



SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Green Bonds Framework

Tokyo Metropolitan Government (TMG)
4 September 2023

VERIFICATION PARAMETERS

Type(s) of instruments contemplated	<ul style="list-style-type: none">Green Bonds
Relevant standards	<ul style="list-style-type: none">Green Bond Principles (GBP), as administered by the International Capital Market Association (ICMA) (as of June 2021 with June 2022 Appendix 1)
Scope of verification	<ul style="list-style-type: none">Tokyo Green Bonds Framework March 2023 version (as of June 6, 2023)Tokyo Metropolitan Government Green Bond Portfolio (as of June 6, 2023)
Lifecycle	<ul style="list-style-type: none">Pre-issuance verification
Validity	<ul style="list-style-type: none">Valid as long as the cited Framework remains unchanged and on the basis of the portfolio analysed as at July 18, 2023

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SCOPE OF WORK

Tokyo Metropolitan Government (“the Issuer” or “TMG”) commissioned ISS Corporate Solutions (ICS) to assist with its Green Bonds by assessing three core elements to determine the sustainability quality of the instruments:

1. TMG’s Green Bonds Framework March 2023 version (as of June 6, 2023) – benchmarked against the International Capital Market Association's (ICMA) Green Bond Principles (GBP), (as of June 2021 with June 2022 Appendix 1)
2. The asset pool – whether the project contribute positively to the United Nations Sustainable Development Goals (UN SDGs) and how they perform against proprietary issuance-specific key performance indicators (KPIs) (See Annex 1).
3. Linking the transaction(s) to TMG’s overall Environmental, Social, and Governance (ESG) profile – drawing on the issuance-specific Use of Proceeds (UoP) projects.

ASSESSMENT SUMMARY

SPO SECTION	SUMMARY	EVALUATION ¹
Part 1: Alignment with GBP	The Issuer has defined a formal concept for its Green Bonds regarding use of proceeds, processes for project evaluation and selection, management of proceeds and reporting. This concept is in line with the Green Bond Principles (GBP).	Aligned
Part 2: Sustainability quality of the asset pool	<p>The Green Bonds will (re)finance eligible project which include:</p> <p>Green categories: Green Real Estate Development, Renewable Energy, Pollution Prevention and Control, Clean Transportation, Adaptation to Climate Change, Pedestrian and Cycling Path.</p> <p>Product and/or service-related use of proceeds categories² individually contribute to one or more of the following SDGs:</p>  <p>Process-related use of proceeds categories³ individually improve (i) the Issuer's operational impacts on one or more of the following SDGs:</p>  <p>The environmental and social risks associated with those use of proceeds categories are managed.</p>	Positive
Part 3: Linking the transaction(s) to TMG's ESG profile	<p>The key sustainability objectives and the rationale for issuing Green Bonds are clearly described by the Issuer. The majority of the project categories considered are in line with the sustainability objectives of the Issuer.</p> <p>At the date of publication and leveraging ISS ESG's Country Rating methodology, the country of the Issuer is exposed to the following areas which may be considered controversial by investors: Whaling, Death Penalty, Coal Power Generation, Climate Protection. Please note that the assessment is performed at the country level. Thus, the Issuer does not</p>	Consistent with Issuer's sustainability strategy

¹ The evaluation is based on the TMG's Green Bonds Framework March 2023 version (as of June 6, 2023 version), on the analysed Asset Pool as received on the June 6, 2023, and on the ISS ESG Country Rating report (updated on May 30, 2023) applicable at the SPO delivery date.

² Green Real Estate Development, Renewable Energy, Pollution Prevention and Control, Transportation, Adaptation to Climate Change, Pedestrian and Cycling Path

³ Green Real Estate Development, Pollution Prevention and Control

necessarily have an influence on the identified controversies, and those controversies are not necessarily directly applicable to the Issuer. Pursuant to the Tokyo Metropolitan Government (TMG), which serves as the governing body of Tokyo, Japan, it was established in 1947 under the new Constitution of Japan and the Local Autonomy Law. The TMG holds the responsibility for providing a diverse range of public services in Tokyo, encompassing education, public works, transportation, and social welfare. Furthermore, it plays a crucial role in the planning and development of Tokyo.

SPO ASSESSMENT

PART I: ALIGNMENT WITH GREEN BOND PRINCIPLES

This section describes ISS ESG’s assessment of the alignment of the TMG’s Green Bonds Framework March 2023 version (as of June 6, 2023) with the ICMA GBP.

ICMA GBP 2021	ALIGNMENT	OPINION
1. Use of Proceeds	✓	<p>The Use of Proceeds description provided by TMG’s Green Bonds Framework is aligned with the ICMA GBP.</p> <p>The Issuer’s green categories align with the project categories as proposed by the ICMA GBP. Criteria are defined in a clear and transparent manner. Disclosure of distribution of proceeds by project is provided, and environmental benefits are described. The Issuer defines exclusion criteria for harmful projects categories.</p> <p>The Issuer defines a look-back period of five years, in line with best market practice.</p>
2. Process for Project Evaluation and Selection	✓	<p>The Process for Project Evaluation and Selection description provided by TMG’s Green Bonds Framework is aligned with the ICMA GBP.</p> <p>The project selection process is defined and structured in a congruous manner. ESG risks associated with the projects are identified and managed through an appropriate process. Moreover, the projects selected show alignment with the sustainability strategy of the Issuer.</p> <p>The Issuer involves various stakeholders, such as the Bureau of Finance, the Bureau of Environment, and other bureaus in this process, in line with best market practice.</p>
3. Management of Proceeds	✓	<p>The Management of Proceeds proposed by TMG’s Green Bonds Framework is aligned with the ICMA GBP.</p> <p>The net proceeds collected are equal to the amount allocated to eligible projects, with no exceptions. The net proceeds are tracked in an appropriate manner and attested in a formal internal process. The net proceeds are managed per bond on an aggregated basis for multiple Green Bonds (portfolio approach). Moreover, the Issuer discloses the temporary investment instruments for unallocated proceeds.</p>

4. Reporting	✓	<p>The allocation and impact reporting proposed by TMG's Green Bonds Framework is aligned with the ICMA GBP.</p> <p>The Issuer commits to disclose the allocation of proceeds transparently and to report in an appropriate frequency. The reporting will be publicly available on the Issuer's website. TMG explains that the level of expected reporting will be at the project category level and the type of information that will be reported. Moreover, the Issuer commits to report annually, until the proceeds have been fully allocated.</p> <p>The Issuer is transparent on the level and information impact reporting (e.g. frequency, scope and duration), in line with best market practice.</p>
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PART II: SUSTAINABILITY QUALITY OF THE ASSET POOL

A. CONTRIBUTION OF THE GREEN BONDS TO THE UN SDGs⁴

Sub-sovereign can contribute to the achievement of the SDGs by providing specific services/products which help address global sustainability challenges, and by being responsible corporate actors, working to minimize negative externalities in their operations along the entire value chain. The aim of this section is to assess the SDG impact of the UoP categories financed by the Issuer in two different ways, depending on whether the proceeds are used to (re)finance:

- specific products/services,
- improvements of operational performance.




1. Products and services

The assessment of UoP categories for (re)financing products and services is based on a variety of internal and external sources, such as the ISS ESG SDG Solutions Assessment (SDGA), a proprietary methodology designed to assess the impact of an Issuer's products or services on the UN SDGs, as well as other ESG benchmarks (the EU Taxonomy Climate Delegated Acts, the ICMA Green and/or Social Bond Principles and other regional taxonomies, standards and sustainability criteria).










The assessment of UoP categories for (re)financing specific products and services is displayed on a 3-point scale (see Annex 1 for methodology):



Each of the Green Bonds Use of Proceeds categories has been assessed for its contribution to, or obstruction of, the SDGs:

USE OF PROCEEDS (PRODUCTS/SERVICES)	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
<p>Green Real Estate Development - Improved energy and resource efficiency in green real estate</p> <p><i>Renewable energy sources electricity storage projects</i></p>	Contribution	
<p>Green Real Estate Development - Sustainable plantings in green real estate</p> <p><i>The development of marine parks, waterfront areas, parks, and school green spaces.</i></p>	Contribution	
<p>Renewable energy</p> <p><i>Rooftop PV system</i></p>	Contribution	




⁴ The impact of the UoP categories on UN Social Development Goals is assessed with proprietary methodology and may therefore differ from the Issuer's description in the framework.

<p>Pollution Prevention and Control - Wastewater treatment facility</p> <p><i>Development of sewage (especially dirty sewage at the beginning of rainfall) reservoir system to reduce polluted water discharged to river or sea at a time of rainy weather.</i></p>	<p>Contribution</p>	
<p>Clean Transportation - Public transport vehicles</p> <p><i>Low-emission diesel buses</i></p>		
<p>Clean Transportation - charging Station</p> <p><i>Installation of charging infrastructure for zero-emission vehicle (ZEV)</i></p>		 
<p>Clean Transportation - EV</p> <p><i>Zero-emission vehicle (ZEV)</i></p>		 
<p>Adaptation to Climate Change - Flood prevention (excluding dams)</p> <p><i>Installation of drainage system as an adaptation measure against floods</i></p> <p><i>Development of stormwater reservoir</i></p> <p><i>Development of facilities against tsunami and heavy rain (facility such as tide breakwater)</i></p>		
<p>Pedestrian and Cycling paths</p> <p><i>Pedestrian and cycling infrastructure (bike lanes, bicycle lanes)</i></p> <p><i>Heat insulation on roads and pedestrian path</i></p>		 

2. Improvements of operational performance (processes)

The below assessment aims at qualifying the direction of change (or “operational impact improvement”) resulting from the operational performance projects (re)financed by the UoP categories, as well as related UN SDGs impacted. The assessment displays how the UoP categories are mitigating the exposure to the negative externalities relevant to the different sectors and business model.

The table below aims at displaying the direction of change resulting from the operational performance improvement projects. The outcome displayed does not correspond to an absolute or net assessment of the operational performance.

USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT ⁵	SUSTAINABLE DEVELOPMENT GOALS
<p>Green Real Estate Development - Improved energy and resource efficiency in green real estate</p> <p><i>Installation of LED lighting</i></p> <p><i>Improve the energy and resource efficiency</i></p> <p><i>Installation of solar installations in existing facilities</i></p>	<p>✓</p>	
<p>Pollution Prevention and Control - Wastewater treatment facility</p> <p><i>Improve energy and resource efficiency in water plant</i></p> <p><i>Installation of high efficient pumping equipment to distributing reservoir and water purification plant</i></p> <p><i>Electrification of drive system of the wastewater treatment equipment (dehydrator)</i></p>	<p>✓</p>	
<p>Renewable energy</p> <p><i>Environmental improvements in metropolitan schools (promotion of zero-emissions)</i></p>	<p>✓</p>	

⁵ Limited information is available on the scale of the improvement as no threshold is provided. Only the direction of change is displayed.

B. MANAGEMENT OF ENVIRONMENTAL & SOCIAL RISKS ASSOCIATED WITH THE ASSET POOL

Relevant ISS ESG KPI sets for TMG's Green Bond Use of Proceeds categories

ISS ESG PROJECT CATEGORIES		TMG ENVIRONMENTAL CATEGORIES ⁶
A	Green real estate development	
A.1	Improved energy and resource efficiency in green real estate	2
A.2	Sustainable plantings in green real estate	13
B	Renewable energy	
B.1	Solar power	5
C	Pollution Prevention and Control	
C.1	Wastewater treatment facility	12
C.2	Improved energy and resource efficiency in water plant	1 ⁷ & 2
D	Transportation	
D.1	Public transport vehicles	15
D.2	Clean transportation charging stations	
D.3	Clean transportation Zero-emission vehicle	3
E.	Adaptation to climate change	
E.1.	Flood prevention (excluding dams)	10
F	Sustainable road development	
F.1.	Heat insulation on roads and pedestrian and cycling paths	11

⁶ See annex 4 for details.

⁷ Related to Water-facility only

The table below evaluates the asset pool against issuance-specific KPIs. All of the assets are/will be located in Japan.

(A) Green real estate development

(A.1) Improved energy and resource efficiency in green real estate

ASSESSMENT AGAINST ISS ESG KPI

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

Social standards in the supply chain

- ✓ TMG has confirmed that all its suppliers, including those outside of Japan, are required to comply with Japan's Industrial Safety and Health Act. This act establishes extensive safety and health standards as mandated by law. Compliance with Japan's safety regulations, including the Industrial Safety and Health Act and the Labor Standards Act, is mandatory for all projects.

Environmental aspects of installed electronic equipment

- ✓ Regarding the take-back and recycling of electronic equipment at the end-of-life stage, all of the projects follow the "Waste Management and Public Cleansing Act," which aims to reduce the discharge of waste and promote the proper sorting, storage, collection, transport, and recycling.

Environmental aspects in the supply chain

- ✓ The procurement process in the Tokyo Metropolitan Government adheres to the Tokyo Metropolitan Government Green Purchasing Promotion Policy, Tokyo Metropolitan Government Green Purchasing Guide, and Tokyo Metropolitan Green Procurement Principle (for public construction).
- ✓ Furthermore, ISO 14001 certification, along with other local environmental management system certifications such as Eco-Action 21⁸ and Eco Stage⁹, is considered one of the evaluation criteria during the general supplier evaluation for public procurement. Suppliers who do not hold these certifications must demonstrate compliance with the environmental aspects defined in TMG's policy and guidelines, as required in TMG's procurement process. Failure to meet these requirements may result in TMG not signing a contract with that particular supplier.

⁸ Eco-Action 21, 2011, <https://www.ea21.jp/>

⁹ Eco Stage, <https://www.ecostage.org/>

(A.2) Sustainable plantings in green real estate

ASSESSMENT AGAINST ISS ESG KPI

Site selection

- ✓ The Issuer confirmed that all projects under this category are not located at cultural heritage sites (i.e., UNESCO Cultural World Heritage Sites and sites listed on the World Monuments Watch of the World Monuments Fund).

- ✓ The Issuer has confirmed that the Marine Park is not located in the Key Biodiversity area of the Inner Tokyo Bay, and an EIA was conducted for the previous project. Additionally, the Issuer has also consulted with the Port Council, receiving support from experts in environmental preservation. With the nature of the Marine Park being a regular park development built on the sea, a dedicated regulation called the Tokyo Marine Park Ordinance¹⁰ is imposed to govern its operations.

Environmental aspects of plantings

- ✓ The growers of the plants comply with the Forest Act of Japan, which prohibits the use of plants that cause negative climate impacts or degrade soil quality. When planting, existing water supplies are used to avoid the need for new irrigation systems. Furthermore, all of the projects adhere to the "Tokyo Metropolitan Green Procurement Principle (public construction)," which mandates the use of native species to mitigate any adverse sustainability issues. However, there is no available information regarding the consideration of high capacity for CO₂ absorption and storage.

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

Environmental aspects in the supply chain

- ✓ TMG has confirmed that all the greening plants used for these projects pose no risk to deforestation, soil degradation, biodiversity, or water stress in the area of origin. Additionally, TMG has established its own selection criteria for greening plants, which prioritize the use of plants produced in Tokyo. The producing center must be confirmed through a "place of origin confirmation document" or other verification measures.
- ✓ The use of materials which can cause negative environmental impact in its produced area is restricted by a TMG standard, "Tokyo Metropolitan Green Procurement Principle (public construction)." TMG has a Chemical Fertilizer Standard to reduce the use of chemical fertilizer and a Soil Diagnose Standard to maintain soil quality. The plants for the project are not the trigger of deforestation because the producers have to follow the Forest Act of Japan.

¹⁰ Tokyo Marine Park Ordinance, 1975, https://www.reiki.metro.tokyo.lg.jp/reiki/reiki_honbun/g101RG00001538.html

- There is no information on the amount of planting which uses genetically modified organisms. Generally, the "Tokyo Metropolitan Green Procurement Principle (public construction)" limits planting to only use native species. The "Act on the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms" limits the use of GMO plants, and the "Guideline for GMO plants handling in Tokyo" regulates the use of GMO plants.

Social standards in the supply chain

- ✓ TMG has confirmed that all its suppliers, including those outside of Japan, are required to comply with Japan's Industrial Safety and Health Act. This act establishes extensive safety and health standards as mandated by law. Compliance with Japan's safety regulations, including the Industrial Safety and Health Act and the Labor Standards Act, is mandatory for all projects.

(B) Renewable Energy

(B.1) Solar Power

ASSESSMENT AGAINST ISS ESG KPI

Social standards in the supply chain

- ✓ TMG has confirmed that all its suppliers, including those outside of Japan, are required to comply with Japan's Industrial Safety and Health Act. This act establishes extensive safety and health standards as mandated by law. Compliance with Japan's safety regulations, including the Industrial Safety and Health Act and the Labor Standards Act, is mandatory for all projects.

Environmental aspects of solar power plants

- ✓ Regarding the take-back and recycling of electronic equipment at the end-of-life stage, all of the projects follow the "Waste Management and Public Cleansing Act," which aims to reduce the discharge of waste and promote proper sorting, storage, collection, transport, and recycling.

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

Environmental aspects in the supply chain

The procurement process in the Tokyo Metropolitan Government adheres to the Tokyo Metropolitan Government Green Purchasing Promotion Policy, Tokyo Metropolitan Government Green Purchasing Guide, and Tokyo Metropolitan Green Procurement Principle (for public construction).

- ✓ Furthermore, ISO 14001 certification, along with other local environmental management system certifications such as Eco-Action 21⁸ and Eco Stage⁹, is considered one of the evaluation criteria during the general supplier evaluation for public procurement. Suppliers who do not hold these certifications must demonstrate compliance with the environmental aspects defined in TMG's policy and guidelines, as required in TMG's procurement process. Failure to meet these requirements may result in TMG not signing a contract with that particular supplier.

(C) Sustainable water and wastewater management

(C.1) Wastewater treatment facility

ASSESSMENT AGAINST ISS ESG KPI

Site Selection

- ✓ The project location is in Tokyo and not within protected areas or any key biodiversity areas.

- ✓ The project is an add-on to the existing wastewater treatment facility, and no additional environmental impact assessment (EIA) was conducted for the project because local regulations do not require it. To minimize the impact on the environment and nearby residents, all projects are required to follow the Tokyo Metropolitan Construction Recycling Guidelines. These guidelines define requirements for environmental considerations, such as minimizing the environmental impact of waste disposal, avoiding violations of natural habitats, using recycled materials to the greatest extent possible to reduce the use of natural resources, utilizing timbers produced from sustainably managed forests, avoiding the introduction of invasive species, and reducing greenhouse gas emissions.

Community dialogue

- ✓ Evaluation of the projects involved collaboration with the local municipality. Project details are generally made available to the public on the Tokyo Metropolitan Government (TMG) website, and TMG welcomes and reviews claims and requirements from the local community and relevant stakeholders. To ensure positive impacts on local communities, all projects adhere to TMG standards and specifications for construction work. These standards require constructors to avoid conflicts, respect human rights, communicate with the community, address concerns, and maintain transparent and fair contracts for land use. There are also grievance mechanisms and compensation schemes in place, if necessary.

Environmental aspects of construction and operation

- ✓ The rate of leakage of Tokyo's water facilities is 3%. The project will aim for similar rates of minimal leakage.
- ✓ Treated water will not be introduced into waterways, landfills, or used for agriculture. Sludge residues will be reduced. Separately, TMG plans to use sludge in thermal power plants.
- ✓ The projects are required to comply with the "Sewerage Act" to meet the high standard quality of treated water. The standards define the maximum amount of toxic substances or other substances. (i.e., cadmium should be less than 0.03mg/L, cyanogen compound should be less than 1mg/L, BOD should be less than 600mg/L.)

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. All projects must comply with Japan's safety regulations, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees in both construction and operation.

Environmental aspects in the supply chain

- ✓ The procurement process in the Tokyo Metropolitan Government adheres to the Tokyo Metropolitan Government Green Purchasing Promotion Policy, Tokyo Metropolitan Government Green Purchasing Guide, and Tokyo Metropolitan Green Procurement Principle (for public construction).
- ✓ Furthermore, ISO 14001 certification, along with other local environmental management system certifications such as Eco-Action 21⁸ and Eco Stage⁹, is considered one of the evaluation criteria during the general supplier evaluation for public procurement. Suppliers who do not hold these certifications must demonstrate compliance with the environmental aspects defined in TMG's policy and guidelines, as required in TMG's procurement process. Failure to meet these requirements may result in TMG not signing a contract with that particular supplier.

(C.2) Improved energy and resource efficiency in water plant

ASSESSMENT AGAINST ISS ESG KPI

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

Social standards in the supply chain

- ✓ TMG has confirmed that all its suppliers, including those outside of Japan, are required to comply with Japan's Industrial Safety and Health Act. This act establishes extensive safety and health standards as mandated by law. Compliance with Japan's safety regulations, including the Industrial Safety and Health Act and the Labor Standards Act, is mandatory for all projects.

Environmental aspects of installed electronic equipment

- ✓ Regarding the take-back and recycling of electronic equipment at the end-of-life stage, all of the projects follow the "Waste Management and Public Cleansing Act," which aims to reduce the discharge of waste and promote proper sorting, storage, collection, transport, and recycling.

Environmental aspects in the supply chain

- The procurement process in the Tokyo Metropolitan Government adheres to the Tokyo Metropolitan Government Green Purchasing Promotion Policy, Tokyo Metropolitan Government Green Purchasing Guide, and Tokyo Metropolitan Green Procurement Principle (for public construction).
- ✓ Furthermore, ISO 14001 certification, along with other local environmental management system certifications such as Eco-Action 21⁸ and Eco Stage⁹, is considered one of the evaluation criteria during the general supplier evaluation for public procurement. Suppliers who do not hold these certifications must demonstrate compliance with the environmental aspects defined in TMG's policy and guidelines, as required in TMG's procurement process. Failure to meet these requirements may result in TMG not signing a contract with that particular supplier.

(D) Public transport

(D.1) Public transport vehicles

ASSESSMENT AGAINST ISS ESG KPI

Production standards

- ✓ TMG has been procuring the buses from manufacturer certified for ISO 14001 environmental management system. TMG will continue to procure buses only from manufacturers that adhere to sustainable practices, as specified in the FY2023 Green bonds.
- ✓ According to the Tokyo Metropolitan Government (TMG), the bus manufacturer that TMG procures its buses from has robust labor policies and high health and safety standards in place.

Environmental aspects of buses

- ✓ The "Tokyo Metropolitan Green Procurement Principle (public construction)" guarantees that all buses meet low emissions and high fuel efficiency standards. Bus manufacturers have conducted comprehensive life cycle assessments to evaluate the environmental impacts of the vehicles. Additionally, based on the assessment results, manufacturers have implemented measures to reduce the environmental burden throughout the life cycle of the buses. The new buses are designed to significantly decrease CO2 emissions compared to older models.

Social aspects of buses

- ✓ There are various safety policies concerning bus operators and passengers. These include limits on the bus operators' working hours as well as clarifying their safety responsibilities. There is robust monitoring of passenger incidents and measures to reduce any incidents. There are national regulations regarding the noise caused by bus operations and also disabled passenger accessibility.

(D.2) Clean Transportation charging station

ASSESSMENT AGAINST ISS ESG KPI

Environmental aspects of charging stations

- TMG is currently not conducting a life cycle assessment for the charging stations.

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

(D.3) Clean Transportation electric and hybrid vehicles

ASSESSMENT AGAINST ISS ESG KPI

Environmental aspects of construction (or production) and operation

- ✓ The issuer confirms that all manufactures have calculated the environmental impacts throughout the life-cycles of the vehicles.

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

User safety

- ✓ TMG confirms that the vehicles are equipped with safety measures to ensure user safety.

(E) Adaptation to climate change

(E.1) Flood prevention (excluding dams)

ASSESSMENT AGAINST ISS ESG KPI

Consideration of environmental aspects during planning and construction

- ✓ All of the projects follow the “Tokyo Metropolitan Green Procurement Principle (public construction)¹¹” which emphasizes the procurement of environmentally friendly items for public construction projects and aims to reduce the environmental impact caused by construction activities. Additionally, all of the projects adhere the “Tokyo Metropolitan Construction Recycling Guidelines¹²,” which encourage efforts to minimize the generation of construction waste materials in public construction work. These guidelines highlight the responsibility of those involved in construction projects to contribute to waste reduction and sustainable practices.

In accordance with the River Act, TMG submits the plans to river experts for approval. These plans include watershed and water flow modeling, as well as impacts on local ecosystems. One of the projects, based on an island, involves extra consideration for zoning and environmental impacts.

- ✓ The construction projects comply with the Noise Regulation Act and the “Tokyo Metropolitan Construction Recycling Guidelines”, due to which noise and the environmental impacts of construction works are minimized.

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

Modelling on natural state of water bodies, scientific monitoring, structural quality mapping

- ✓ All of the projects follow the "Tokyo Metropolitan Green Procurement Principle (public construction)", which ensures that the construction works are in line with

¹¹ Tokyo Metropolitan Government. Tokyo Metropolitan Green Procurement Principle (public construction)https://www.toshiseibi.metro.tokyo.lg.jp/seisaku/recy/pdf/recy_30-1.pdf

¹² Tokyo Metropolitan Government. Tokyo Metropolitan Green Procurement Principle (public construction)https://www.toshiseibi.metro.tokyo.lg.jp/seisaku/recy/pdf/recy_30-1.pdf
<http://www.toshiseibi.metro.tokyo.jp/seisaku/recy/index.html>

specific local conditions and consider biodiversity impacts. The projects will also follow the relevant national government guidelines about the scope of the works used to achieve the project aims.

One of the projects will not change the natural water flow because it expands the existing pipe network.

For two of the projects, scientific monitoring and modeling of the natural water flow were conducted in the planning phase. These studies were used in recommending the proposed works.

One of the projects also modeled potential storm, tidal, and tsunami damage during the planning phase. This assessment involved the Tokyo Committee on Disaster Prevention.

Community dialogue

- ✓ Evaluation of the projects involved collaboration with the local municipality. Project details are generally made available to the public on the Tokyo Metropolitan Government (TMG) website, and TMG welcomes and reviews claims and requirements from the local community and relevant stakeholders. To ensure positive impacts on local communities, all projects adhere to TMG standards and specifications for construction work. These standards require constructors to avoid conflicts, respect human rights, communicate with the community, address concerns, and maintain transparent and fair contracts for land use. There are also grievance mechanisms and compensation schemes in place, if necessary.

Social standards in the supply chain

- ✓ TMG has confirmed that all its suppliers, including those outside of Japan, are required to comply with Japan's Industrial Safety and Health Act. This act establishes extensive safety and health standards as mandated by law. Compliance with Japan's safety regulations, including the Industrial Safety and Health Act and the Labor Standards Act, is mandatory for all projects.

Environmental aspects in the supply chain

- ✓ The procurement process in the Tokyo Metropolitan Government adheres to the Tokyo Metropolitan Government Green Purchasing Promotion Policy, Tokyo Metropolitan Government Green Purchasing Guide, and Tokyo Metropolitan Green Procurement Principle (for public construction).
- ✓ Furthermore, ISO 14001 certification, along with other local environmental management system certifications such as Eco-Action 21⁸ and Eco Stage⁹, is considered one of the evaluation criteria during the general supplier evaluation for public procurement. Suppliers who do not hold these certifications must demonstrate compliance with the environmental aspects defined in TMG's policy and guidelines, as required in TMG's procurement process. Failure to meet these requirements may result in TMG not signing a contract with that particular supplier.

(F) Sustainable road development

(F.1) Heat insulation on roads and pedestrian and cycling paths

ASSESSMENT AGAINST ISS ESG KPI

Site selection

- ✓ The Issuer confirmed that all of the project sites are not located in key biodiversity areas.

Environmental aspects of construction

- ✓ All of the projects follow the "Tokyo Metropolitan Green Procurement Principle (public construction)," which reduces the environmental burden of the construction. The construction projects also need to follow the Noise Regulation Act and the "Tokyo Metropolitan Construction Recycling Guidelines," due to which noise and the environmental impacts of construction works are minimized.

Sustainable materials

- ✓ The projects will use recycled materials, as required under the "Tokyo Metropolitan Green Procurement Principle (public construction)."

Labour, health and safety

- ✓ In Japan, the law prescribes extensive safety and health standards. For all assets high labor and health and safety standards are ensured by the Japanese legislation, which include the Industrial Safety and Health Act as well as the Labor Standards Act. TMG has requested project contractors to comply with safety initiatives to maintain high labor and health and safety standards for their employees.

PART III: LINKING THE TRANSACTION TO TMG'S ESG PROFILE

A. CONSISTENCY OF GREEN BONDS WITH TMG'S SUSTAINABILITY STRATEGY

Key sustainability objectives and priorities defined by the Issuer

TMG is the local government for the city of Tokyo, which has a population of about 14 million¹³. In 2019, it announced its 2050 net zero target and its Zero Emissions Tokyo Strategy. The Strategy focuses on supporting the Paris Agreement and contains various plans to reduce the city's GHG emissions and improve climate adaptation measures.

Since then, TMG has updated its decarbonizing policies to meet the climate emergency. It announced the "Climate Emergency Declaration: TIME TO ACT"¹⁴ campaign in March 2021 to accelerate its efforts to halve the carbon emissions by 2030 and achieve zero emissions by 2050.

Encompassing these climate change priorities, in March 2021, TMG established the "Future Tokyo: Tokyo's Long-Term Strategy"¹⁵, an overarching plan that clarifies its vision for Tokyo's future and the strategies for realizing a sustainable Tokyo. The strategy reaffirms the government's commitment to improving the city population's social wellbeing, including by promoting healthy and sustainable lifestyles. It also includes commitments to improving several environmental aspects of the city, such as enhancing Tokyo's green infrastructure and resilience towards flooding.

In its strategy document¹⁶ which is published under United Nations Voluntary Local Reviews guidelines in 2021, TMG outlines the SDG themes it focuses on as part of its Zero Emission Tokyo Strategy:

- Project for Realization of a Hydrogen Society
- Zero Emission Energy Project
- Zero Emission Mobility Project
- Project for Promoting Sustainable Use of Resources
- Project for Adapting to Climate Change

As part of its sustainability strategy outlined in the strategy document, TMG will use green financing to implement its green projects. According to the Tokyo Metropolitan Government Budget Proposal¹⁷, TMG first began issuing green bonds in 2017. Since then, it has issued green bonds every year, to promote environmental measures and stimulate domestic ESG bond market.

In a separate document¹⁸, TMG has outlined environmental guidelines for government departments, businesses, NPOs and the general public to take into consideration when engaging in any activities.

¹³ Tokyo Metropolitan Government, April 2023, Tokyo Metropolitan Population Estimates (Only in Japanese), <https://www.metro.tokyo.lg.jp/tosei/hodohappyo/press/2023/04/26/05.html>

¹⁴ Tokyo Metropolitan Government, Time To Act, <https://www.kankyo.metro.tokyo.lg.jp/en/time-to-act.html>

¹⁵ Tokyo Metropolitan Government, March 2021, Future Tokyo: Tokyo's Long-Term Strategy, <https://www.metro.tokyo.lg.jp/english/about/policies/policies01.html>

¹⁶ Tokyo Metropolitan Government, July 2021, Tokyo Sustainability Action #Future Tokyo, <https://www.seisakukikaku.metro.tokyo.lg.jp/basic-plan/2021/07/images/Tokyo%20Sustainability%20Action.pdf>

¹⁷ Tokyo Metropolitan Government, February 2023, Summary of the Tokyo Government Budget Proposal, https://www.zaimu.metro.tokyo.lg.jp/syukei1/zaisei/20230127_reiwa5nendo_tokyotoyosanangaiyou/5yosanangaiyou_englishver.pdf

¹⁸ Tokyo Metropolitan Government, September 2022, Tokyo Environment Master Plan (Only included in Japanese Version), https://www.kankyo.metro.tokyo.lg.jp/dbook/202210/master_plan/2022-10_tokyo_kankyo/#page=147

Rationale for issuance

In the “Future Tokyo: Tokyo’s Long-Term Strategy”, the issuance of green bonds is positioned as one initiative for achieving a Zero Emission Tokyo to contribute to the world’s achievement of net-zero carbon emissions by 2050. TMG continues to issue Tokyo Green Bonds to actively resolve environmental issues, a matter of concern shared by the international community, and promote a “sustainable recovery” that would enable people to live sustainable lives and to drive the development of the green finance market.

Opinion: *The key sustainability objectives and the rationale for issuing Green Bonds are clearly described by the Issuer. The majority of the project categories financed are in line with the sustainability objectives of the Issuer.*

B. COUNTRY'S EXPOSURE TO ESG RISKS

Issuer overview

Japan is located in East Asia. Japan is a constitutional monarchy with a bicameral parliament, classified as a high-income country by the World Bank. The Issuer has an estimated population of 124.86 million inhabitants¹⁹ as of 2022, with 91.69% of its population living in urban areas, and a level of greenhouse gas emissions per capita of 8.70 t-CO₂ as of 2020, which have decreased in recent years.

Additional information relating to the Issuer, based on international indices:

INDEX	RANK, AS OF DATE
Human Development Index ²⁰	19 out of 191, in 2021
Corruption Perception Index ²¹	18 out of 180, in 2022
Global Peace Index ²²	10 out of 163, in 2022

ESG risks associated with the Issuer and sovereign Issuers

Leveraging ISS ESG's Country Rating methodology, key challenges faced by sovereign Issuers have been identified in terms of sustainability management as displayed in the table below. Please note, this is not an Issuer-specific assessment.

ESG KEY ISSUES FOR SOVEREIGN ISSUERS	
Political system and governance	Natural resources
Human Rights and fundamental freedoms	Climate change and energy
Social conditions	Product and consumption

Please note that the consistency between the issuance subject to this report and the Issuer's sustainability strategy is further detailed in Part III.A of the report.

Exposure of the Issuer's country to controversial areas

At the date of publication, the country of the Issuer is exposed to the following areas which may be considered controversial by investors:

SOVEREIGN CONTROVERSIAL AREAS	DESCRIPTION
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¹⁹ Statistics Bureau of Japan, May 2023, Monthly Report December 1, 2022 (Final estimates), May 1, 2023 (Provisional estimates), <https://www.stat.go.jp/english/data/jinsui/tsuki/index.html> (Japanese only)

²⁰ UNDP, Human Development Insights, <https://hdr.undp.org/data-center/country-insights#/ranks>

²¹ Transparency International, Corruption Perceptions Index, <https://www.transparency.org/en/cpi/2021/index/jpn>

²² Vision of Humanity, 2022 Global Peace Index Overall GPI, <https://www.visionofhumanity.org/maps/#/>

Climate Protection	Inadequate climate change performance (CCPI<50) Inadequate climate change performance (CCPI = very poor)
Coal Power Generation	>25% of total primary energy supply (TPES) >25% of TPES & no decision on abandoning coal power and no moratorium on coal-fired power plants
Death Penalty	Death penalty not fully abolished Death penalty applied
Whaling	N/A

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ANNEX 1: Methodology

Green KPIs

The Green Bond KPIs serve as a structure for evaluating the sustainability quality – i.e. the social and environmental added value – of the use of proceeds of TMG’s Green Bonds.

It comprises firstly the definition of the use of proceeds category offering added social and/or environmental value, and secondly the specific sustainability criteria by means of which this added value and therefore the sustainability performance of the assets can be clearly identified and described.

The sustainability criteria are complemented by specific indicators, which enable quantitative measurement of the sustainability performance of the assets and which can also be used for reporting. If a majority of assets fulfill the requirement of an indicator, this indicator is then assessed positively. Those indicators may be tailor-made to capture the context-specific environmental and social risks.

Environmental and social risks assessment methodology

The Environmental and social risks assessment evaluates whether the assets included in the asset pool match the eligible project category and criteria listed in the Green Bond KPIs.

All percentages refer to the amount of assets within one category (e.g. wind power). Additionally, the assessment “no or limited information is available” either indicates that no information was made available or that the information provided did not fulfil the requirements of the Green Bond KPIs.

The evaluation was carried out using information and documents provided on a confidential basis by TMG (e.g. Due Diligence Reports). Further, national legislation and standards, depending on the asset location, were drawn on to complement the information provided by the Issuer

Assessment of the contribution and association to the SDG

The 17 Sustainable Development Goals (SDGs) were endorsed in September 2015 by the United Nations and provide a benchmark for key opportunities and challenges toward a more sustainable future. Using a proprietary method, the extent to which TMG’s Green Bonds contributes to related SDGs has been identified.

ANNEX 2: ISS ESG Country Rating Methodology

ISS ESG Country Rating provides relevant and forward-looking environmental, social, and governance (ESG) data and performance assessments.

For more information, please visit:

<https://www.issgovernance.com/file/publications/methodology/Country-Rating-Methodology.pdf>

ANNEX 3: Quality management processes

SCOPE

TMG commissioned ICS to compile a Green Bonds SPO. The Second Party Opinion process includes verifying whether the Green Bonds Framework aligns with the GBP and to assess the sustainability credentials of its Green Bonds, as well as the Issuer's sustainability strategy.

CRITERIA

Relevant Standards for this Second Party Opinion

- ICMA Green Bond Principles

ISSUER'S RESPONSIBILITY

TMG's responsibility was to provide information and documentation on:

- Framework
- Asset pool
- Documentation of ESG risks management at the asset level

ISS ESG's VERIFICATION PROCESS

ISS ESG is one of the world's leading independent environmental, social and governance (ESG) research, analysis and rating houses. The company has been actively involved in the sustainable capital markets for over 25 years. Since 2014, ISS ESG has built up a reputation as a highly-reputed thought leader in the green and social bond market and has become one of the first CBI approved verifiers.

This independent Second Party Opinion of the Green Bonds to be issued by TMG has been conducted based on a proprietary methodology and in line with the ICMA GBP.

The engagement with TMG took place from May to July 2023.

ISS' BUSINESS PRACTICES

ISS has conducted this verification in strict compliance with the ISS Code of Ethics, which lays out detailed requirements in integrity, transparency, professional competence and due care, professional behavior and objectivity for the ISS business and team members. It is designed to ensure that the verification is conducted independently and without any conflicts of interest with other parts of the ISS Group.

ANNEX 4: TMG's Asset Pool

TMG has selected the below project categories to be financed by the green bonds issued in 2023 under the Green Bonds Framework March 2023 version. The categories are based on the Tokyo Environmental Master Plan. TMG's intended allocation of the proceeds share, are also in the table.

Category		Share (%)
Realization of Zero Emissions through Energy Decarbonization and the Sustainable Use of Resources		88.3%
1	Reduce greenhouse gases emitted by office buildings	4.6%
2	Promote the conservation of energy and energy management	7.9%
3	Promote the use of zero emission vehicles	0.1%
4	Promote advanced transportation technology and the use of bicycles	0.4%
5	Increase the utilization of renewable energy, i.e., solar, geothermal, hydrogen, sewerage heat.	28.6%
6	Reduce resource loss and increase the use of environmentally friendly materials	0.0%
7	The 3 Rs (reduce, reuse and recycle), Promote the recycling of waste	0.0%
8	Increase the utilization of materials reducing environmental burdens	0.0%
9	Measures addressing rising temperatures in urban areas	0.0%
10	Measures to prevent flooding and prepare for other natural disasters	41.0%
11	Road improvement (heat insulation and water absorption)	4.3%
12	Improve water quality and groundwater conservation	1.4%
Realization of an Environmentally Symbiotic, Prosperous Society that Continues to Benefit from Biodiversity		7.5%
13	Plant and protect plants through the development of parks, street trees, forests, etc.	7.5%
14	Conserve biological diversity (Develop tidelands in marine parks, etc.)	0.0%
Realization of a Better Urban Environment that Ensures the Safety and Health of Tokyo Residents		4.2%
15	Improve air quality	4.2%
16	Promote measures to prevent/remediate soil contamination	0.0%
17	Promote the treatment of harmful waste	0.0%
Total		100.0%

About this SPO

ISS ESG is one of the world's leading rating agencies in the field of sustainable investment. The agency analyses companies and countries regarding their environmental and social performance.

We assess alignment with external principles (e.g. the ICMA Green / Social Bond Principles), analyse the sustainability quality of the assets and review the sustainability performance of the Issuer themselves. Following these three steps, we draw up an independent SPO so that investors are as well informed as possible about the quality of the bond / loan from a sustainability perspective.

Learn more: <https://www.isscorporatesolutions.com/solutions/esg-solutions/green-bond-services/>

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