ISS-oekom

Second Party Opinion

Assessment of the Sustainability Quality of the Green Bond of Tokyo Metropolitan Government

20 July 2018

Aim and Scope of this Second Party Opinion

Tokyo Metropolitan Government (TMG) commissioned ISS-oekom to assist with the issuance of its second Green Bond by confirming the sustainable added value of the bond. The aim of the Green Bond issuance is to fund projects that reduce environmental burdens, such as climate change (mitigation and adaptation) and projects that foster the efficient use of natural resources and biodiversity protection.

ISS-oekom's mandate included the following services:

- Definition of Green Bond KPIs ("ISS-oekom Green Bond KPIs") containing a clear description of eligible asset categories and the social and environmental criteria assigned to each category for evaluating the sustainability-related performance of the assets (re-) financed through the proceeds of the bond.
- Analysis of the alignment of the Green Bond to be issued against ICMA's Green Bond Principles.
- Evaluation of compliance of the Green Bond with the ISS-oekom Green Bond KPIs.
- Review and classification of Japan's sustainability performance on the basis of the ISS-oekom Country Rating.

Overall Evaluation of the Green Bond

Most of the projects selected for inclusion in the Green Bond of Tokyo Metropolitan Government offer added social and/or environmental value. However, for 5% of the funded assets (heat island countermeasures such as heat insulation and increasing water absorption capacities of roads) ISS-oekom cannot identify a strong positive overall impact.

- Tokyo Metropolitan Government has defined a formal concept for its Green Bond 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 (Part I of this Second Party Opinion).
- The overall sustainability quality in terms of sustainability benefits and risk avoidance and minimisation of most of the funded assets is good. (Part II of this Second Party Opinion).
- The country, which the issuer forms part of, shows an average sustainability performance (Part III of this Second Party Opinion).

There are some aspects for which more specific selection or performance criteria would be strongly recommended as that could add to the overall quality of the Green Bond.

The most important aspects include strict human rights standards for the sourcing of timber (project category A.2 Sustainable timber use in green real estate), and high standards regarding the environmental aspects of buses (project category D.1 Public transport vehicles).

Additionally, ISS-oekom suggests a follow up on the controversy related to the sourcing of timber ("Controversy assessment" in project category A.2 Sustainable timber use in green real estate), to ensure an accurate communication of the controversy to the public and to evaluate the asset's eligibility in future green bonds.

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[1]		Share
Smart Energy & Urban Development		**31.90%**
1	Reduce greenhouse gas from office buildings	6.00%
2	Promote energy savings and energy management	13.90%
3	Promote advanced transportation technology use and bicycle use	1.00%
4	Enhance utilisation of renewable energy such as solar, geothermal, hydrogen, sewerage heat, etc.	11.00%
Sustainable Resource & Waste Management		**1.70%**
5	Reduce resource loss and increase eco-material use	1.70%
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		**6.00%**
9	Development of parks, planting trees along roads, afforestation, etc.	6.00%
10	Conserve biological diversity (development of tideland in marine park, etc.)	0.00%

[1] Categories and percentages are reported as given by TMG.

TMG Environmental Category		Share
Improvements of Living Environment		**21.90%**
11	Improve water quality and groundwater conservation	6.00%
12	Improve air quality	9.70%
13	Promote countermeasures against soil contamination	0.00%
14	Heat island countermeasures (heat insulation and water absorption)	6.20%
Adaptation for Climate Change		**38.50%**
15	Countermeasures against rising temperatures in urban areas	0.00%
16	Countermeasures against flood and natural disasters	38.50%
Total		**100.00%**

Projects grouped into the TMG Environmental Category "14 Heat island countermeasures (heat insulation and water absorption)", consist of road upgrades for pedestrian and cycling use (1.2%), and road upgrades for the use of conventional combustion engine vehicles (5%).
ISS-oekom acknowledges the added social and environmental value of the pedestrian paths, but cannot identify a strong positive impact in the upgrades of roads used by combustion engine vehicles and therefore 5% of the projects have not been included in this Second Party Opinion.

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

3) Management of Proceeds

According to Article 208 of the Local Autonomy Act, the annual expenditure of TMG in each fiscal year shall be assigned to its annual revenue. In accordance with this principle, TMG's Green Bond funds are allocated to projects within the fiscal year.

The Bureau of Finance monitors the allocation of the Green Bond funds and discloses the allocation status. All green bond related information will be disclosed on TMG's website[2].

After the end of the fiscal year, all TMG bonds, revenues and expenditures financed through them are audited by the Tokyo Metropolitan Audit and Inspection Commissioners. The Green Bond funds will be classified as such within TMG's accounting system.

4) Reporting

TMG will annually disclose a result of the allocation of the Green Bond proceeds on their website[2] 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

[2] English: http://www.zaimu.metro.tokyo.jp/bond/en/en.html;
Japanese: http://www.zaimu.metro.tokyo.jp/bond/ir/ir.html

Part II – Sustainability Quality of the Green Bond

1) ISS-oekom Green Bond KPIs

The ISS-oekom 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 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 Green Bond can be clearly identified and described.

The sustainability criteria are complemented by specific indicators, which enable quantitative measurement of the sustainability performance of the Green Bond and which can also be used for reporting. Details on the individual criteria and indicators for the categories can be found in Annex 1 „ISS-oekom Green Bond KPIs".

2) Evaluation of the Assets Financed by the Green Bond

Method

ISS-oekom has evaluated whether the assets included in the Green Bond match the categories and criteria listed in the ISS-oekom Green Bond KPIs. The evaluation was carried out using information and documents provided to ISS-oekom on a confidential basis by TMG (e.g. information on credit guidelines). Further, national legislation and standards, depending on the asset location, were drawn on to complement the information provided by TMG.

The following table provides a mapping of TMG'S environmental categories to ISS-oekom's project categories:

ISS-oekom Project Categories		TMG Environmental Categories[3]
A	Green real estate development	
A.1	Improved energy and resource efficiency in green real estate	1 & 2
A.2	Sustainable timber use in green real estate	5
A.3	Sustainable plantings in green real estate	9
B	Renewable energy	
B.1	Solar power	4
B.2	Geothermal heating and cooling systems	4
B.3	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)	16
F	Sustainable road development	
F.1.	Pedestrian and Cycling paths	3 & 14*

*only pedestrian and cycling paths.

[3] See pp. 3 and 4 for details.

Findings

A. Green real estate development

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

Sustainability risks and benefits of the project category

The main environmental benefit of energy and resource efficiency comprises climate protection through the long-term reduction of energy and resource consumption and therefore a transition towards a low carbon economy. Further, improvements to energy and resource efficiency help to conserve natural resources and reduce environmental impact.

At the same time, there are possible sustainability risks that need to be taken into account. Possible social risks stem from working conditions at construction sites and the supply chain of installed electronic equipment. Relevant environmental issues arise from the use of certain hazardous substances in electrical and electronic equipment and recycling at the end-of-life stage.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Percentage improvement of energy and resource efficiency
  - ✓ According to TMG, most of the financed projects are expected to achieve a percentage improvement of more than 50% once completed.
- 2. Working conditions during construction and maintenance work
  - ✓ 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.
- 3. Social standards in the supply chain
  - ✓ One major supplier provides for high labour and health and safety standards (e.g. ILO core conventions).
  - O 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).
- 4. Environmental aspects of installed electronic equipment
  - ✓ 100% of financed projects meet high environmental standards regarding take-back and recycling of electronic equipment at end-of-life stage.

- ✓ 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 underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Energy consumption reduced in 5 out of 6 projects: 6,879,897 kWh/year
- GHG emissions avoided in 1 out of 6 projects: 19,000 tonnes of CO_2 (until the end of FY2020)

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

A.2. Sustainable timber use in green real estate

Sustainability risks and benefits of the project category

The use of sustainable timber in real estate is beneficial from an environmental point of view as it allows the use of natural resources and supports the preservation and protection of valuable ecosystems at the same time. Additionally, timber as a building material has a lower overall carbon footprint compared to alternatives such as steel, concrete or brick, as less energy is used in its production and transport. From a social point of view, the use of sustainable timber can contribute to the livelihoods of communities that depend on sustainable forest management as forests provide them with food, energy, shelter and income.

Still, when evaluating the use of timber in building projects, certain social and environmental risks need to be taken into account. Most of these issues stem from how the timber is sourced. Supply of timber poses a major environmental threat to habitat and wildlife through logging in ecologically significant forests, fertilizer use or water stress. Social risks are mainly posed by disrespect of labour and human rights and disregard of rights of local communities regarding forest access, economical income and cultural identity. As with any building project, working conditions at construction sites can also be a concern.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Working conditions on construction sites
  - ✓ 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.
- 2. Environmental standards in the supply chain
  - ✓ For 2 of the 3 financed projects timber originates from sources that are not located in regions with high levels of water stress or that conducted water impact assessments.
  - ✓ For 100% of financed projects timber originates from sources that ensure conservation of natural habitat and wildlife (e.g. no logging of primary forest, ecologically significant secondary forest or protected areas such as Ramsar sites, UNESCO Natural Word Heritage, IUCN protected areas I-IV, Intact Forest Landscape).
  - ✓ For 2 of the 3 financed projects timber originates from sources that provide for measures to protect biodiversity (e.g. biodiversity assessment, creation of corridors between biodiversity hotspots, training of workers and managers).
  - ✓ For 2 of the 3 financed projects timber originates from sources that exclude genetically modified organisms.

- For 1 of the 3 financed projects timber originates from sources that provide for high standards regarding use of chemicals and fertilizers (e.g. exclusion of certain fertilizers, reduction targets). No information is available for the other 2 projects.

- 3. Social standards in the supply chain
  - ✓ According to TMG, timber is 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.
  - For 1 of the 3 financed projects timber originates from sources that provide for high standards regarding use of chemicals and fertilizers (e.g. exclusion of certain fertilizers, reduction targets). No information is available for the other 2 projects.
  - ✓ 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.
  - For 1 of the 3 financed projects, further standards regarding human rights and consideration of impacts on local communities (e.g. respect for internationally recognised human rights, commitment to seek free, prior and informed consent) are in place. No information is available for the other 2 projects.

Controversy assessment

- A controversy assessment on the underlying assets revealed a controversy for all the three stadiums where timber installations took place.
  A petition with more than 110,000 signatures has been launched by the NGO "Rainforest Action Network", saying the procurement policy regarding the timber used in the three venues is not transparent and rigorous enough and that the timber has been sourced unsustainably from countries such as Indonesia and Malaysia.
  The Olympic organisers on the other side, keep claiming the timber used in the facilities are sustainably sourced following the Sustainable Sourcing Code for Timber.

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

- Timber used in 3 out of 3 projects: more than 780m^2

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

A.3. Sustainable plantings in green real estate

Sustainability risks and benefits of the project category

The planting of green areas in the build environment is beneficial from a sustainability point of view as living plants absorb CO_2 as part of photosynthesis and thereby contribute to climate protection as well as to improving air quality. Further, from a social point of view, green areas can improve health and well-being of local residents.

At the same time, possible sustainability risks stem from intensive resource use for cultivation in case plants are not suited to the region, climate and soil. Within the supply chain, mismanagement of soil, biodiversity and water constitute environmental risks. Social risks are mainly posed by disrespect of labour and human rights.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Environmental aspects of plantings
  - ✓ 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.
  - O However, no information is available on whether a high capacity of CO2 absorption and storage are taken into consideration.
- 2. Working conditions at building sites
  - ✓ 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.
- 3. Environmental aspects in the supply chain
  - ✓ 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).
  - O 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.

- 4. 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.
  - ✓ 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 underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Area of greenings in 2 out of 3 projects: more than 10,866m^2
- Area of park development in 1 out of 3 projects: 30,000m^2

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

B. Renewable energy

B.1. Solar power

Sustainability risks and benefits of the project category

The environmental benefits of solar power comprise climate protection and the transition towards a low carbon economy. Further benefits are less environmental intervention (e.g. resource extraction, releases of waste streams to water or soil) and less need for cooling water in comparison to fossil fuel or nuclear power plants. From a social perspective, the transition from fossil fuels to solar power lowers negative human rights impacts of oil, gas and coal production (e.g. land-use conflicts, resettlement). In addition – different from fossil fuels combustion – solar power does not impact air quality.

With respect to potential risks, the manufacturing of solar panels in developing countries such as China can have negative social and environmental impacts. As the production of solar panels requires scarce raw materials and as the panels contain hazardous substances, aspects such as recyclability, management of hazardous substances and conversion efficiency are relevant to evaluate the overall environmental performance of related projects. However, in comparison with other renewable energy sources, social and environmental risks related to solar power are deemed to be low.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Site Selection (not applicable for PV roof systems):
  - Not applicable as all solar systems are PV roof systems.
- 2. Supply chain standards
  - ✓ 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).
- 3. Environmental aspects of PV plants
  - ✓ According to TMG, approximately 98.5% of financed projects reach a conversion efficiency of at least 15%.
  - ✓ According to TMG, 100% of financed projects meet high environmental standards regarding take-back and recycling of PV modules at end-of-life stage
  - ✓ According to TMG, in 100% of financed projects the use of certain hazardous substances (e.g. lead, mercury, cadmium) is restricted.
- 4. Working conditions during construction and maintenance work
  - ✓ 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.

- However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.

Controversy assessment

- A controversy assessment on the underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Renewable energy consumption for 7 out of 7 projects: 730,810 kWh/year

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

B.2. Geothermal heating and cooling systems

Sustainability risks and benefits of the project category

The environmental benefits of geothermal power comprise climate protection and the transition towards a low carbon economy. Further benefits are less environmental intervention (e.g. resource extraction, releases of waste streams to water or soil) and less need for cooling water in comparison to fossil fuel or nuclear power plants. From a social perspective, the transition from fossil fuels to geothermal power lowers negative human rights impacts of oil, gas and coal production (e.g. land-use conflicts, resettlement). In addition – different from fossil fuels combustion – geothermal power does not impact air quality.

However, the installation of geothermal heating and cooling systems can result in negative environmental impacts at construction sites (e.g. ground and groundwater risks). Further risks include potentially poor environmental standards of geothermal installations (i.e. contamination of ground water) and potentially poor working conditions during construction and installation.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Site selection
  - ✓ According to TMG, none of the projects are located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV).
  - ✓ According to TMG, all financed projects underwent environmental impact assessments at the planning stage.
  - ✓ According to TMG, none of the projects are located in the proximity to major fault lines.
- 2. Community dialogue
  - ✓ According to TMG, all 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).
- 3. Environmental aspects of construction and operation
  - ✓ According to TMG, all financed projects meet high environmental standards during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).
  - ✓ According to TMG, all financed projects provide for measures to avoid contamination of soil and groundwater (e.g. well casing, management of waste streams, measures for the disposal of flowback and production water).
  - O No information is available on projects that provide for seismic monitoring.
- 4. Working conditions during construction and maintenance work

- ✓ 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 work conducted by own employees and contractors.
- O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.

Controversy assessment

- A controversy assessment on the underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Renewable energy installed system capacity for 2 out of 2 projects: 550 kW and 600 kW

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

B.3. Hydro power (micro-hydro systems in water supply infrastructures)

Sustainability risks and benefits of the project category

From an environmental perspective, hydro power projects contribute to climate protection and to a transition towards a low-carbon economy. Further benefits are less environmental degradation and pollution (e.g. through resource extraction, releases of waste streams to water or soil) in comparison to fossil fuels or nuclear power plants. From a social perspective, the transition from fossil fuels to hydro power decreases negative human rights impacts of oil, gas and coal production (e.g. land-use conflicts, resettlement). In addition – in comparison to fossil fuel combustion – hydro power does not negatively impact air quality.

However, the construction and operation of micro-hydro systems in water supply infrastructures can result in negative environmental impacts. Faulty pipes might lead to leakages and thus water loss in the water distribution system. The main social risks stem from potentially poor working conditions during construction and in the operational stage.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Consideration of environmental aspects during planning and construction
  - ✓ 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).
- 2. Working conditions during construction and maintenance work
  - ✓ 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.
- 3. Environmental aspects of micro-hydro systems in water supply infrastructures
  - ✓ According to TMG, 100% of financed projects feature measures to reduce nuisances from the water distribution system (e.g. earthquake resistance measures, trouble monitoring).

Controversy assessment

- A controversy assessment on the underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Energy production (including electricity sales) for 1 out of 2 projects: 217,000 kWh/year
- Energy consumption reduced in 1 out of 2 projects: 5,983,000 kWh/year

*ISS-oekom 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

Sustainability risks and benefits of the project category

From a sustainability point of view, wastewater treatment is beneficial as it helps to maintain clean water for reuse, to optimise resource recovery and provide a solution to water shortages. Furthermore, wastewater treatment can safeguard water sources and the ground from contamination through wastewater, which is harmful to people as well as flora and fauna. Properly treated wastewater contains fewer nutrients, which would otherwise stimulate growth of algae and reduce the availability of oxygen, therefore contributing to the protection of aquatic life.

At the same time, the construction and operation of wastewater treatment facilities can present social as well as environmental risks. Social risks mainly stem from workers' health and safety and from nuisance of local residents. Environmental risks stem from possible environmental impacts of wastewater treatment processes, i.e. leakage of sewage or poor management of sewage sludge disposal (e.g. disposal into waterways). Also, quality standards for treated water need to be taken into account when evaluating wastewater treatment projects.

All assets selected for the Green Bond are located in a highly-regulated and developed country.

- 1. Site selection
  - ✓ 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.
- 2. Community dialogue
  - ✓ 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).
- 3. Environmental aspects of construction and operation
  - ✓ According to TMG, 100% of financed projects feature measures to reduce nuisances from the water distribution system (e.g. earthquake resistance measures, trouble monitoring).
  - ✓ 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).
  - ✓ 100% of the financed project follow high standards regarding the quality of treated water.

- 4. 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.

Controversy assessment

- A controversy assessment on the underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Water stored for 1 out of 1 project: 1.5 million m^3 (until the end of FY2020)

*ISS-oekom 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)

Sustainability risks and benefits of the project category

The acquisition of low pollution buses is positive from an environmental point of view as further public transport helps foster climate protection through lower carbon emissions.

At the same time, when evaluating the production of buses, certain risks have to be taken into account. Major risks from an environmental point of view stem from the negligence of environmental impacts throughout the whole life-cycle (i.e. all impacts from cradle to grave). Social risks stem from safety of both workers at production sites and potential bus operators and passengers.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Productions standards
  - ✓ 100% of financed project provide for a comprehensive environmental management system at the manufacturing sites of trains/buses.
  - ✓ Most vehicles are produced at manufacturing sites that provide for high labour and health and safety standards (e.g. ILO core conventions).
- 2. Environmental aspects of trains/buses
  - ✓ 100% of financed vehicles are sourced from a supplier who conducts life-cycle-assessments.
  - O All financed buses are equipped with diesel engines which are not as efficient as electric motors.
- 3. Social aspects of trains/buses
  - ✓ 100% of the financed buses ensure health and safety for both passengers and operators (fire protection, minimisation of noise exposure, accessibility).

Controversy assessment

- Due to the nature of the projects, ISS-oekom did not consider necessary conducting a controversy assessment.

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

- Percentage of Nox (Nitrogen oxide) emissions reduced for 1 out of 1 project: 91%/year
- Percentage of Pm (Particulate matter) emissions reduced in 1 out of 1 project: 96%/year (reduction from exchanged old buses)

*ISS-oekom 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)

Sustainability risks and benefits of the project category

Flood prevention is positive from a sustainability point of view as floods can have severe impacts on humans as well as ecosystems. Floods can endanger humans and other species; they can cause soil erosion through rapid water runoff and contaminate habitats. By remodelling water bodies to their natural states, consequences of floods are prevented without restricting the water body, natural habitats are restored and biodiversity strengthened.

At the same time, flood prevention measures can represent social as well as environmental risks. Social risks mainly stem from workers' health and safety and from nuisance of local residents. Environmental risks stem from possible environmental impacts during construction but also from inadequate species protection during and after construction.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. 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).
- 2. 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond.
- 3. 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.
  - O Due to the densely built-up environment within Tokyo, water bodies are generally not modelled on the natural state of the water body.

- 4. 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).
- 5. 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 underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Percentage of rivers with countermeasures in 1 out of 5 projects: 67.6%
- Water storage amount in 1 out of 5 projects: 1,056,300m^3 (until the end of FY2025)
- Length of development in 1 out of 5 projects: 0.14 km (seawall and shore protection)
- Development size in 2 out of 5 projects: 105.3 km (seawall, internal shore protection, and offshore breakwater (until the end of FY2021))
- Development number in 1 out of 5 projects: 23 (water gates and drainage pump station (until the end of FY2021))

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

F. Sustainable road development

F.1. Pedestrian and Cycling paths

Sustainability risks and benefits of the project category

The construction of pedestrian and cycling paths is positive from an environmental point of view as it restricts the use of combustion engine vehicles. The use of heat insulating and water absorbing pavements has social benefits as they help regulating the temperature within cities.

At the same time, when evaluating the construction of roads, certain risks have to be taken into account. Major risks from an environmental point of view stem from the negligence of environmental impacts throughout the construction (i.e. all impacts regarding the asphalt and location of the roads). Social risks on the other side, relate to the safety of workers at construction sites.

All assets selected for the Green Bond are located in a highly regulated and developed country.

- 1. Site selection
  - ✓ According to TMG, none of the projects are located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV).
- 2. Environmental aspects of construction
  - ✓ 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.
- 3. Sustainable materials
  - ✓ 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).
- 4. Working conditions during construction and maintenance work
  - ✓ 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.
  - O However, in practice enforcement in Japan is only partially effective and a number of cases of forced labour are reported throughout the country. Those cases are not directly linked to the projects financed through this Green Bond

Controversy Assessment

- A controversy assessment on the underlying assets did not reveal any controversial activities or practices that could be attributed to TMG.

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

- Development area of heat insulating pavement in 1 out of 2 projects: more than 30,000m^2
- Length of development in 1 out of 2 projects: 19.1 km cycling paths (until the end of FY2019)

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

Part III – Assessment of Japan's Sustainability Performance

In order to evaluate the sustainability performance of public authority bond issuers, ISS-oekom applies the rating of the country which these form part of. In the ISS-oekom Country Rating with a rating scale from A+ (excellent) to D- (poor), Japan was awarded a score of C+.

As of 20 July 2018, this rating puts Japan in place 30 out of 60 countries rated by ISS-oekom.

The ISS-oekom Country Rating evaluates the following six areas in order to determine the sustainability performance of a country:

Social Rating

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

Environmental Rating

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

Besides the area "Human Rights and Fundamental Freedoms", Japan achieved a rating that was above average compared to all rated countries in the social part of the rating.

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

Japan violates the exclusion criteria death penalty, climate protection and whaling screened by ISS-oekom.

Details on the rating of the country can be found in Annex 2 "ISS-oekom Country Rating of Japan".

ISS-oekom

Munich, 20 July 2018

About ISS-oekom

Since March 2018, ISS-oekom has been a member of the ISS family, providing high quality solutions for sustainable and responsible investment and corporate governance. Originally founded in 1993 and formerly known as oekom research, the company is one of the world's leading ESG research and rating agencies for sustainable investments with an unsurpassed rating methodology and quality recognition. ISS-oekom analyzes businesses and countries with respect to their environmental social and governance performance. As an experienced partner of institutional investors and financial service providers, we analyse the level of responsibility exercised by equity and bond issuers towards society and the environment. Under the new ownership, ISS-oekom completes the ESG research and RI services offerings of ISS, making it a worldwide pure-player in the area of RI Research & Solutions. ISS-oekom is headed by Robert Haßler, former CEO and co-founder of oekom-research.

More information: www.oekom-research.com and www.issgovernance.com.

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Annexes

- Annex 1: ISS-oekom Green Bond KPIs
- Annex 2: ISS-oekom Country Rating of Japan

Annex 1: oekom Green Bond KPIs

ISS-oekom Green Bond KPIs

The ISS-oekom 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 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 Green Bond can be clearly identified and described.

The sustainability criteria are complemented by specific indicators, which enable quantitative measurement of the sustainability performance of the Green Bond and which can be used for comprehensive reporting.

Use of Proceeds

A. Green real estate development
   - Improved energy and resource efficiency in green real estate
   - Sustainable timber use in green real estate
   - Sustainable plantings in green real estate

B. Renewable energy
   - Solar power
   - Geothermal heating and cooling systems
   - Hydro power (micro-hydro systems in water supply infrastructures)

C. Pollution prevention and control
   - Wastewater treatment facility

D. Public transport
   - Public transport vehicles

E. Adaptation to climate change
   - Flood prevention (no dams)

F. Sustainable road development
   - Pedestrian and cycling paths

A. Green real estate development

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

1. Percentage improvement of energy and resource efficiency

- Percentage of financed projects for which the percentage improvement reaches or exceeds 20% for energy efficiency and / or 10% for resource efficiency.

2. Working conditions during construction and maintenance work

- Percentage of financed projects with high labour and health and safety standards for construction and maintenance work conducted by own employees and contractors (e.g. ILO core conventions).

3. Social standards in the supply chain

- Percentage of financed projects for which high labour standards are applied in the supply chain (e.g. ILO core conventions).

4. Environmental aspects of installed electronic equipment

- Percentage of financed projects which meet high environmental standards regarding take-back and recycling of electronic equipment at end-of-life stage.
- Percentage of financed projects for which the thresholds defined by the European Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive) are fulfilled.

Controversy assessment

- Description of controversies (e.g. due to labour rights violations, accidents).

A.2 Sustainable timber use in green real estate

1. Working conditions on construction sites

- Percentage of financed projects which provide for high labour and health and safety standards for construction work conducted by own employees and contractors (e.g. ILO core conventions).

2. Environmental standards in the supply chain

- Percentage of financed timber which originates from sources that are not located in regions with high levels of water stress or that conducted water impact assessments.
- Percentage of financed timber which originates from sources that ensure conservation of natural habitat and wildlife (e.g. no logging of primary forest, ecologically significant secondary forest or protected areas such as Ramsar sites, UNESCO Natural Word Heritage, IUCN protected areas I-IV, Intact Forest Landscape).

- Percentage of financed timber which originates from sources that provide for measures to protect biodiversity (e.g. biodiversity assessment, creation of corridors between biodiversity hotspots, training of workers and managers).
- Percentage of financed timber which originates from sources that exclude genetically modified organisms.
- Percentage of financed timber which originates from sources that provide for high standards regarding use of chemicals and fertilizers (e.g. exclusion of certain fertilizers, reduction targets).

3. Social standards in the supply chain

- Percentage of financed projects for which high labour standards are applied in the supply chain (e.g. ILO core conventions).
- Percentage of financed projects which provide for high standards regarding human rights and consideration of impacts on local communities (e.g. respect for internationally recognised human rights, commitment to seek free, prior and informed consent).

Controversy assessment

- Description of controversies (e.g. due to accidents, biodiversity issues, human rights).

A.3 Sustainable plantings in green real estate

1. Environmental aspects of plantings

- Percentage of financed projects which use sustainable plants (e.g. reduced need of irrigation, appropriate to the region, climate and soil, with high capacity of CO_2 absorption and storage).

2. Working conditions at building sites

- Percentage of financed projects which provide for high labour and health and safety standards for own employees and contractors (e.g. ILO core conventions).

3. Environmental aspects in the supply chain

- Percentage of financed plants which originate from sources that provide for sustainable soil and biodiversity management along the whole value chain (e.g. position on pesticide and chemical fertiliser use, deforestation, soil degradation, biodiversity).
- Percentage of financed plants which originate from sources that do not use genetically modified organisms.
- Percentage of financed plants which 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.

4. Social standards in the supply chain

- Percentage of financed projects for which high labour standards are applied in the supply chain (e.g. ILO core conventions).
- Percentage of financed projects which provide for high standards regarding human rights (e.g. respect for internationally recognised human rights, right to water, resettlement and compensation).

Controversy assessment

- Description of controversies (e.g. due to labour rights violations, accidents, adverse biodiversity impacts).

B. Renewable energy

B.1 Solar power

1. Site Selection (not applicable for PV roof systems):

- Percentage of assets that are not located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV).

2. Supply chain standards

- Percentageof assets that provide for high labour and health and safety standards in the supply chain of solar modules (e.g. ILO core conventions).

3. Environmental aspects of solar power plants

- Percentage of assets that feature a conversion efficiency of at least 15%.
- Percentage of assets that provide for high environmental standards regarding take-back and recycling of solar modules at end-of-life stage (e.g. in line with WEEE requirements).
- Percentage of assets that provide for high standards regarding the reduction or elimination of toxic substances within solar panels (e.g. in line with RoHS requirements or other relevant standards).

4. Working conditions during construction and maintenance work

- Percentage of assets that provide for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).

Controversy Assessment

- Assessment of controversial assets (e.g. due to labour rights violations, adverse biodiversity impacts).

B.2 Geothermal heating and cooling systems

1. Site selection

- Percentage of assets that are not located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV).
- Percentage of assets that underwent environmental impact assessments at the planning stage.
- Percentage of assets that are not located in the proximity to major fault lines.

2. Community dialogue

- Percentage of assets that 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).

3. Environmental aspects of construction and operation

- Percentage of assets that meet high environmental standards during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).
- Percentage of assets that provide for measures to avoid contamination of soil and groundwater (e.g. well casing, management of waste streams, measures for the disposal of flowback and production water).
- Percentage of assets that provide for seismic monitoring.

4. Working conditions during construction and maintenance work

- Percentage of assets that provide for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).

Controversy Assessment

- Assessment of controversial assets (e.g. due to labour rights violations, adverse biodiversity impacts).

B.3 Hydro power (micro-hydro systems in water supply infrastructures)

1. Consideration of environmental aspects during planning and construction

- Percentage of financed projects which meet high environmental standards and requirements during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).

2. Working conditions during construction and maintenance work

- Percentage of financed projects which provide for high labour and health and safety standards for own employees and contractors (e.g. ILO core conventions).

3. Environmental aspects of micro-hydro systems in water supply infrastructures

- Percentage of financed projects which feature measures to reduce nuisances from the water distribution system (e.g. leakage prevention, prevention of water loss and pipe bursts, adaptation measures to water pressure).

Controversy Assessment

- Assessment of controversial assets (e.g. due to labour rights violations, adverse biodiversity impacts).

C. Pollution prevention and control

C.1 Wastewater treatment

1. Site selection

- Percentage of assets that are not located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV).
- Percentage of assets that underwent environmental impact assessments at the planning stage.

2. Community dialogue

- Percentage of assets that 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).

3. Environmental aspects of construction and operation

- Percentage of assets that feature measures to prevent leakage of sewerage systems (e.g. monitoring systems, adequate maintenance and repair).
- Percentage of assets that 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).
- Percentage of assets that provide for high standards regarding the quality of treated water.

4. Working conditions during construction and operation

- Percentage of assets that provide for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).

Controversy Assessment

- Assessment of controversial assets (e.g. due to labour rights violations, adverse biodiversity impacts).

D. Public transport

D.1 Public transport vehicles (buses)

1. Productions standards

- Percentage of assets that provide for a comprehensive environmental management system at the manufacturing sites of trains/buses.
- Percentage of assets that provide for high labour and health and safety standards at the manufacturing sites of trains/buses. (e.g. ILO core conventions).

2. Environmental aspects of trains/buses

- Percentage of assets for which comprehensive life-cycle-assessments have been conducted.
- Percentage of assets for which energy efficiency during operation is optimised (e.g. through energy recovery systems for trains/ E-buses, hybrid and biofuel buses).

3. Social aspects of trains/buses

- Percentage of assets which ensure health and safety for both passengers and operators (e.g. fire protection, minimisation of noise exposure, accessibility).

Controversy Assessment

- Assessment of controversial assets (e.g. due to labour rights violations, adverse biodiversity impacts).

E. Adaptation to climate change

E.1 Flood prevention (no dams)

1. Consideration of environmental aspects during planning and construction

- Percentage of financed projects which underwent environmental impact assessments at the planning stage.
- Percentage of financed projects which meet high environmental standards and requirements during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).

2. Working conditions during construction and operation

- Percentage of financed projects which provide for high labour and health and safety standards for own employees and contractors (e.g. ILO core conventions).

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

- Percentage of financed projects for which the relevant plans are scientifically monitored and are modelled on the natural state of the water body.

4. Community dialogue

- Percentage of financed projects which feature community dialogue as an integral part of the planning process and construction phase (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes).

5. Social standards in the supply chain

- Percentage of financed projects for which high labour standards are applied in the supply chain (e.g. ILO core conventions).

Controversies

- Description of controversial projects (e.g. due to accidents, adverse biodiversity impacts).

F. Sustainable road development

F.1 Pedestrian and Cycling paths

1. Site selection

- Percentage of assets that are not located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV).

2. Environmental aspects of construction

- Percentage of assets that meet high environmental standards during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).

3. Sustainable materials

- Percentage of assets for which measures for the use of sustainable construction materials are in place (e.g recycled/green asphalt, water retentive pavement).

4. Working conditions during construction and maintenance work

- Percentage of assets that provide for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).

Controversy Assessment

- Assessment of controversial assets (e.g. due to labour rights violations, fatalities).

ISS-oekom Country Rating

Japan

Status	**Not Prime**
Rating	**C+**
Prime Threshold	**B-**

D-	D	D+	C-	C	C+	B-	B	B+	A-	A	A+
	poor			**medium**			**good**			**excellent**	

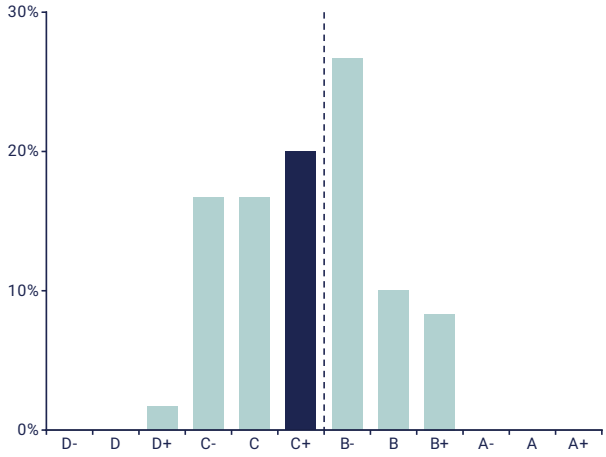
Country Leaders

Country (in alphabetical order)	**Grade**
Norway	B+
Sweden	B+
Switzerland	B+

Legend: Universe Country --- Prime

Distribution of Ratings

60 entities in the universe



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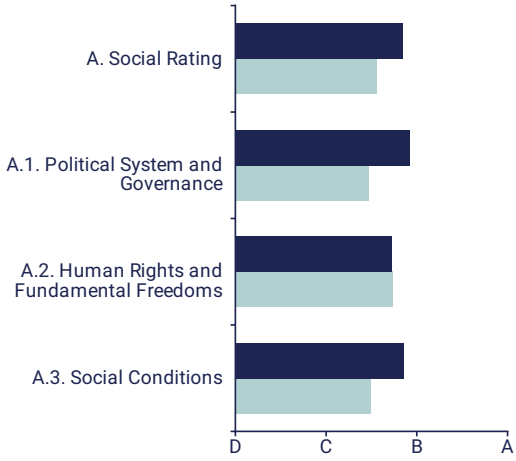

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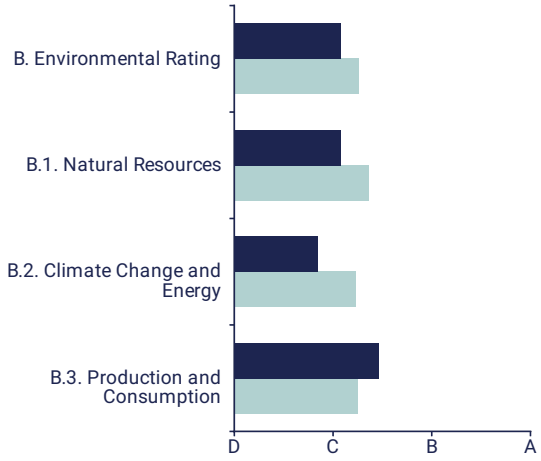

Japan

Additional Country Information

Country Profile

Politics and Geography

National territory (2017):	377962	[km2]
Capital (2018):	Tokyo	
Climate (2018):	mostly warm oceanic / continental	
Government type (2018):	parliamentary constitutional monarchy	

Population

National population (2017):	126451000	[people]
Population change (2016):	-0.12	[in %]
Population density (2017):	334.56	[persons per km2]
Urban population (2016):	93.9	[as % of total]

Economy and Society

GDP per capita (2016):	38343	[in USD (PPP)]
Income group (2017):	high income	
Real GDP growth (2016):	1	[in %]
Consumer prices (2016):	0.3	[in %]
Current account balance (2016):	3.8	[as % of GDP]
General government gross debt (2016):	239.3	[as % of GDP]
Budget deficit (2016):	-4.2	[in %]
Unemployment rate (2016):	3.1	[as % of labour force]
Human Development Index (2015):	17	[index rank]

Japan

Methodology - Overview

ISS-oekom Country Rating – The ISS-oekom country 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-oekom'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-oekom 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 ISS-oekom 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.

Distribution of Ratings - Overview of the distribution of the ratings of all countries that are included in the ISS-oekom 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 ISS-oekom country 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-oekom 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.