ISS ESG

SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Green Bonds Framework

Tokyo Metropolitan Government (TMG)
2 September 2022

VERIFICATION PARAMETERS

Type(s) of instruments contemplated	• Green Bonds
Relevant standards	• International Capital Market Association (ICMA) Green Bond Principles (GBP), (June 2021)
Scope of verification	• Tokyo Green Bonds Framework (March 2022) • Tokyo Metropolitan Government Green Bond Portfolio (as of 02.06.2022)
Lifecycle	• Pre-issuance verification
Validity	• As long as the Tokyo Green Bonds Framework (March 2022) remains unchanged.

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SCOPE OF WORK

Tokyo Metropolitan Government ("the Issuer" or "TMG") commissioned ISS ESG to assist with its Green Bonds by assessing three core elements to determine the sustainability quality of the instrument:

1. TMG's Green Bonds Framework (March 2022 version) – benchmarked against the International Capital Market Association's (ICMA) Green Bond Principles (GBP), (June 2021).
2. The asset pool – whether the projects contribute positively to the UN SDGs and perform against ISS ESG's issue-specific key performance indicators (KPIs) (See Annex 1).
3. Green Bonds link to TMG's sustainability strategy – drawing on TMG's overall sustainability profile and issuance-specific Use of Proceeds categories.

ISS ESG 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**	The Green Bonds will (re-)finance eligible asset categories which include: renewable energy, green buildings, sustainable water and wastewater management, clean transportation and climate change adaptation The use of proceeds categories have a significant contribution to SDGs 6 "Clean water and Sanitation", SDG 7 'Affordable and clean energy' and SDG 13 'Climate action', and also limited contribution to SDG 3 "Good Health and Well-being" and SDG 11 "Sustainable cities and communities". The environmental and social risks associated with those use of proceeds categories have been well managed.	**Positive**
Part 3: **Green Bonds link to issuer's sustainability strategy**	According to the ISS ESG Country Rating published on 10.06.2022, the issuer shows a good sustainability performance. The Use of Proceeds financed through this Green Bonds are consistent with the issuer's sustainability strategy and material ESG topics for the issuer's industry. The rationale for issuing Green Bonds is clearly described by the issuer.	**Consistent with issuer's sustainability strategy**

[1] ISS ESG's evaluation is based on the TMG's Green Bonds Framework (March 2022 version) which received as of 02.06.2022, and on the ISS ESG Country Rating applicable at the SPO delivery date (updated on 10.06.2022).

ISS ESG 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 2022) with the ICMA GBP.

ICMA GBP 2021	ALIGNMENT	ISS ESG'S OPINION
1. Use of Proceeds	✓	ISS ESG considers the Use of Proceeds description provided by TMG's Green Bonds Framework and the provided asset pool (please refer to annex 4 of this report for more detail) as **aligned** with the ICMA GBP 2021. The Issuer's green categories align with the project categories as proposed by the ICMA GBP 2021, Criteria are defined in a clear and transparent manner. Environmental benefits are described and quantified. The issuer defines the percentage of assets that are (re-)financed, in line with best market practice.
2. Process for Project Evaluation and Selection	✓	ISS ESG considers the Process for Project Evaluation and Selection description provided by TMG's Green Bonds Framework as **aligned** with the ICMA GBP 2021. The project selection process is defined and structured in a congruous manner. ESG risks associated with the project categories are identified and managed through an appropriate process. Moreover, the projects selected show alignment with the sustainability strategy of the Issuer. 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.
3. Management of Proceeds	✓	ISS ESG finds that the Management of Proceeds proposed by TMG's Green Bonds Framework as **aligned** with the ICMA GBP 2021. The proceeds collected will be equal to the amount allocated to eligible projects, with no exceptions. The proceeds are tracked in an appropriate manner and attested in a formal internal process.

4. Reporting	✓	ISS ESG finds that the allocation and impact reporting proposed by TMG's Green Bonds Framework as **aligned** with the ICMA GBP 2021. The Issuer commits to disclose the allocation of proceeds transparently and to report with an appropriate frequency. TMG explains the level of expected reporting and the type of information that will be reported. Moreover, the Issuer commits to report annually, until the proceeds have been fully allocated.

PART II: SUSTAINABILITY QUALITY OF THE ISSUANCE

A. CONTRIBUTION OF THE GREEN BONDS TO THE UN SDGs

Sub-sovereign issuers can contribute to the achievement of the SDGs by providing specific services/products which help address global sustainability challenges, and by being responsible actors, working to minimize negative externalities in their operations along the entire value chain.

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 5-point scale (see Annex 1 for methodology):

Significant Obstruction	Limited Obstruction	No Net Impact	Limited Contribution	Significant Contribution

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

USE OF PROCEEDS	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
Improved energy and resource efficiency in green real estate	Limited Contribution	7 AFFORDABLE AND CLEAN ENERGY; 11 SUSTAINABLE CITIES AND COMMUNITIES; 13 CLIMATE ACTION
Sustainable plantings in green real estate	Limited Contribution	11 SUSTAINABLE CITIES AND COMMUNITIES
Solar power (rooftop PV system)	Significant Contribution	7 AFFORDABLE AND CLEAN ENERGY; 13 CLIMATE ACTION
Wastewater treatment facility	Significant Contribution	6 CLEAN WATER AND SANITATION
Improved energy and resource efficiency in water plant	Limited Contribution	7 AFFORDABLE AND CLEAN ENERGY; 13 CLIMATE ACTION
Public transport vehicles (low pollution non-step bus)	Significant Contribution	13 CLIMATE ACTION
Clean transportation charging stations	Limited Contribution	7 AFFORDABLE AND CLEAN ENERGY; 13 CLIMATE ACTION

Clean transportation Plug-in hybrid vehicles (low-emission vehicles)	**Limited Contribution**	7 AFFORDABLE AND CLEAN ENERGY, 13 CLIMATE ACTION
Clean transportation Electric motorcycles	**Limited Contribution**	7 AFFORDABLE AND CLEAN ENERGY, 13 CLIMATE ACTION
Flood prevention (excluding dams)	**Limited Contribution**	3 GOOD HEALTH AND WELL-BEING, 11 SUSTAINABLE CITIES AND COMMUNITIES, 13 CLIMATE ACTION
Heat insulation on roads and pedestrian and cycling paths	**Limited Contribution**	13 CLIMATE ACTION

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 assessed the ESG risk management in place at an asset level for the project categories of this Green Bond. To conduct the assessment, ISS ESG defined ESG KPI sets capturing the key ESG challenges faced by those project categories.

	ISS ESG PROJECT CATEGORIES	TMG ENVIRONMENTAL CATEGORIES[2]
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	10
B	Renewable energy	
B.1	Solar power	5
C	Sustainable water and wastewater management	
C.1.	Wastewater treatment facility	12
C.2	Improved energy and resource efficiency in water plant	1, 2 & 5
D	Transportation	
D.1.	Public transport vehicles	13
D.2	Clean transportation charging stations	3
D.3	Clean transportation electric and hybrid vehicles	
E.	Adaptation to climate change	
E.1.	Flood prevention (excluding dams)	12 & 17
F	Sustainable road development	
F.1.	Heat insulation on roads and pedestrian and cycling paths	4 & 15

[2] See annex 4 for details.

(A) Green real estate development

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

The table below presents the findings of an ISS ESG assessment of the project categories against ISS ESG KPIs.

ASSESSMENT AGAINST ISS ESG KPI	
Working conditions at building sites	
✓	All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.
Social standards in the supply chain	
✓	All of the projects comply with the Industrial Safety and Health Act, Japan. Additionally, TMG has been selecting manufacturers with high labour and health and safety standards for suppliers. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.
Environmental aspects of installed electronic equipment	
✓	Regarding take-back and recycling of electronic equipment at 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, recycling.

(A.2) Sustainable plantings in green real estate

ASSESSMENT AGAINST ISS ESG KPI	
Environmental aspects of plantings	
✓	The growers of the plants comply with the Forest Act of Japan, which prevents 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. All of the projects follow the "Tokyo Metropolitan Green Procurement Principle (public construction)" which requires that native species should be used.
○	However, no information is available on whether a high capacity of CO2 absorption and storage are taken into consideration.

Working conditions at building sites

✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors.

Environmental aspects in the supply chain

TMG has its own selection criteria for greening plants, which emphasizes the importance of promoting using greening plants produced in Tokyo and the producing center should be confirmed by "place of origin confirmation document" or other 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.

○ 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.

✓ 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)".

Social standards in the supply chain

✓ All of the projects comply with the Industrial Safety and Health Act. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

✓ According to TMG, when developing and constructing of parks, TMG holds an information and explanatory meeting to the surrounding communities.

(B) Renewable Energy

(B.1) Solar Power

ASSESSMENT AGAINST ISS ESG KPI

Site Selection

✓ All of the Projects are roof based solar PV systems.

Supply chain standards

✓ TMG has selected manufacturers with high levels of labour and health and safety standards in the supply chain of solar modules. All of the Projects are to be executed based on Industrial Safety and Health Act, Japan. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Environmental aspects of solar power plants

✓ Regarding take-back and recycling of electronic equipment at 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, recycling.

Working conditions during construction and maintenance work

✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

(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.

✓ The project is an add-on to the existing wastewater treatment facility, environmental impact assessment (EIA) was not conducted for the project because the local regulations do not require them.

Community dialogue

✓ The local communities are consulted in the planning of the projects. TMG's conditions with the construction workers oblige them to avoid conflicts with the local community and enact measures to minimize their impact. 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 will improve water quality. They will comply with the "Water Pollution Prevention Act" to maintain the quality of the treated water.

Working conditions during construction and operation

✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

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

ASSESSMENT AGAINST ISS ESG KPI

Working conditions at building sites

✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Social standards in the supply chain

✓ All of the projects comply with the Industrial Safety and Health Act, Japan. Additionally, TMG has been selecting manufacturers with high labour and health and safety standards for suppliers. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Environmental aspects of installed electronic equipment

✓ Regarding take-back and recycling of electronic equipment at 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, recycling.

(D) Public transport

(D.1) Public transport vehicles

ASSESSMENT AGAINST ISS ESG KPI

Production standards

✓ The “Tokyo Metropolitan Green Procurement Principle (public construction)” ensures that all of the buses will have low emissions and high fuel efficiency.

✓ According to TMG, the bus manufacturer from which TMG is procuring its buses has high labour policies and health and safety standards in place. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

Environmental aspects of buses

✓ The bus manufacturers have calculated comprehensive life cycle assessments of the environmental impacts of the vehicles.

✓ The new buses can reduce CO2 emissions compared to the older buses.

Social aspects of buses

✓ There are various safety policies concerning the 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 the 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 considering if they will invest in charging stations which have undergone a life cycle assessment.
Working conditions during construction and maintenance work
✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

(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.

✓ For 100% of the plug-in hybrid vehicles, energy efficiency during operations is optimized (125g CO2/km in combustion engine mode).

Labour, health and safety

✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 of the 8 ILO Core Conventions are ratified and in force in Japan.

User safety

✓ TMG confirms that the manufacturers have safety measures in place that provide for user safety of the vehicles.

(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)", and the "Tokyo Metropolitan Construction Recycling Guidelines".
✓ In accordance with the River Act, TMG submits the plans to river experts for approval. These plans include watershed and water flow modelling, 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.
Working conditions during construction and operation
✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 out of 8 ILO Core Conventions are ratified and in force in Japan.
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 ensure that the construction works are in line with 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 modelling of the natural water flow was conducted in the planning phase. These studies were used in recommending the proposed works.

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

Community dialogue

✓ The local communities are consulted in the planning for all of the projects. TMG's conditions with the construction workers oblige them to avoid any conflicts with the local community and enact measures to minimize their impact, such as through transparent communications and timely responses to community complaints. There are also grievance mechanisms and compensation schemes in place, if necessary.

One of the projects, located on an island, involves extra consideration for environmental impacts.

Social standards in the supply chain

All of the Projects are to be executed in line with the Industrial Safety and Health Act, Japan.

✓ TMG selects contractors which mainly procure the cement from a corporation, which has strict human rights and labour standards and refers to the ILO core conventions.

(F) Sustainable road development

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

ASSESSMENT AGAINST ISS ESG KPI

Site selection

✓ 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)".

Working conditions during construction and maintenance work

✓ All of the projects comply with the Industrial Safety and Health Act as well as the Labour Standards Act. TMG also has various policies and measures including reduction of overtime work and promotion of remote working. TMG independently prepares their own criteria for the public works bidding for contractors. 6 out of 8 ILO Core Conventions are ratified and in force in Japan.

PART III: GREEN BONDS LINK TO TMG'S SUSTAINABILITY STRATEGY

A.ISSUER COUNTRY'S EXPOSURE TO ESG RISKS

This section aims to provide macro-country level ESG risks and offers additional context to the issuance assessed in the present report. It leverages ISS ESG Country Rating methodology as well as relevant external sources such as United Nations Development Programme, Transparency International and Institute for Economics & Peace.

Issuer country's overview

Japan is located in East Asia. Japan is a constitutional democracy with a parliamentary government, classified as a high-income country by the World Bank. Japan has an estimated population of 125.38 million inhabitants as of 2021, with 92% of its population living in urban areas, and a level of greenhouse gas emissions per capita of 8.7 as of 2018, which have decreased in recent years.

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

INDEX	RANK, AS OF DATE
Human Development Index[3]	19, in 2020
Corruption Perception Index[4]	18, in 2021
Global Peace Index[5]	12, in 2021

ESG risks associated with the issuer's country

Leveraging ISS ESG's Country Rating methodology, ISS ESG assessed the current sustainability performance of the issuer to be good. Please note that the consistency between the issuance subject to this report and the issuer's sustainability strategy is further detailed in Part III.B of the report.

Key challenges faced by sovereign and sub-sovereign issuers in terms of sustainability management are 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

[3] Source: https://hdr.undp.org/data-center/specific-country-data#/countries/JPN
[4] Source: https://www.transparency.org/en/cpi/2021/index/jpn
[5] Source: www.visionofhumanity.org/maps/#/

Exposure to controversial areas (at country level)

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
Climate protection	Inadequate climate change performance
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

B. 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 million[6]. 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.

In addition to these climate change priorities, in March 2021, TMG established the "Future Tokyo: Tokyo's Long-Term Strategy" that clarifies its vision for Tokyo's bright future and the strategies for realizing this vision. This 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 document in 2021[6], 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

Rationale for issuance

TMG first began issuing green bonds in October 2017. Since then, it has issued green bonds every year, to attract financing to support its goals and actions as mentioned in its Action Plan for 2020 and climate change strategy. 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 in order to actively work to resolve environmental issues, a matter of concern shared by the international community, to and promote a "sustainable recovery" that would enable people to live sustainable lives and to drive the development of the green finance market.

Contribution of Use of Proceeds categories to sustainability objectives and key ESG industry challenges

ISS ESG mapped the Use of Proceeds categories financed under this Green Bonds with the sustainability objectives defined by the issuer, and with the key ESG industry challenges as defined in the ISS ESG Country Rating methodology for the sovereign. Key ESG industry challenges are key issues that are highly relevant for a respective industry to tackle when it comes to sustainability, e.g. climate

[6] www.metro.tokyo.lg.jp/english/about/sustainable/documents/tokyo_sustainability_action.pdf

change and energy efficiency in the buildings industry. From this mapping, ISS ESG derived a level of contribution to the strategy of each Use of Proceeds categories.

USE OF PROCEEDS CATEGORY	SUSTAINABILITY OBJECTIVES FOR THE ISSUER	KEY ESG CHALLENGES	CONTRIBUTION
Green real estate development			
Improved energy and resource efficiency in green real estate	✓	✓	Contribution to a material objective
Sustainable plantings in green real estate	✓	✓	Contribution to a material objective
Renewable Energy			
Solar power	✓	✓	Contribution to a material objective
Sustainable water and wastewater management			
Wastewater treatment facility	✓	✓	Contribution to a material objective
Improved energy and resource efficiency of water plants	✓	✓	Contribution to a material objective
Transportation			
Public transport vehicles	✓	✓	Contribution to a material objective
Clean transportation charging stations	✓	✓	Contribution to a material objective
Clean Transportation electric and hybrid vehicles	✓	✓	Contribution to a material objective
Adaptation to climate change			
Flood prevention	✓	✓	Contribution to a material objective
Sustainable road development			

Heat insulation on roads and pedestrian and cycling paths	✓	✓	Contribution to a material objective

Opinion: *ISS ESG finds that the Use of Proceeds financed through this bond are consistent with the issuer's sustainability strategy and material ESG topics for the sub-sovereign. The rationale for issuing Green Bonds is clearly described by the issuer.*

DISCLAIMER

1. Validity of the SPO: As long as the Tokyo Green Bonds Framework remains unchanged.
2. ISS ESG uses a scientifically based rating concept to analyse and evaluate the environmental and social performance of companies and countries. In doing so, we adhere to standardized procedures to ensure consistent quality of responsibility research worldwide. In addition, we provide Second Party Opinion (SPO) on bonds based on data provided by the issuer.
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ANNEX 1: Methodology

ISS ESG Green KPIs

The ISS ESG 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

ISS ESG 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 to ISS ESG or that the information provided did not fulfil the requirements of the ISS ESG Green Bond KPIs.

The evaluation was carried out using information and documents provided to ISS ESG 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, ISS ESG identifies the extent to which TMG's Green Bonds contributes to related SDGs.

ANNEX 2: ISS ESG Country Rating Methodology

The following pages contain methodology description of the ISS ESG Country Rating.

Methodology - Overview

The ESG Country Rating methodology was originally developed by Institutional Shareholder Services Germany (formerly oekom research) and has
been consistently updated for many years.

ESG Country Rating – The ESG Country Rating universe comprises 179 countries, as well as Hong Kong and the European Union, representing 100 per cent of global sovereign debt (as of January 2022). The assessment of a country's sustainability performance is based on approximately 100 environmental, social and governance criteria with equal weight assigned to the social and environmental dimension. All criteria are individually weighted and evaluated and the results are aggregated to yield an overall score (rating). The selection of criteria is derived from ISS ESG's understanding of sustainability and reflects various global challenges that are embodied in the Sustainable Development Goals. Criteria are selected according to their relevance (materiality) and the quality of data regarding availability, up-to-dateness and consistency for all the countries rated.

Country controversies – In addition to the rating, ISS ESG conducts a comprehensive analysis of relevant controversies. Thereby, our clients have the possibility to consider, either separately or in addition to the rating, circumstances in areas they view as especially critical. The country controversy assessment is either directly derived from information provided by credible and acknowledged external sources, such as indices or blacklists, or it is based on the country's performance in the respective rating section. In the latter cases, underperformance in a specific set of indicators constitutes a controversy. Some controversy issues are delineated on different levels of severity.

Country leaders - List (in alphabetical order) of the top three countries from the ESG Country Rating universe at the time of generation of this report.

Criteria design – The rating comprises both qualitative and quantitative criteria. For instance, the safeguarding of fundamental freedoms by a country's government is mostly assessed in qualitative terms, while a country's consumption of resources is quantified. Qualitative criteria are evaluated against absolute targets and/or best practices, the assessment of quantitative indicators is based on thresholds. Those either reflect normative considerations and/or relative performance in a given area. In order to ensure their validity, some quantitative indicators are normalized against eligible denominators. To assess the quality of government policy in a specific area, we use indicators measuring input, such as spending on education as a proportion of GDP, as well as criteria measuring output, such as female participation in education.

Decile Rank - The Decile Rank indicates in which decile (tenth part of total) the individual Country Rating ranks from 1 (best – country's rating is in the first decile within the country universe) to 10 (lowest – country's rating is in the tenth decile within the country universe). The Decile Rank is determined based on the underlying numerical score of the rating. If the total number of countries cannot be evenly divided by ten, the surplus countries are distributed from the top (1. decile) to the bottom. If there are Country Ratings with identical absolute scores that would span a division in decile ranks, all ratings with an equal decile score are classified in the higher decile, resulting in a smaller number of Country Ratings in
the decile below.

Distribution of Ratings - Overview of the distribution of the ratings of all countries that are included in the ESG Country Rating universe (country
portrayed in this report: dark blue).

Rating Scale – countries are rated on a twelve-point scale from A+ to D-:
A+: the country shows excellent performance
D-: the country shows poor performance
Overview of the range of scores achieved in the ESG Country Rating universe (light blue) and indication of the grade of the country evaluated in this report (dark blue).

Sources of Information - The sources we draw on include international institutions such as the World Bank, the International Energy Agency (IEA) and the World Health Organisation (WHO), as well as respected non-governmental organisations such as Amnesty International, Transparency International and the Stockholm International Peace Research Institute (SIPRI). A selection of sources used for this report is illustrated in the annex.

Status & Prime Threshold – Countries are categorised as Prime if they achieve/exceed the minimum sustainability performance requirements (Prime threshold) defined by ISS ESG for the Country Rating.

Update cycle - The vast majority of rating criteria is updated annually, only single indicators receive event-driven updates. The exact timing is determined by the publication dates of major sources of information.

ANNEX 3: Quality management processes

SCOPE

TMG commissioned ISS ESG to compile a Green Bonds SPO. The Second Party Opinion process includes verifying whether the Green Bonds Framework aligns with the ICMA GBP 2021 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 GBP 2021
- ISS ESG Key Performance Indicators relevant for Use of Proceeds categories selected by the Issuer

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.

ISS ESG has conducted this independent Second Party Opinion of the Green Bonds to be issued by TMG based on ISS ESG methodology and in line with the ICMA GBP 2021.

The engagement with TMG took place from May to July 2022.

ISS ESG's 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 behaviour 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 bond issued in 2022 under the Green Bonds Framework. 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 (%)
Smart Energy & Urban Development		**43.0%**
1	Reduce greenhouse gases emitted by office buildings	4.5%
2	Promote the conservation of energy and energy management	5.7%
3	Promote the use of zero emission vehicles	0.3%
4	Promote advanced transportation technology and the use of bicycles	0.3%
5	Increase the utilization of renewable energy, i.e., solar, geothermal, hydrogen, sewerage heat.	32.3%
Sustainable Resource & Waste Management		**0.0%**
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	Promote the treatment of harmful waste	0.0%
Natural Environment Conservation		**9.3%**
10	Grow and conserve plants through the development of parks, greening in urban areas, the development of forests, etc.	9.3%
11	Conserve biological diversity (Develop tidelands in marine parks, etc.)	0.0%
Improvement of Living Environment		**10.8%**
12	Improve water quality and groundwater conservation	2.8%
13	Improve air quality	4.8%
14	Promote measures to prevent/remediate soil contamination	0.0%
15	Road improvement (heat insulation and water absorption)	3.3%
Adaptation for Climate Change		**36.9%**
16	Measures addressing rising temperatures in urban areas	0.0%
17	Measures to prevent flooding and prepare for other natural disasters	36.9%
Total		**100.0%**

About ISS ESG 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.

As part of our Sustainable (Green & Social) Bond Services, we provide support for companies and institutions issuing sustainable bonds, advise them on the selection of categories of projects to be financed and help them to define ambitious criteria.

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/

For more information on SPO services, please contact: SPOsales@isscorporatesolutions.com

For more information on this specific Green Bonds SPO, please contact: SPOOperations@iss-esg.com

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