

SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Green Bond

Tokyo Metropolitan Government (TMG)
17 July 2020

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Overall Evaluation of the Green Bond

Tokyo Metropolitan Government (TMG) commissioned ISS ESG to assist with its fourth Green Bond by assessing three core elements to determine the sustainability quality of the Framework:

1. TMG's Green Bond Framework – benchmarked against the International Capital Market Association's (ICMA) Green Bond Principles (GBPs).
2. The asset pool – whether the projects contributes positively to the UN SDGs and perform against ISS ESG's issue-specific key performance indicators (KPIs) (See Annex 2).
3. Review and classification of Japan's sustainability performance on the basis of the ISS ESG Country Rating.

ISS ESG ASSESSMENT SUMMARY

SPO SECTION	SUMMARY	EVALUATION ¹
Part 1: Performance against the GBPs	The issuer has defined a formal concept for its Green Bond Framework regarding use of proceeds, processes for project evaluation and selection, management of proceeds and reporting. This concept is in line with the ICMA GBPs.	Positive
Part 2: Sustainability quality of the asset pool	<p>The overall sustainability quality of the asset pool in terms of sustainability benefits, risk avoidance and minimisation is good based upon the ISS ESG Green Bond KPIs. The KPIs contain a clear description of eligible asset categories that can be found at page 11.</p> <p>All assets of the asset pool are located in Japan, where legislative frameworks set minimum standards, which reduce environmental and social risks.</p>	Positive
Part 3: Issuer sustainability performance	<p>Japan, the country which the issuer is part of, shows a good sustainability performance and has been given a rating of B-, which classifies it as Prime by the methodology of the ISS ESG Country Rating.</p> <p>It is rated 32nd out of 124 countries as of 17.07.2020. This equates to a high relative performance, with a Decile Rank² of 3.</p> <p>Japan has not yet progressed into a greener economy, as the dependence on fossil fuels is still great, and the country's climate record is correspondingly poor. However, economic efficiency is high, and the welfare state delivers a high level of social justice, good access to healthcare and favorable working conditions. Yet, the rising share of old people in the society, low levels of immigration and birthrates are challenging that model of society already today.</p> <p>The country has strong institutions, uncritical levels of corruption and a clean human rights record, although societal discrimination is prevailing on some grounds. In the medium term, Japan could give up its post-World War II pacifism with regard to tensions in East Asia, entailing greater risks for its political stability.</p>	<p>Status: Prime</p> <p>Rating: B-</p> <p>Decile Rank: 3</p>

¹ ISS ESG's evaluation will remain valid until any modification to the Framework or addition of new assets into the asset pool by the issuer and as long as the Country Rating does not change (last modification on the 23.06.2020). ISS ESG underwent a controversy screening of the asset pool on the 25.06.2020.

² Rank relative to industry group. 1 indicates a high relative ESG performance, while 10 indicates a low relative ESG performance.








Contribution of the Green Bond to the UN SDGs







Based on the assessment of the sustainability quality of the Green Bond asset pool and using a proprietary methodology, ISS ESG assessed the contribution of the TMG's Green Bond to the Sustainable Development Goals defined by the United Nations (UN SDGs).

This assessment is displayed on 5-point scale (see Annex 2 for methodology):

Significant Obstruction	Limited Obstruction	No Net Impact	Limited Contribution	Significant Contribution
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Each of the Green Bond's Use of Proceeds categories has been assessed for its contribution to, or obstruction of, the SDGs:

USE OF PROCEEDS CATEGORY	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
GREEN REAL ESTATE DEVELOPMENT		
Improved energy and resource efficiency in green real estate	Limited contribution	 
Sustainable plantings in green real estate	Limited contribution	
RENEWABLE ENERGY		
Solar power	Significant contribution	 
Hydro power (micro-hydro power systems in water supply infrastructures)	Significant contribution	 

USE OF PROCEEDS CATEGORY	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
POLLUTION PREVENTION AND CONTROL		
Wastewater treatment facility	Significant contribution	
PUBLIC TRANSPORT		
Public transport vehicles (diesel buses)	Limited contribution	
ADAPTATION TO CLIMATE CHANGE		
Flood prevention (no dams)	Limited contribution	  
SUSTAINABLE ROAD DEVELOPMENT		
Heat insulation on roads and pedestrian and cycling paths	Limited contribution	

The issuer’s Green Bond significantly contributes to the SDGs 6 “Clean water and sanitation”, 7 “Affordable and clean energy” and 13 “Climate Action” thanks to its Use of Proceeds categories contributing to sustainable energy use and wastewater treatment. The issuer’s Green Bond also have limited contribution on SDGs 3 “Good health and well-being”, 11 “Sustainable cities and communities” and 15 “Life on land”.

Regarding the public transportation vehicles, diesel-fueled buses have a limited contribution to the SDG 13 “Climate action” thanks to its public transport aspects and has no net impact on the SDG 7 “Affordable and clean energy” as diesel-fueled buses are considered as a neutral technology on this regard.

ISS ESG SPO ASSESSMENT

PART I: GREEN BOND PRINCIPLES

1. Use of Proceeds

The proceeds of this Green Bond will be used to finance selected eligible projects belonging to the Tokyo Environmental Master Plan issued in 2016. The projects are grouped into TMG's Environmental Categories:

TMG ENVIRONMENTAL CATEGORY ³		SHARE
Smart Energy & Urban Development		24.6%
1	Reduce greenhouse gas from office buildings	5.3%
2	Promote energy savings and energy management	8.8%
3	Promote advanced transportation technology use and bicycle use	0.3%
4	Enhance utilisation of renewable energy such as solar, geothermal, hydrogen, sewerage heat, etc.	10.2%
Sustainable Resource & Waste Management		0.00%
5	Reduce resource loss and increase eco-material use	0.00%
6	3R (reduce, reuse and recycle) – Promote cyclical use of waste	0.00%
7	Enhance utilisation of materials reducing environmental burden	0.00%
8	Promote harmful waste treatment	0.00%
Natural Environment Conservation		14.4%
9	Development of parks, planting trees along roads, afforestation, etc.	14.4%
10	Conserve biological diversity (development of tideland in marine park, etc.)	0.00%

³ Categories and percentages are reported as given by TMG.

TMG ENVIRONMENTAL CATEGORY		SHARE
Improvements of Living Environment		24.00%
11	Improve water quality and groundwater conservation	10.3%
12	Improve air quality	10.3%
13	Promote countermeasures against soil contamination	0.00%
14	Heat island countermeasures (heat insulation and water absorption)	3.3%
Adaptation for Climate Change		37.0%
15	Countermeasures against rising temperatures in urban areas	0.00%
16	Countermeasures against flood and natural disasters	37.0%
Total		100.00%

Opinion: ISS ESG considers the Use of Proceeds description provided by TMG’s Green Bond Framework as aligned with the GBPs and with the sustainability strategy of the issuer. The distribution of proceeds between project categories is well disclosed.

2. Process for Project Evaluation and Selection

The project selection for the inclusion in the Green Bond is carried out by TMG. The local government must either consult the Ministry of Internal Affairs and Communications and obtain its approval to issue municipal bonds or report to the Ministry before issuance.

The selection process is based on the Criteria for Evaluation and Selection of Target Projects defined by TMG. Those criteria include environmental, social and governance aspects.

CRITERIA FOR EVALUATION & SELECTION OF PROJECTS	
E1	Clear positive environmental impact
E2	Reduction of negative environmental impact
S1	Clear positive social impact
S2	Reduction of negative social impact
G1	Policy & regulatory compliance
G2	Feasibility / urgency
G3	Sustainable effect

In principle, Local Governments may issue municipal bonds to finance purposes stipulated in Article 5 of the Local Government Finance Act.

Such purposes include:

- Operating local public enterprises
- Investments and loans
- Refunding of existing municipal bonds
- Emergency disaster control projects, disaster recovery projects, disaster-relief projects, and
- Developing and constructing public infrastructure and facilities.

Local Governments must consult with the Ministry of Internal Affairs and Communications and obtain approval for the issuance of bonds.

However, the governments meeting a certain standard, can issue municipal bonds (such as publicly offering bonds) by reporting instead of the consultation.

Opinion: *ISS ESG finds that the process for Project Evaluation and Selection broadly aligns with the GBPs. The environmental and social criteria for which the projects are selected are also clearly listed. The actors responsible for the selection of the assets are described.*

3. Management of Proceeds

As the annual expenditure in each fiscal year of the TMG needs to be assigned to its annual revenue⁴, in principle, Tokyo Green Bonds funds are appropriated for target projects within the fiscal year. The Bureau of Finance manages the execution status of target projects to follow up the allotment of Tokyo Green Bonds funds as necessary and discloses the allotment status based on the methods of information disclosure shown in the document.

At the end of each fiscal year, as for all the revenue and expenditure including related to the projects funded by the TMG Bonds, the execution results and the settlement related documents will be created and submitted to the Tokyo Metropolitan Audit and Inspection Commissioners for examination. With the comments of the commissioners, the documents will be submitted to the Tokyo Metropolitan Assembly for certification.

Use of Tokyo Green Bonds appropriated funds will be clarified by classifying the funds into the accounting division based on the TMG accounting system and by doing this, the funds will be managed.

Opinion: *ISS ESG finds that the segregation and tracking of funds process aligns with the GBPs. However, the expected allocation period and temporary investments as well as the disclosure of portfolio balance of unallocated proceed could be added to align with best market practices.*

⁴ This is based on the principle of a one-year budget, Article 208, Local Government Autonomy Act

4. Reporting

TMG will annually disclose a result of the allocation of the Green Bond proceeds on their website³ including:

- The status of the allocation for the relevant issuance (in millions of yen)
- The environmental impacts
- The potential change of projects within project categories

Additional information on reporting is available in the table below:

NO.	CONTENTS	TIMING
1	Issuance policy	At all times
2	› Environmental project category, evaluation & selection process	At all times
3	Decision of target projects <ul style="list-style-type: none"> – Project name – Environmental category of Tokyo Green Bonds – Amount to be appropriated by the issuance (millions of yen) – Expected environmental impact 	Before issuance
4	Result of the appropriation <ul style="list-style-type: none"> – Project name – TMG Environmental Category – Results of appropriation for the issuance (millions of yen) – Expected environmental impact 	Following fiscal year of the issuance
5	Change of target projects, etc.	If necessary

Opinion: ISS ESG finds that the reporting is aligned to the requirements of the GBPs, but that more information could be disclosed. This includes disclosure on the types of impact indicators, level, scope and duration of reporting, both in terms of allocation and impact.

External review

Second Party Opinion

ISS ESG has reviewed TMG's Green Bond and has certified its alignment with ICMA's Green Bond Principles 2018. The SPO will be made available on TMG's website. This is the fourth SPO received by TMG from ISS ESG.

PART II: SUSTAINABILITY QUALITY OF THE GREEN BOND 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 CATEGORIES⁵
A	Green real estate development	
A.1	Improved energy and resource efficiency in green real estate	1 & 2
A.2	Sustainable plantings in green real estate	9
B	Renewable energy	
B.1	Solar power	4
B.2	Hydro power (micro-hydro systems in water supply infrastructures)	2 & 4
C	Pollution prevention and control	
C.1.	Wastewater treatment facility	11
D	Public transport	
D.1.	Public transport vehicles	12
E.	Adaptation to climate change	
E.1.	Flood prevention (no dams)	11 & 16
F	Sustainable road development	
F.1.	Heat insulation on roads and pedestrian and cycling paths	3 & 14

⁵ See pp. 7 and 8 for details.

Evaluation of the assets

A. Green real estate development

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

As a Use of Proceeds category, improvement of energy and resource efficiency in green real estate has a limited contribution to the SDGs 7 “Affordable and clean energy” and 13 “Climate Action”. Additionally, when considering the deeper ESG management, improvement of energy and resource efficiency in green real estate can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Percentage improvement of energy and resource efficiency	
<ul style="list-style-type: none"> ✓ According to TMG, most of the financed projects are expected to achieve a percentage improvement of more than 50% once completed. 	
Working conditions during construction and maintenance work	
<ul style="list-style-type: none"> ✓ 100% of financed projects are located in Japan where high standards regarding labour rights (e.g. ILO core conventions) and health and safety are in place for construction and maintenance work conducted by own employees and contractors. 	
Social standards in the supply chain	
<ul style="list-style-type: none"> ✓ Two major suppliers provide for high labour and health and safety standards (e.g. ILO core conventions). 	
<ul style="list-style-type: none"> ○ For the other suppliers, no information is available on where the electronic equipment will be sourced from. Therefore, it cannot be determined whether high labour standards will be applied in the supply chain (e.g. ILO core conventions). 	
Environmental aspects of installed electronic equipment	
<ul style="list-style-type: none"> ✓ 100% of financed projects meet high environmental standards regarding take-back and recycling of electronic equipment at end-of-life stage. 	
<ul style="list-style-type: none"> ✓ For 100% of financed projects the use of certain hazardous substances (e.g. lead, mercury, cadmium) is restricted in electrical equipment by the Japanese law for promotion of effective utilisation of resources (J-MOSS). 	

Controversy assessment

A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.

Impact indicators for the projects within this project category according to TMG*

- Energy consumption reduced in 4 out of 5 projects: 8,023,097 kWh/year
- GHG emissions avoided in 1 out of 5 projects: 19,000 tonnes of CO₂ (sum till the end of FY2020)

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

A.2. Sustainable plantings in green real estate

As a Use of Proceeds category, sustainable planting in green real estate has a limited contribution to the SDG 11 “Sustainable cities and communities”. Additionally, when considering the deeper ESG management, sustainable planting in green real estate can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Environmental aspects of plantings	
<p>✓ According to TMG, 100% of financed projects use native species or select plants in line with characteristics of the region and have a reduced need of irrigation.</p>	 
<p>○ However, no information is available on whether a high capacity of CO₂ absorption and storage are taken into consideration.</p>	
Working conditions at building sites	
<p>✓ 100% of financed projects are located in Japan where high standards regarding labour rights (e.g. ILO core conventions) and health and safety are in place for construction and maintenance work conducted by own employees and contractors.</p>	
Environmental aspects in the supply chain	
<p>✓ According to TMG, plants originate from sources that provide for sustainable soil and biodiversity management along the whole value chain (e.g. strong position on pesticide and chemical fertiliser use, deforestation, soil degradation, biodiversity).</p>	

- For 100% of financed projects, plants originate from sources that regulate the use of genetically modified organisms, however the use is not prohibited.



- ✓ According to TMG, plants originate from sources that are not located in regions with high levels of water stress or sources that were subject to a water impact assessment.



Social standards in the supply chain

- ✓ According to TMG, plants are to be sourced from Japan and thus, high standards regarding labour rights (e.g. ILO core conventions) and health and safety are applied in the supply chain.



- ✓ According to TMG, affected communities are to be informed, grievance mechanisms and compensation schemes need to be in place and violations of human rights shall be avoided.



Controversy assessment

A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.

Impact indicators for the projects within this project category according to TMG*

- Area of greenings in 1 out of 3 projects: 6,868m²
- Area of park development in 2 out of 3 projects: 37,530m²






**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

B. Renewable energy

B.1. Solar power

As a Use of Proceeds category, solar power has a significant contribution to the SDGs 7 “Affordable and clean energy” and 13 “Climate Action”. Additionally, when considering the deeper ESG management, solar power can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Site Selection (not applicable for PV roof systems)	
<ul style="list-style-type: none"> - Not applicable as all solar systems are PV roof systems 	
Supply chain standards	
<ul style="list-style-type: none"> ✓ Most of the projects provide for high labour and health and safety standards in the supply chain of solar modules (e.g. ILO core conventions). 	
Environmental aspects of PV plants	
<ul style="list-style-type: none"> ✓ According to TMG, approximately 88.6% of financed projects reach a conversion efficiency of at least 15%. 	
<ul style="list-style-type: none"> ✓ According to TMG, 100% of financed projects meet high environmental standards regarding take-back and recycling of PV modules at end-of-life stage. 	
<ul style="list-style-type: none"> ✓ According to TMG, in 100% of financed projects the use of certain hazardous substances (e.g. lead, mercury, cadmium) is restricted. 	
Working conditions during construction and maintenance work	
<ul style="list-style-type: none"> ✓ 100% of financed projects are located in Japan where high standards regarding labour rights (e.g. ILO core conventions) and health and safety are in place for construction and maintenance work conducted by own employees and contractors. 	
Controversy assessment	
<p>A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.</p>	

Impact indicator for the projects within this project category according to TMG*




- Renewable energy consumption for 3 out of 3 projects: 605,786 kWh/year

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

B.2. Hydro power (micro-hydro systems in water supply infrastructures)

As a Use of Proceeds category, micro-hydro power systems have a significant contribution to the SDGs 7 “Affordable and clean energy” and 13 “Climate Action”. Additionally, when considering the deeper ESG management, micro-hydro power systems can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG ESG KPI	ASSOCIATION WITH THE SDGS
Consideration of environmental aspects during planning and construction	
<p>✓ According to TMG, all financed projects meet high environmental standards and requirements during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).</p>	
Working conditions during construction and maintenance work	
<p>✓ 100% of financed projects are located in Japan where high standards regarding labour rights (e.g. ILO core conventions) and health and safety are in place for construction and maintenance work conducted by own employees and contractors.</p>	
Environmental aspects of micro-hydro systems in water supply infrastructures	
<p>✓ According to TMG, 100% of financed projects feature measures to reduce nuisances from the water distribution system (e.g. earthquake resistance measures, trouble monitoring).</p>	
Controversy assessment	
<p>A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.</p>	

Impact indicators for the projects within this project category according to TMG*

- Energy production (including electricity sales) for 1 out of 2 projects: 386,000 kWh / year
- Energy consumption reduced in 1 out of 2 projects: 930,000 kWh / year








**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

C. Pollution prevention and control

C.1. Wastewater treatment facility

As a Use of Proceeds category, wastewater treatment facilities have a significant contribution to the SDG 6 “Clean water and sanitation”. Additionally, when considering the deeper ESG management, wastewater treatment facilities can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG ESG KPI	ASSOCIATION WITH THE SDGS
Site selection	
<ul style="list-style-type: none"> ✓ According to TMG, the financed projects are not located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV). - As the financed projects are add-ons to existing facilities, an environmental impact assessment is not required. 	
Community dialogue	
<ul style="list-style-type: none"> ✓ According to TMG, all the financed projects feature community dialogue as an integral part of the planning process (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes). 	 
Environmental aspects of construction and operation	
<ul style="list-style-type: none"> ✓ According to TMG, 100% of financed projects feature measures to reduce nuisances from the water distribution system (e.g. earthquake resistance measures, trouble monitoring). 	
<ul style="list-style-type: none"> ✓ According to TMG, 100% of financed projects feature measures to reduce the environmental impacts of sewage sludge disposal (e.g. exclusion of introduction into waterways and landfill, exclusion or standards for agricultural use, utilisation of energy). 	
<ul style="list-style-type: none"> ✓ 100% of the financed project follow high standards regarding the quality of treated water. 	
Working conditions during construction and operation	
<ul style="list-style-type: none"> ✓ 100% of financed projects are located in Japan where high standards regarding labour rights (e.g. ILO core conventions) and health and safety are in place for construction and operational work conducted by own employees and contractors 	

Controversy assessment

A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.

Impact indicator for the projects within this project category according to TMG*

- Water stored for 1 out of 1 project: 1.5 million m³ (until the end of FY2020)





**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

D. Public transport

D.1. Public transport vehicles (buses)

As a Use of Proceeds category, diesel-fueled buses have a limited contribution to the SDG 13 “Climate action” thanks to its public transport aspects and has no net impact on the SDG 7 “Affordable and clean energy” as diesel-fueled buses are considered as a neutral technology on this regard. Additionally, when considering the deeper ESG management, public transport vehicles including diesel-fueled buses can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG ESG KPI	ASSOCIATION WITH THE SDGS
Productions standards	
<ul style="list-style-type: none"> ✓ 100% of financed project provide for a comprehensive environmental management system at the manufacturing sites of trains/buses. 	
<ul style="list-style-type: none"> ✓ 100% of financed vehicles are produced at manufacturing sites that provide for high labour and health and safety standards (e.g. ILO core conventions). 	
Environmental aspects of buses	
<ul style="list-style-type: none"> ✓ 100% of financed vehicles are sourced from a supplier who conducts life-cycle-assessments. 	
<ul style="list-style-type: none"> ○ All financed buses are equipped with diesel engines which are not as energy efficient as electric motors and are more polluting. 	

Social aspects of buses

- ✓ 100% of the financed buses ensure health and safety for both passengers and operators (fire protection, minimisation of noise exposure, accessibility).



Controversy assessment

A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.

Impact indicator for the projects within this project category according to TMG*

- Percentage of NOx (Nitrogen oxide) emissions reduced for 1 out of 1 project: 84%/year
- Percentage of PM (Particulate matter) emissions reduced in 1 out of 1 project: 72%/year (reduction from exchanged old buses).

**ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.*

E. Adaptation to climate change

E.1. Flood prevention (no dams)

As a Use of Proceeds category, flood prevention assets have a limited contribution to the SDG 3 “Good health and well-being”, 11 “Sustainable cities and communities” and 13 “Climate action. Additionally, when considering the deeper ESG management, flood prevention assets can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG ESG KPI

ASSOCIATION WITH THE SDGS

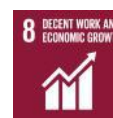
Consideration of environmental aspects during planning and construction

- ✓ According to TMG, 100% of financed projects underwent assessments at the planning stage similar to environmental impact assessments.
- ✓ According to TMG, all financed projects meet high environmental standards and requirements during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).



Working conditions during construction and operation

- ✓ 100% of financed projects are located in Japan where high standards regarding labour rights (e.g. ILO core conventions) and health and safety are in place for construction and operational work conducted by own employees and contractors.



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

- ✓ According to TMG, for 2 of the 3 financed projects the relevant plans are scientifically monitored.
- TMG green procurement principles take into consideration biodiversity when construction work is carried out. However, due to the densely built-up environment within Tokyo, water bodies are generally not modelled on the natural state of the water body.



Community dialogue

- ✓ According to TMG, financed projects feature community dialogue as an integral part of the planning process and construction phase (e.g. information of communities, grievance mechanisms and compensation schemes).



Social standards in the supply chain

- ✓ In all projects high labour standards are applied in the supply chain (e.g. ILO core conventions).



Controversy assessment

A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.

Impact indicators for the projects within this project category according to TMG*

- Avoidance rate from flooding caused by 50mm/h rain in 1 out of 6 projects: 74% (by the end of FY2020)
- Percentage of rivers with countermeasures in 1 out of 6 projects: 68.1%
- Water storage amount in 1 out of 6 projects: 1,056,300m³ (by the end of FY2025)
- Length of development in 1 out of 6 projects: 0.19 km (seawall and shore protection)
- Development size in 2 out of 6 projects: 105.3 km (seawall, internal shore protection, and offshore breakwater (by the end of FY2021))
- Development number in 1 out of 6 projects: 23 (water gates and drainage pump station (by the end of FY2021))

*ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.

F. Sustainable road development

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

As a Use of Proceeds category, heat insulation on roads and pedestrian and cycling paths have a limited contribution to the SDG 13 “Climate action”. Additionally, when considering the deeper ESG management, heat insulation on roads and pedestrian and cycling paths can be associated to other SDGs. The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG ESG KPI	ASSOCIATION WITH THE SDGS
Site selection	
<ul style="list-style-type: none"> ✓ According to TMG, none of the projects are located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV). 	
Environmental aspects of construction	
<ul style="list-style-type: none"> ✓ According to TMG, all financed projects meet high environmental standards during the construction phase. ✓ For the financed projects, measures to effectively minimise the environmental impact during the construction phase are in place. 	
Sustainable materials	
<ul style="list-style-type: none"> ✓ For all financed projects, measures for the use of sustainable construction materials are in place (e.g recycled/green asphalt, water retentive/heat insulating pavement). 	
Working conditions during construction and maintenance work	
<ul style="list-style-type: none"> ✓ 100% of financed projects are located in Japan where high standards regarding labour rights (e.g. ILO core conventions) and health and safety are in place for construction and operational work conducted by own employees and contractors 	
Controversy assessment	
<p>A controversy assessment on the assets did not reveal any controversies that can be attributed to TMG.</p>	
Impact indicators for the projects within this project category according to TMG*	

- Length of development in 1 out of 2 projects: 15.3km of cycling paths (by the end of FY2024)
- Development area of heat insulating pavement in 1 out of 2 projects: 17.823km

*ISS ESG does not provide impact calculations, nor checks the plausibility of the data provided by the issuer.

PART III: ASSESSMENT OF JAPAN'S ESG PERFORMANCE

The ISS ESG Country Rating comprises a rating scale from A+ (excellent) to D- (poor).

COUNTRY	STATUS	RATING	DECILE RANK
JAPAN	PRIME	B-	3

This means that the country performed well in terms of sustainability, compared against other countries of the ISS ESG universe. In ISS ESG's view, the securities issued by the country therefore meet the basic requirements for sustainable investments.

As of 17.07.2020, this rating places Japan 32nd out of 124 countries rated by ISS ESG.

The ISS ESG Country Rating evaluates the following eight areas in order to determine the sustainability performance of a country:

Social and Governance Performance

- Social Rating
- Political System and Governance
- Human Rights and Fundamental Freedoms
- Social Conditions

Environmental Performance

- Environmental rating
- Natural Resources
- Climate Change and Energy
- Production and Consumption

In the social part of the rating, Japan achieved a rating that was above average compared to other rated countries.

In the environmental part, the country shows a below average performance compared to other rated countries, apart from the "Production and Consumption" area, where it slightly outperforms the other countries.

Japan violates the exclusion criteria death penalty, climate protection, coal power generation, and whaling screened by ISS ESG.

Details on the rating of the issuer can be found in Annex 1.

DISCLAIMER

1. Validity of the SPO: For TMG's first issuance following the SPO release.
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 the highest quality standards which are customary in responsibility research worldwide. In addition, we create a Second Party Opinion (SPO) on bonds based on data from the issuer.
3. We would, however, point out that we do not warrant that the information presented in this SPO is complete, accurate or up to date. Any liability on the part of ISS ESG in connection with the use of these SPO, the information provided in them and the use thereof shall be excluded. In particular, we point out that the verification of the compliance with the selection criteria is based solely on random samples and documents submitted by the issuer.
4. All statements of opinion and value judgements given by us do not in any way constitute purchase or investment recommendations. In particular, the SPO is no assessment of the economic profitability and credit worthiness of a bond but refers exclusively to the social and environmental criteria mentioned above.
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ANNEX 1: ISS ESG Country Rating

The following pages contain extracts from Japan's 2020 ISS ESG Country Rating.

ESG Country Rating

Japan

Status **Prime**

Rating **B-**

Prime Threshold **B-**

Decile Rank **3**



Absolute Rating



The assessment of a company's sustainability performance is based on approximately 100 criteria, selected specifically for each industry. A company's failure to disclose, or lack of transparency, regarding these matters will impact a company's rating negatively

Decile Rank



Indicates decile rank relative to all rated entities. A decile rank of 1 indicates a high relative ESG performance, while a 10 indicates a lower relative ESG performance.

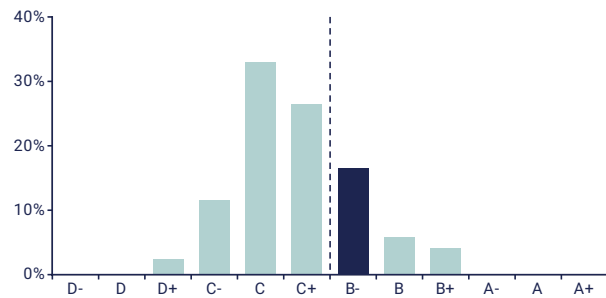
Country Leaders

Country (in alphabetical order)	Grade
Denmark	B+
Sweden	B+
Switzerland	B+

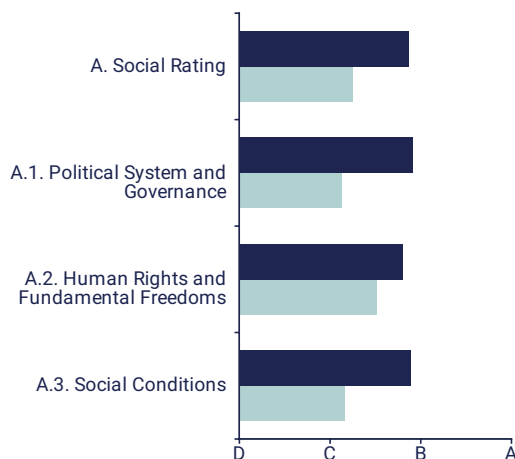
Legend: ■ Universe ■ Country --- Prime

Distribution of Ratings

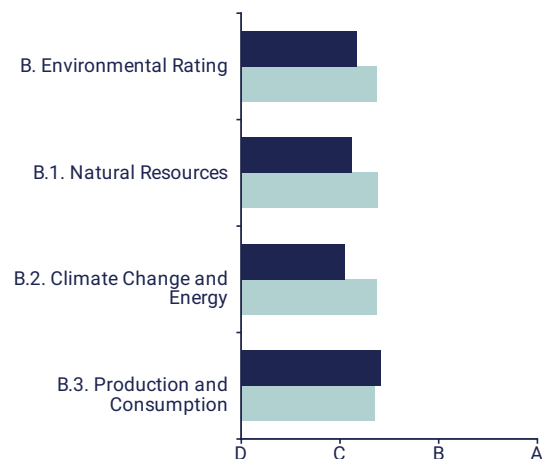
124 entities in the universe



Governance and Social Performance



Environment Performance



Japan

Additional Country Information

Country Profile

Politics and Geography

National territory (2019):	377962 [km2]
Capital (2018):	Tokyo
Climate (2018):	mostly warm oceanic / continental
Government type (2018):	parliamentary constitutional monarchy

Population

National population (2019):	125853035 [people]
Population change (2018):	-0.2 [in %]
Population density (2019):	345.3 [persons per km2]
Urban population (2018):	91.62 [as % of total]

Economy and Society

GDP per capita (2019):	45546.19 [in USD (PPP)]
Income group (2019):	high income
Real GDP growth (2018):	0.8 [in %]
Consumer prices (2019):	0.98 [in %]
Current account balance (2018):	3.5 [as % of GDP]
General government gross debt (2018):	237.1 [as % of GDP]
Budget deficit (2017):	-4.6 [in %]
Unemployment rate (2018):	2.4 [as % of labour force]
Human Development Index (2018):	19 [index rank]

Japan

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 58 countries, as well as Hong Kong and the European Union, representing 96 per cent of global outstanding sovereign debt (as of June 2018). 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 normalised 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 2: Methodology

ISS ESG Green KPIs

The ISS ESG Green Bond KPIs serves 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 bond.

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. Those indicators may be tailor-made to capture the context-specific environmental and social risks.

To review the KPIs used in this SPO, please contact Federico Pezzolato (details below) who will send them directly to you.

Asset evaluation 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’s (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 contributes to related SDGs.

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 Information about SPO services, and this Green/Social Bond, contact:

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