising funds through green bonds, JFM supports the efforts of local governments involved in sewerage and water supply projects. Through the issuance of green bonds, JFM responds to the demand from responsible investors who prioritize environmental and social considerations.

It should be noted that in the future, JFM is also considering the possibility of extending Green Bonds to projects other than sewerage and water projects, taking into account the financial needs of the target projects and the needs of investors, based on their compliance with the International Capital Market Association's Green Bond Principles and other relevant guidelines.

3.2 Development of Sewerage System in Japan

In the late 19th century, insufficient drainage of sewerage caused by the concentration of population in cities such as Tokyo and flooding from heavy rainfall led to the spread of diseases such as cholera and other diseases, resulting in the deterioration of the sanity environment. In light of such circumstances, Japan's first sewerage system was constructed in 1884, with the aim of improving living conditions through maintaining public health. Subsequently, Japan experienced rapid economic growth in the 1950s-70s, and during this time the sewerage system in Japan expanded rapidly. Meanwhile, water pollution in rivers and bodies of water became a serious issue across the country in this period.

[6] In the initial LGBP for FY 2023, the planned amount for the sewerage projects is approximately 1.26 trillion yen (USD 9.5 billion), of which the lending plan amount by JFM accounts for about 27.6%. The planned amount for the water supply projects is approximately 0.60 trillion yen (USD 4.5 billion), of which JFM's lending plan amount occupies about 33.2%.

This situation led to the revision of the Sewerage Act in 1970 in which an article on “preserving the quality of water in areas of public waters” was added and became the foundation for today’s Sewerage Act. Additionally, the Water Pollution Prevention Act was established in 1971 to prevent the pollution of water in areas of public waters and groundwater. These laws prescribe the standards for the water quality of effluent from a sewerage business for over 40 substances. Local governments operate their sewerage projects in compliance with these water quality standards. In this way, the sewerage business contributes to the improvement of public health, the preservation of the living environment and the water quality in areas of public waters, and therefore plays an important environmental and societal role.

The government has formulated the "Priority Plan for Social Infrastructure Development" to promote the development of social infrastructure such as roads and rivers in a focused, efficient, and effective manner. This plan also addresses issues related to sewerage projects, such as resolving areas with limited sewerage coverage and reducing environmental burden through the effective utilization of sewerage sludge. Under this plan, local governments establish "Master Plans" that set future goals for promoting sewerage treatment, flood control measures, and water quality preservation in public water areas. They also develop "Comprehensive Plans" that outline the placement of sewerage facilities for the next 20 to 30 years based on these goals, as well as "Project Plans" that specify the placement of facilities to be implemented within a 5 to 7-year timeframe. Through these plans, the government aims to achieve planned improvements and maintenance of facilities, ensuring the sustainable functionality of sewerage systems[7].

As of the end of fiscal year 2022, the sewerage treatment coverage rate in Japan was 92.9%, the total length of installed sewer pipe reached approximately 490,000 km (300,000 miles)[8], and the number of sewerage treatment plants was approximately 2,200[9]. However, many of the sewer pipes and facilities were rapidly constructed during the 1960s-80s, meaning that the number of pipes aged 50 years and over is expected to grow, while more than half of the sewerage treatment facilities are now over 15 years old. It is expected that there will be an increasing demand for the renewal and reconstruction of sewerage-related facilities in the future. In addition, Japan has seen a rise in natural disasters such as typhoons and earthquakes in recent years, leading to an increased need to protect and upgrade lifeline sewerage facilities as lifelines to be able to minimize the impact of such natural disasters.

3.3 Development of Water System in Japan

Japan’s water supply operations have been promoted in line with the times and social conditions, including the enforcement of the Water Supply Act and the development of water supply facilities throughout the country. Later, in the Meiji Era, as more foreign ships visited Japan after the opening of the country, infectious diseases such as cholera invaded Japan and spread in cities near harbors. In order to ensure public health and prevent outbreaks of infectious diseases, Japan's first modern water supply system was constructed in Yokohama City in 1887. In 1890, the Japanese government enacted the Waterworks Ordinance to regulate water supply projects, stipulating that municipalities should develop and manage their local water supply systems. Following this, water supply facilities

[7] In Japan, a target has been set to achieve a utilization rate of approximately 85% for sewage sludge and an energy recovery rate of 37% by the fiscal year 2030
[8] Ministry of Land, Infrastructure and Transport. As of 31 March 2021
[9] Ministry of Land, Infrastructure and Transport. As of 31 March 2021

were developed especially in major cities such as Tokyo, Osaka, and Kyoto, as well as in cities such as Nagasaki, Hakodate, Niigata, and Kobe. During World War II, Japan's water supply facilities suffered severe damage, resulting in the country's water supply coverage declining to as low as 26.2% as of 1950.

In 1957, the Water Supply Act was enacted in order to supply wholesome, plenty and affordable water, to enhance public health and to improve the living environment for residents of the community, and the developments of water supply facilities were promoted, with the aim of supplying high quality water resources to all citizens. In the 1960s and 1970s, the demand for water supply service surged, along with the penetration of electric washing machines, home baths and flushing toilets, as well as the urban population concentration, driven by housing developments and the increase in nuclear families. The development of water supply facilities progressed dramatically in line with the growth of the Japanese economy. As of the end of fiscal year 2021, the water supply coverage rate stands at 98.2%.

In order to appropriately address the issue of a safe and comfortable water supply, the government has formulated the "New Water Supply Vision", which outlines the ideal state and key initiatives for the water supply industry in the next 50 to 100 years. Based on this vision, local municipalities have developed their own "Water Supply Business Vision" and business plans, which include efforts to respond to the increasing demand for updating water supply facilities, reducing environmental burden through energy-saving measures and the promotion of the use of renewable energy[10].

As of the end of fiscal year 2020, the ageing rate of pipelines (the proportion of pipeline extensions that have exceeded their legal service life (40 years) of total pipelines) amounts to 20.6%. In recent years, renewal and measures against aging of facilities, such as pipes developed in the period of expansion, and seismic reinforcement of pipelines have become important challenges in the water supply industry[11]. Leakage from deteriorating pipes can lead to a decrease in the efficiency of the entire water supply system, as well as an increase in environmental burden. Furthermore, water supply operations have a significant environmental burden as shown by the fact that the annual electricity consumption of water supply utilities accounts for about 1% of Japan's total electricity consumption.

[10] In Japan, a target has been set for the water supply industry to achieve energy savings of 750.54 million kWh by FY 2030 from FY 2013.
[11] Ministry of Land, Infrastructure and Transport

4. Alignment with the Green Bond Principles, 2021 (GBP)

JFM's Green Bond Framework is aligned with the four core components defined by the International Capital Market Association's Green Bond Principles (GBP) 2021 and the Ministry of the Environment's Green Bond Guidelines (2022 edition). These components include the "Use of Proceeds," "Process for Project Evaluation and Selection," "Management of Proceeds," and "Reporting."

4.1 Use of Proceeds

The proceeds from the issuance of the bonds based on this framework, “the Green Bonds”, will be allocated to loans for local municipalities' sewerage and water supply projects. Through sewerage projects, local municipalities are committed to conserving water resources due to the improvement of water quality, and utilizing energy efficiently and recycling of sewerage sludge, which helps the reduction of greenhouse gas emissions. Through water supply projects, they are committed to promoting the effective use and conservation of water resources by reducing water leakage in distribution. JFM contributes to such initiatives through providing loans to local governments that carry out these projects.

JFM will use an amount equal to the net proceeds of the Green Bonds, “the Proceeds from Green Bonds” to finance or refinance, in whole or in part, existing or future projects that satisfy the eligibility criteria set forth below (together, the Eligible Projects) by way of loans made by JFM to local municipalities. Such loans made by JFM to local municipalities shall include those made to finance or refinance Eligible Projects up to 36 months preceding the issue date of a relevant series of Green Bonds.

JFM will allocate the Proceeds from Green Bonds before the end of the fiscal year when the Green Bonds are issued.

Eligibility Criteria:

Eligible Green Project Category	Eligibility Criteria	Environmental Objective	Alignment with UN SDGs
Sustainable water and wastewater management	Development, construction, maintenance, updates, operation of sewerage related assets, which comply with sewerage drainage standards set by Japanese law[12].	Pollution Prevention and Control Water Resource Conservation Energy use of sewerage sludge, sewerage sludge recycle	
	Development, construction, maintenance, renewal, and operation of water supply-related facilities that meet the standards prescribed by Japanese law[13].	Effective utilization and conservation of water resources	

4.2 Process for Project Evaluation and Selection

JFM's Sustainability Working Group, which is placed under the Sustainability Committee, consists of members of the corporate planning department, administration department, finance department, loan department and the local government support department including members who have experience in local municipalities' projects related to the environment. The Sustainability Working Group is responsible for ensuring that the Proceeds from Green Bonds are allocated to loans or refinancing of Eligible Projects. The loan department will confirm that the borrower has obtained consent or approval from the Minister for Internal Affairs and Communications, or the respective prefectural governors on the borrowing, in accordance with the requirements of Japanese law.

In addition, JFM's Sustainability Working Group will conduct surveys with the relevant local municipalities to gain impact metrics. The Eligible Projects to allocate the Proceeds from Green Bonds will be finally selected based on the surveys.

[12] Sewerage Act (Act No. 79 of 1958, as amended)
Water Pollution Prevention Act (Act No. 138 of 1970, as amended)
Purification Tank Act (Act No. 43 of 1983, as amended)

[13] Water Supply Service Act (Act No.177 of 1957, as amended)

Figure 2: Process for Project Funding[14]

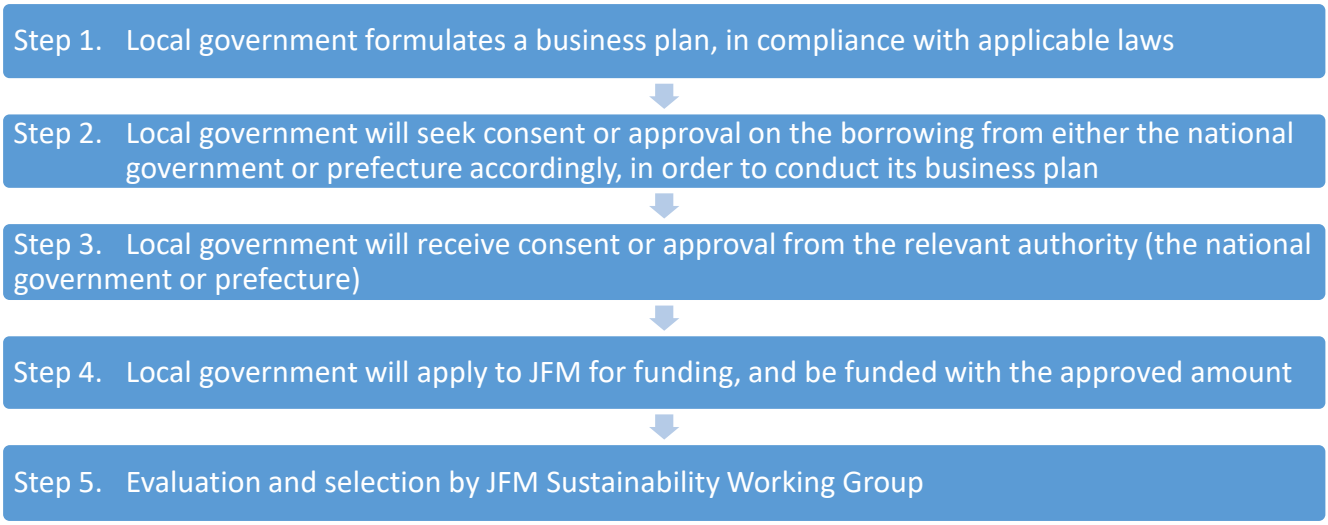
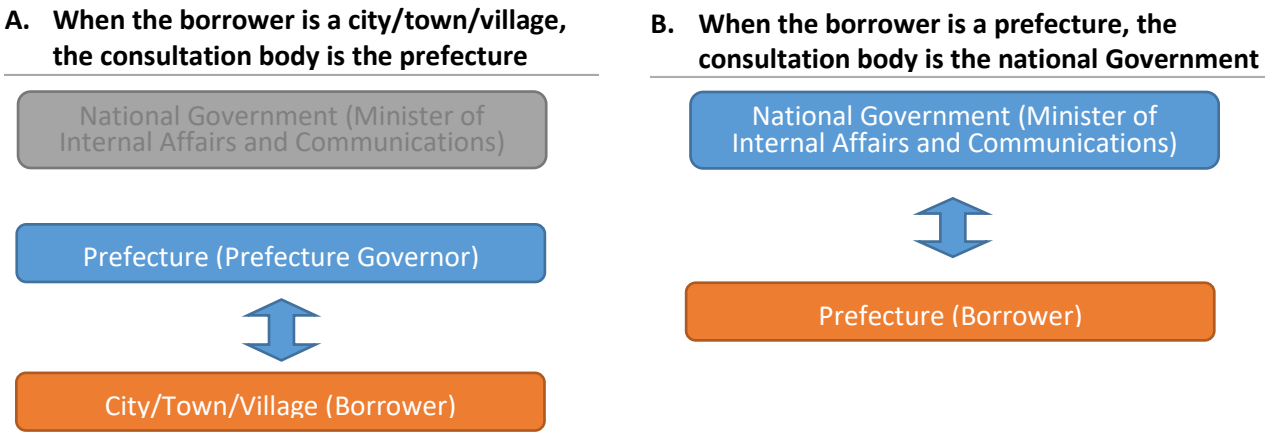


Figure 3: Consultation, consent/approval process between local governments and the national government or the prefecture



4.3 Management of Proceeds

JFM's Sustainability Working Group will track, monitor and account for the allocation of the Proceeds from Green Bonds and ensure that the Proceeds from Green Bonds are appropriately managed in cash or cash equivalents until they are allocated to loans or refinancing for Eligible Projects.

In addition, JFM will conduct inspections and examinations on projects which JFM has funded to make sure that the Proceeds from Green Bonds are allocated to Eligible Projects.

[14] As shown in figure 3

4.4 Reporting

JFM's Sustainability Working Group will conduct a survey on Eligible Projects that are selected to ensure that the total amount of loans exceeds the amount of the Proceeds from Green Bonds.

Subsequently, the group reports on the Eligible Projects that receive effective response on the survey.

Additionally, JFM plans to report the following information on its website annually until the full Proceeds from Green Bonds are allocated:

(i) Total amount of Eligible Projects surveyed

(ii) Breakdown of Eligible Projects surveyed (number of projects and loan amounts by facility type and by new/construction or renovation/replacement)

Business	Facility Type
Sewerage business	• Sewerage treatment facilities • Advanced treatment facilities • Sludge treatment facilities • Pump stations • Pipes • Others
Water supply business	• Water intake facilities • Water purification facilities • Water distribution facilities • Pipes • Others

(iii) (Estimated) key impact indicators for the borrowing entity or the water treatment area for the Eligible Projects surveyed

Business	Estimated Key Impact Indicators
Sewerage business	• 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
Water supply business	• 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

(iv) Case studies on selected Eligible Projects

(v) Refinancing Rate

Projects which are subject of such reporting are expected to be in line with the eligible Green Project category of Green Bond Principles; "Sustainable water and wastewater management".

5. External Review

5.1 Second Party Opinion

JFM concluded a contract with Moody's to provide a Second Party Opinion (SPO) on the environmental benefits of "JFM Green Bond Framework" as well as the alignment to the GBP and the Ministry of the Environment's Green Bond Guidelines (2022 edition). The SPO is available on JFM's website.

https://www.jfm.go.jp/en/investors/bond/international/green_bond2.html
(As of March 2024)

5.2 Compliance Review

Until the Proceeds from Green Bonds have been fully allocated, JFM will have Moody's (or any other party appointed by JFM as a successor for Moody's) conduct a compliance review on an annual basis to provide assurance as to the amount of net proceeds that has been allocated in compliance with all material respects of the eligibility criteria set forth in this Green Bond Framework.

Disclaimer

The information and opinions contained in this JFM Green Bond Framework (the Framework) are provided as at the date of the Framework and are subject to change without notice. None of JFM or any of its affiliates assume any responsibility or obligation to update or revise such statements, regardless of whether those statements are affected by the results of new information, future events or otherwise. The Framework represents current JFM policy and intent, is subject to change and is not intended to, nor can it be relied on, to create legal relations, rights or obligations.

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No representation is made as to the suitability of any Green Bonds to fulfil environmental and sustainability criteria required by prospective investors. Each potential purchaser of bonds should determine for itself the relevance of the information contained or referred to in the Framework or the relevant bond documentation for such Green Bonds regarding the use of proceeds and its purchase of Green Bonds should be based upon such investigation as it deems necessary. JFM has set out its intended policy and actions in the Framework in respect of use of proceeds, project evaluation and selection, management of proceeds and reporting, in connection with the Green Bonds. However, it will not be an event of default or breach of contractual obligations under the terms and conditions of any such Green Bonds if JFM fails to adhere to the Framework, whether by failing to fund or complete Eligible Projects or by failing to ensure that proceeds do not contribute directly or indirectly to the financing of the excluded activities as specified in the Framework, or by failing (due to a lack of reliable information and/or data or otherwise) to provide investors with reports on uses of proceeds and environmental impacts as anticipated by the Framework, or otherwise.

In addition, it should be noted that all of the expected benefits of the Eligible Projects as described in the Framework may not be achieved. Factors including (but not limited to) market, political and economic conditions, changes in government policy (whether with a continuity of the government or on a change in the composition of the government), changes in laws, rules or regulations, the lack of available Eligible Projects being initiated, failure to complete or implement projects and other challenges, could limit the ability to achieve some or all of the expected benefits of these initiatives, including the funding and completion of Eligible Projects. Each environmentally focused potential investor should be aware that Eligible Project may not deliver the environmental or sustainability benefits anticipated, and may result in adverse impacts.