

Japan Credit Rating Agency, Ltd. (hereinafter referred to as "JCR") will publish the evaluation results of green bonds as follows:

Joint Green Bond issuers (Local Government)

Joint Local Government Green Bond 2nd

Assignment



Issuer	Joint Green Bond issuers (Local Government) * Joint Green Bond issuers refers to a group that issues Joint Local Government Green Bond.
Evaluation Target	Joint Local Government Green Bond 2nd
Label	Bond
Amount of Issue	56.4 billion yen
Interest Rate	0.893 per cent
Date of Issuance	March 29, 2024
Date of Repayment	March 24, 2034
Payment Method	Bullet payment at maturity
Use of Proceeds	Projects that contribute to climate change mitigation and adaptation

Evaluation Overview

▶▶▶ 1. Overview of Joint Green Bond issuers (Local Government)

Japanese local governments are broadly divided into ordinary local governments and special local governments in Article 1-3, paragraph (1) of the Local Autonomy Law (Act No. 67 of 1947.) Ordinary local governments include prefectures and municipalities, and special local governments have special wards, unions of local governments and property wards. Municipalities are categorized into three: (1) designated cities that are required to be designated by cabinet orders among cities with a population of 500,000 or more, (2) core cities whose requirements are to be designated by cabinet orders from cities with a population of 200,000 or more, (3) special cities at the time of the enforcement (they were actually special cities when the special city system was abolished,) (4) other cities that are required to have a population of 50,000 or more or others) and (5) towns and villages¹. Local bonds can be issued by local governments except for property wards according to budgets stipulated, respectively.

Municipal bonds refer to debts borne by local governments through externally financing proceeds financially required, which are to be repaid for more than one fiscal year². Municipal bonds, in principle, can be issued only in the cases listed in each item of Article 5 of the Local Finance Law (Act No. 109 of 1948,) including those when financing financial resources for public work expenditures (transportation, gas or water supply) or construction expenses of public or official facilities. The main characteristics of municipal bonds are: (1) debts borne by local governments, (2) debts borne through financing, (3) debts in the form of loans on deeds or securities issuance, (4) debts whose substantial collateral are taxation rights of local governments, (5) debts are to be repaid beyond one fiscal year and (6) municipal bonds can be issued for businesses stipulated by law³.

Among the municipal bonds, joint local government bonds are municipal bonds jointly issued by local governments that issue publicly offered local bonds nationwide and have been issued since April 2003. The joint local government bonds mainly have the following characteristics: (1) they are issued in accordance with Article 5-7⁴ of the Local Finance Law through assuming joint and several debts⁵ by local governments, (2) measures are taken to supplement liquidity and (3) having large issuance lots and high liquidity. As for (1), respective participating organizations are responsible for fully repaying the issuance amount of the joint local government bonds as joint and several obligors and thus the system is extremely robust on the certainty of the repayment. Regarding (2), a fund is established, aiming to supplement liquidity by depositing part of sinking funds of respective organizations in the trustee bank in order to repay the principal and interests without delay even if the participating organizations face unforeseen situations caused by disasters. Concerning (3), products are superior with high liquidity since the issuance amount is large, approximately 100 billion yen every month (FY2020.)

¹ Source: Ministry of Internal Affairs and Communications website at <https://www.soumu.go.jp/mainsosiki/jichigyousei/bunken/chihou-koukyoudantaikubun.html>

² Source: Ministry of Finance website <https://www.mof.go.jp/policy/filp/summary/filplocal/tihousaiseidonogaiyou.htm>

³ Source: Akane Enatsu (2007) "Local Bond Investment Handbook" published by Zaikai Shoho Sha

⁴ Article 5-7 of the Local Finance Law (Joint Issuance of Municipal Securities)

In case of issuing municipal bonds by a method to issue securities, two or more local governments can jointly issue securities through the vote of the Assembly

⁵ Joint and several debts: Respective Joint and several debtors shall be accountable for repaying all debts (Article 436 of the Civil Code)

▶▶▶ 2. Environmental initiatives of Joint Green Bond issuers (Local Government)

Local governments can be a key to implement regional priority strategies and are main promoters on local environmental conservation, which is a core for developing sustainable society and are expected to play a role as a coordinator of local initiatives in the government's "Fifth Basic Environmental Plan." Therefore, local governments are expected to comprehensively deploy environmental conservation measures in their regions, such as presenting targets or directions of regional efforts, setting respective systems or developing bases for social infrastructure or promoting actions of respective bodies according to regional characteristics by cooperating and coordinating with residents, businesses, private organizations, other local governments or government-affiliated institutions while striving to closely cooperate among related divisions.

The national global warming measure's plan lists two main roles to be played by local governments as follows: "promoting measures in accordance with natural and social conditions in regions" and "taking measures on their own affairs and projects." Local governments will promote measures comprehensively and systematically to reduce greenhouse gas emissions according to the natural and social conditions in regions for the former. Prefectures and municipalities will map out/implement plans on measures to reduce greenhouse gas emissions and to conserve/strengthen absorption mechanisms for their own affairs and projects (Local Governments' Implementation Plan for Affairs/Businesses) since the local governments should aim to be a model for business operators and residents in the areas by working through efforts initiatively for the latter.

Furthermore, local governments are to strive to consider the plan and to formulate the regional climate change adaptation plan in order to promote measures on climate change adaptation according to regional natural economic and social conditions in the national Climate Change Adaptation Plan. Simultaneously, the local governments actively incorporate climate change adaptation into related measures, including disaster prevention/national resilience, promoting agriculture, forestry and fisheries and preserving biodiversity in cooperation with related departments and strive to promote measures on climate change adaptation in respective categories.

As described above, local governments promote measures for climate change mitigation and adaptation based on Basic Environmental Plan, Global Warming Measures Plan and Climate Change Adaptation Plan formulated by the national government or respective local governments.

Joint Local Government Green Bonds (hereinafter referred to as "Joint Local Government Green Bond") has been issued in and after FY 2023. Mitigation and adaptation measures for climate change can be accelerated nationwide more than ever since utilizing the mechanism of the Joint Local Government Bond enables the local governments that could not handle allocation projects to finance proceeds with green bonds individually.

▶▶▶ 3. Green Bonds

The evaluation target is Joint Local Government Green Bond 2nd (hereinafter referred to as "this bond") issued by local governments. JCR will evaluate whether this bond aligns with Green Bond

Principles⁶ and Green Bond Guidelines⁷, which are principles or guidelines and are not legally underlying regulations; however, JCR will evaluate this bond by referring to the Principles and Guidelines above since they are domestically and internationally unified standards at the present moment.

Local governments established eligible criteria for Joint Local Government Green Bond Framework (hereinafter referred to as "Joint Local Government Green Bond Framework") in accordance with the Basic Environmental Plan, Global Warming Measures Plan or Climate Change Adaptation Plan formulated by the national government or respective local governments. The projects whose proceeds are used for this bond consist of 223 projects selected by local governments, which meet the Framework. JCR has confirmed that all projects: (1) are important measures to achieve the goals on the environmental policy intended by the national or local governments' Basic Environmental Plan, Global Warming Measures Plan or Climate Change Adaptation Plan, (2) align with the "requirements to determine the alignment of individual projects" set in the Joint Local Government Green Bond Framework and (3) have taken or will take "the negative impacts and measures assumed" properly established in the aforementioned Framework based on various materials submitted by respective Joint Green Bond issuers. With which, JCR has evaluated that the projects eligible for the use of proceeds are expected to have environmental benefits.

The project selection process will be carried out with departments having specialized knowledge in local governments. A management system has been established to ensure that the proceeds are certainly allocated to green projects. Items to be disclosed as reporting will present environmental benefits. JCR has evaluated that the management system in the local governments as appropriate and that transparency is ensured based on the aforementioned.

Accordingly, JCR has assigned "g1" to the "Green Evaluation (Use of Proceeds),"m1" to the "Management, Operation and Transparency Evaluation" and "Green 1" to the "JCR Green Bond Evaluation" for this bond, based on JCR Green Finance Evaluation Methodology. JCR has evaluated that this bond meets the criteria for items required in the Green Bond Principles and Green Bond Guidelines.

⁶ International Capital Market Association (ICMA) "Green Bond Principles 2021"

<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>

⁷ Ministry of the Environment "2022 Green Bond Guidelines" <https://www.env.go.jp/content/000062495.pdf>

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I. Use of Proceeds

JCR's Key Consideration in This Factor

JCR will initially confirm whether the proceeds are used for green projects that bring about clear environmental benefits in this section. JCR will then confirm whether the impacts are fully examined by internal specialist departments in local governments or external third parties, and whether measures are taken for the avoidance/mitigation required in cases where the use of proceeds is expected to negatively impact on the environment/society. Lastly, JCR will confirm the consistency with the Sustainable Development Goals (hereinafter referred to as "SDGs") of the use of proceeds.

▶▶▶ Current Status of Evaluation Targets and JCR Evaluation

JCR has examined various materials provided by respective Joint Green Bond issuers for all projects, and accordingly, JCR has confirmed the followings about the projects using proceeds from this bond: (1) they are important measures to achieve the goals on the environmental policy sought in the national or local governments' Basic Environmental Plan, Global Warming Measures Plan or Climate Change Adaptation Plan, (2) they align with the "requirements to determine the alignment of individual projects" set in the Joint Local Government Green Bond Framework and (3) "the negative impacts and measures assumed" established in the aforementioned Framework are properly considered or will be considered, and consequently the projects are expected to have environmental benefits.

1. The Outline of the Use of Proceeds

Local governments will target the projects for the use of proceeds shown in Figure 1.

Category	Subcategory	Green related Business	
2. Projects for energy-saving	(1) Convert public facilities into ZEB	1	Convert public facilities into ZEB
		2	Convert public housing into ZEH
	(2) Introduction of equipment with high energy-saving performance to public facilities	1	Convert lighting for public facilities or traffic lights into LED
		2	Development of air conditioning equipment for public facilities (introducing air conditioning equipment with high energy efficiency)
		3	Improvement of elevators in public facilities (introducing elevators with high energy efficiency)
		4	Energy saving for other public facilities
	(3) Utilization of unused energy	1	Development of facilities that utilize unused heat energy (geothermal/sewage heat)
3. Projects for pollution prevention and control	(1) Improvement of sewage treatment facilities	1	Development of sewerage facilities (related to sewage treatment) (improvement of sewage treatment facilities/pipes or cross-jurisdictional renovation)
		2	Improvement of combined sewage systems
		3	Development of night soil treatment facilities

Category	Subcategory	Green related Business	
	(2) Development of disposal related facilities	1	Improvement of core equipment in general waste treatment facilities, such as energy recovery type waste treatment/high-efficient refuse-burning power generation facilities (related to energy recovery)
		2	Improvement of energy recovery type waste treatment facilities/high-efficient refuse-burning power generation facilities (scrap-and-build, reconstruction)
		3	Development of general waste treatment equipment/facilities (leading to the reduction of hazardous substances emissions (Scrap-and-build or reconstruction in case of improving facilities)
		4	Improvement of facilities/equipment of recycling resources (waste) for proper reuse of used products
	(3) Monitoring/removal of contaminants	1	Development of monitoring facilities of water/air pollutants and hazardous chemical substances
		2	Reduction of nitrate nitrogen (improvement of animal excrement treatment facilities (compost center)
		3	Removal of contaminated soil
		4	Measures for marine pollution
4. Projects for sustainable management of natural resources/ land use	(1) Conservation/ management of marine resources	1	Creation of tidal flats, shallow bottom and seaweed beds
		2	Development of fish beds
		3	Creation of breeding grounds
		4	Improvement of river environment (fish ladder installation facilities)
		5	Development of seed production facilities
		6	Improvement of fisheries technology development facilities
	(2) Conservation/ management of forest resources	1	Development of forest roads
		2	Improvement of forests, such as thinning or afforestation (excluding opening of forest roads)
		3	Promote to introduce wooden structure and introduce wooden interior decoration with wood produced by the group concerned in public facilities
	(3) Improvement of personnel training bases on natural resources management	1	Improvement of bases to develop human resources who are responsible for sustainable forests/forestry

Category	Subcategory	Green related Business	
	(4) Greening promotion	1	Development of parks (creation of green space)
		2	Greening public facilities
	(5) National park development	1	Improvement of national park facilities
5. Projects for biodiversity conservation	(1) Development of wildlife habitat	1	Conservation of wetlands or coral reefs
		2	Development of wildlife habitat under conservation
		3	Improvement of rare species protection facilities/laboratory
	(2) Prevention of damage by wildlife or alien species	1	Prevention of damage by wildlife or alien species
	(3) Landscape conservation	1	Development of landscape-friendly facilities with the natural river reconstruction method
2		<i>satoyama</i> (community-based forest) conservation	
6. Projects for clean transportation	(1) Development of vehicles in public transportation	1	Development of vehicles in the railway business (public/quasi-public corporation)
		2	Improvement of facilities (station buildings) in the railway business (public/quasi-public corporation)
		3	Development of vehicles in the bus business (public/quasi-public corporation)
	(2) Spread and expansion of electric vehicles	1	Switch official vehicles from conventional cars to electric vehicles
		2	Improvement of battery charging facilities for electric vehicles
		3	Development of hydrogen stations
	(3) Promotion of utilizing the clean modes of transport	1	Improvement of bicycle running space
		2	Development of facilities for park and ride
	(4) Formation of carbon neutral port (CNP)	1	Formation of carbon-neutral port (CNP)
	8. Projects for adaptation to climate change	(1) Measures for damage from storms and floods	1
2			Removal of sediment from rivers
3			Widening rivers
4			Improvement of floodway
5			Development of roads (drainage/permeability pavement,

Category	Subcategory	Green related Business		
			roads for emergency transportation)	
		6	Improvement of flood control dams	
		7	Development of agricultural irrigation facilities (drainage pump stations)	
		8	Development of railway bridge replacement at the bottleneck in watercourses	
		9	Extending the life of river management facilities (improvement of switching gears)	
		10	Improvement of flood control facilities (retention/equalizing reservoirs or basins)	
		11	Removal of all power poles on roads (for reducing damage in case of damages from storms and floods)	
		12	Development of additional devices of emergency power supply for traffic lights	
		13	Water level gauge for crisis management, river monitoring camera or river information infrastructure (information gathering/processing devices of precipitation)	
		14	Improvement of wide-area disaster prevention bases that will be evacuation sites in the event of disasters	
		15	Development of sewerage facilities (related to rainwater) (improvement of rainwater drainage/infiltration facilities and additions of pumps)	
		(2) Measures for high tide/wave	1	Development of facility to protect the coastline (bank protection, embankment, detached breakwaters, groins, floodgates, improvement of drainage pumping stations or rising breakwater)
			2	Development of harbor and fishing port facilities (quay walls)
		(3) Measures for landslide	1	Development of erosion control (hereinafter referred to as "SABO") facilities (SABO dams or mountain stream maintenance work)
			2	Improvement of afforestation facilities (check dams or channel works)
3	Development of protection forests			
4	Implementation of projects to prevent landslides at steep slopes (development of retaining wall/ slope work) and to take measures for landslide			

Category	Subcategory	Green related Business		
		5	Implementation of measures for road slopes and projects for stone fall prevention	
		6	SABO information infrastructure (information gathering/processing equipment of precipitation)	
	(4) Research and development in preparation for climate change by the Agriculture, forestry and fisheries industry	1	Improvement of developmental facilities for varieties of agricultural products or agricultural production technology	
		2	Development of fisheries research facilities	
		3	Improvement of seeding production facilities for aquatic plants and animals	
	(5) Measures for temperature increase	1	Addressing summer heat along with heat island phenomenon (improving heat shielding/water retention of roads)	
		2	Creating cool spots in cities	
	10. Projects for green buildings	(1) Green buildings	1	New construction/renovation of public facilities (obtaining environmental certification)

*1 Categories/Subcategories comply with the 2022 Green Bond Guidelines formulated by the Ministry of the Environment.

*2 Lists are omitted for the categories without appropriation projects on this joint local government green bond.

*3 Appropriation projects on this joint local government green bond are highlighted in green in the table.

Figure 1: List of the use of proceeds⁸

2. The Environmental Benefits of Projects

Use of Proceeds 1: Project for Energy Saving (ZEB conversion of public facilities)

Local governments will use the proceeds from this bond for ZEB conversion of public facilities.

ZEB (Net Zero Energy Building) is defined as (1) ZEB (energy savings of 100 per cent or more,) (2) Nearly ZEB (energy savings of 75 per cent or more and less than 100 per cent) and (3) ZEB Ready (no introduction of renewable energy) for buildings that have further reduced energy consumption by introducing renewable energy depending upon the reduction amount after making efforts to save 50 per cent or more energy. Additionally, (4) ZEB Oriented is defined as a building of 10,000 square meters or more to achieve energy savings of at least 30 to 40 per cent and has adopted technologies that are expected to save energy but are not presently evaluated in the energy conservation calculation program under the Act on Improvement of Energy Consumption Performance of Buildings (Act No. 53 of 2015.) The Joint Local Government Green Bond Framework has stipulated that green projects meet one of the aforementioned

⁸Source: Materials submitted by the Ministry of Internal Affairs and Communications that were processed by JCR

criteria from (1) to (4) as the eligibility of green projects, and JCR has confirmed that the use of the proceeds falls under the criteria above.

The use of the proceeds is expected to improve the environmental benefits since high energy efficiency is likely to be achieved in accordance with the use of the building. This use of proceeds falls under Energy Efficiency in the Green Bond Principles and Project for Energy Conservation among the uses of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 2: Project for Energy Saving (introducing equipment with high energy saving performance to public facilities)

Local governments will use the proceeds from this bond to convert lighting in public facilities or traffic lights into LED and developing air conditioning equipment in public facilities (introducing air conditioning equipment with high energy efficiency.)

The project selected under the Joint Local Government Green Bond Framework is expected to improve energy efficiency by 30 per cent or more by installing alternatives in the existing equipment. JCR can determine that the project has environmental benefits since the level is favorably compared with the globally required level as energy efficiency reduction rates.

Environmental benefits are prospective since the use of proceeds is likely to help achieve the energy efficiency of 30 per cent or more. The use of this proceeds falls under Energy Efficiency in the Green Bond Principles and Project for Energy Saving among the use of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 3: Project for Energy Saving (utilizing unused energy)

Local government will use the proceeds from this bond for developing facilities with unutilized thermal energy (hot spring water.)

Unutilized thermal energy is a generic term to refer to energy that has not been used so far although it has a potential to be effectively usable, such as geothermal heat, sewage heat⁹, river water/sea water heat¹⁰ or snow and ice heat¹¹. The unused energy is characterized into three¹² as follows: (1) widely and shallowly distributed, (2) temporal variation is large and (3) a long distance between the place energy is generated and the place energy is used. Taking these characteristics into consideration, it is required to develop facilities to utilize unused thermal energy.

In cases where thermal sources or thermal demand are appropriately consolidated due to the reduced size of cities toward the achievement of compacted urban space with neighboring nature in the Basic Environment Plan, the usability of unused thermal energy, such as geothermal heat or sewage heat increases, therefore, the government is making efforts to use the heat through the support to introduce heat supply facilities.

⁹ Sewage treatment water is relatively warmer even in winter; therefore, it is heat sources frequently used.

¹⁰ River water or sea water is efficiently usable as coolant water or heat source water since the temperature of river water or sea water is lower than the external temperature in summer and higher than the external temperature in winter

¹¹ Coldness of snow and ice is usable as heat sources to store vegetables or use energy for air conditioning in summer by storing snow in winter.

¹²Source: The website of National Institute for Environmental Studies at <https://tenbou.nies.go.jp/science/description/detail.php?id=5>

It is expected to have environmental benefits since greenhouse gas (hereinafter referred to as "GHG") is directly or indirectly reduced with the use of proceeds. This use of proceeds is categorized into Energy Efficiency in the Green Bond Principles and Project for Energy Efficiency among the use of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 4: Project for Pollution Prevention and Control (developing waste treatment facilities)

Local governments will use the proceeds from this bond for developing facilities/equipment to renew core equipment and reasonably reuse used products in general waste treatment facilities, such as energy recovery type waste treatment facilities or high-efficient refuse-burning power generation facilities or for improving facilities/equipment on recycling resources.

JCR deems that the development that has environmental benefits or is contributable to reducing environmental loads is qualified as green characteristics: for instance, there are mechanisms to recover thermal energy generated in the process of waste treatment and reuse it within or outside facilities or to effectively reduce harmful substances generated during normal operations in the development of waste treatment facilities.

Environmental benefits are prospective since the contribution is made to generate energy and to reduce harmful substances along with waste disposal through using this proceeds. This use of proceeds falls under Pollution Prevention and Control in the Green Bond Principles and Projects for Pollution Prevention and Control among the uses of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 5: Project for Sustainable Management of Natural Resources/Land Use (contributing to the conservation/management of fishery resources)

Local governments will use the proceeds from this bond for developing fish reef.

As seen in the recent poor catches of squid, saury and salmon, fish that had been caught in the past has not been caught any more, and fish that had not been caught in the past has been caught for several years, which is different from the short-term poor catches experienced before. These changes are likely to be fluctuation in resources caused by global warming or changes in the marine environment and may continue for a long period in the future. In response to these issues, the government established the "Basic Plan for Fisheries" so as to comprehensively and systematically promote measures on fisheries in cooperation with relevant prefectural offices, local governments, producers or consumers.

In the Basic Plan for Fisheries, sustainable fishing is important while maintaining the marine ecosystem, and the conservation and development of seaweed beds or tidal flats have been promoted, which play a major role to nurture ecosystems and increase fishery resources. Similarly, fishery resources have increased due to breeding grounds such as fish beds in which sea algae necessary for spawning have grown thick, young fish has hidden from enemies or the food required for their growth has increased.

It is expected to have environmental benefits since the efforts toward sustainable fishery will be promoted with the use of proceeds. This use of proceeds is categorized into Sustainable

Management of Living Natural Resources and Land Use in the Green Bond Principles and Project for Sustainable Management of Living Natural Resources and Land Use among the use of proceeds illustrated in the Green Bond Guidelines.

*Use of Proceeds 6: Project for Sustainable Management of Natural Resources/Land Use
(contributing to the conservation/management of forest resources)*

Local governments will use the proceeds from this bond for improving forest roads, developing forests, such as thinning or afforestation and promoting to introduce wooden structure and wooden interior decoration in public facilities with wood made by the issuers.

Forests that make up roughly 70 per cent of the land in Japan have multiple functions, such as preventing global warming, preserving the natural environment, cultivating water sources or conserving biodiversity. There have been some issues, which can hinder from demonstrating multifaceted functions, including some forests without proper reforestation, in which clear-cutting is concentrated in areas where is easier to cut down trees or disasters that frequently occurs in mountain regions due to increased heavy rains. In response to these issues, Japanese government has established Forest/Forestry Basic Plan, indicating the perspective and basic direction for future policy development. The Plan aims to achieve prosperous special economy, looking ahead to carbon neutrality in 2050 by appropriately managing forests and developing the forestry/forest industry while increasing its sustainability.

In order to maintain the multiple functions of forests, forest management, such as thinning to promote tree growth or afforestation is required after logging. The purpose of forest roads is to provide access to forests and promote forest improvement. Using wood in prefectures to which respective issuers belong is established as the eligible criteria through introduction of wooden structure and wooden interior decoration in public facilities. The followings are advantages to log trees from forests under proper management and to introduce wooden structure and wooden interior decoration.

- It is contributable to the prevention of global warming due to carbon fixation by trees.
- It is contributable to a sustainable society since wood is a renewable resource.
- Less energy is required for construction.
- Mountains are well cared and forests are kept healthy.

These initiatives are listed as specific efforts in the Basic Plan for Forestry and Forest Industry, and JCR has evaluated that this use of proceeds is in line with the Plan.

The use of proceeds will promote the initiatives toward sustainable forests/forestry; therefore, environmental benefits are prospective. The use of this proceeds falls under Environmentally Sustainable Management of Living Organism Resources and Land Use in the Green Bond Principles and Projects for Sustainable Management of Natural Resources/Land Use among the use of proceeds exemplified in the Green Bond Guidelines.

*Use of Proceeds 7: Project for Sustainable Management of Natural Resources/Land Use
(improving human resources development bases on natural resource management)*

Local governments will use the proceeds from this bond to improve bases for developing human resources who will be responsible for sustainable forests and forestry.

Forestry workers have continuously declined from 126,000 in 1985 to approximately 44,000 in 2020. The aging rate in the forestry industry (a percentage of workers who age 65 or older) was 25 per cent in 2020, higher than the average of all industries, 15 per cent, and aging is also becoming a serious issue. It is essential to continuously ensure new workers and simultaneously to increase the retention through fostering human resources to secure the forestry workforce.

Improving productivity and safety is required in the forestry work in order for forestry workers to be able to continue working for a long time, which makes the industry attractive. In recent years, prefectures have opened new colleges of forestry as pre-employment education /training institutions nationwide to improve technical skills of forestry workers and to make them work safely and efficiently. The local governments use the proceeds to develop human resources development bases as described above. Securing human resources (supporting new employees and gradually developing human resources) are also listed in the Forests and Forestry Basic Plan, and JCR has evaluated that this use of proceeds complies with the Plan.

This use of proceeds will promote the development of human resources necessary for sustainable forests/forestry, and thus it is expected to have environmental benefits. The use of proceeds is categorized into Environmentally Sustainable Management of Living Organism Resources and Land Use in the Green Bond Principles and Projects for Sustainable Management of Natural Resources/Land Use among the uses of proceeds exemplified in the Green Bond Guidelines.

*Use of Proceeds 8: Project for Sustainable Management of Natural Resources/Land Use
(promoting greening)*

Local governments will use the proceeds from this bond to develop parks (create green space.)

Park development whose purpose is creating green space brings about a variety of effects that improve the urban environment, such as developing urban biodiversity by conserving/regenerating region-specific flora and fauna species or ecosystems, mitigating heat island phenomenon through the greenery's evapotranspiration effects, preventing urban areas from spreading, making green belts and creating good landscapes that can become a symbol of the area.

This proceeds will be used to conserve natural landscapes and improve biodiversity, and accordingly, environmental benefits are prospective. This use of proceeds fall under Environmentally Sustainable Management of Living Organism Resources and Land Use in the Green Bond Principles and Projects for Sustainable Management of Natural Resources/Land Use among the use of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 9: Project for Biodiversity (reservation of natural landscape)

Local governments will use the proceeds from this bond for conserving *satoyama* (community-based forest area.)

satochi-satoyama (community-based forest areas and the surrounding countryside) is areas with diverse natural environments, such as farmlands, reservoirs, woodlands or grasslands. *satochi-satoyama* is located between nature areas in deep mountains with rich nature and urban areas in which human activities are concentrated and covers approximately 40 per cent of Japan. It is neither completely pristine nature nor fully under human control. With moderate human intervention and management, it has become habitats for a variety of plants and animals and has played a role in enriching the natural environment in the Japanese archipelago. On the other hand, *satoyama* has been increasingly unmanaged due to changes in industrial structures and lifestyles. Without human management, *satoyama* will rapidly deteriorate and lead to risks, such as increasing damage in case of a disaster due to the loss of ecosystems or the disappearance of functions of nature. The conservation of *satoyama*, which is the use of this proceeds is expected to contribute to the maintenance of biodiversity that will be brought about by the *satoyama* by avoiding or controlling such risks.

It is expected to have environmental benefits with the use of this proceeds since the project contributes to biodiversity. The use of this proceeds falls under Terrestrial and Aquatic Biodiversity Conservation in the Green Bonds Principles and Project for Terrestrial and Aquatic Biodiversity Conservation among the use of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 10: Project for Clean Transportation (developing rolling stock of public transportation)

Local governments will use the proceeds from this bond for developing rolling stock in railway projects (public/quasi-public corporation) and facilities (station buildings.)

The development of rolling stock in the railway projects assumed for this use of proceeds will involve the introduction of new rolling stock by the railway companies. Railways are a means of transportation with low environmental burdens and CO₂ emissions per transport volume is 1/5 of private cars for passengers and 1/10 of commercial cargo vehicles for freight.¹³ This use of proceeds will be used to further reduce environmental loads by introducing rolling stock with higher energy efficiency than the existing vehicles.

Station buildings are required for operating railway projects and is made conditional on reduction of CO₂ emission such as introducing energy saving facilities in the eligible criteria under this framework. The criteria make energy-saving be achievable and in cases where the convenience of rail road increases through the development of railway facilities, a modal shift to railroads from other means of transportation is achievable.

This use of proceeds provides a means of transportation that are highly effective to reduce greenhouse gas emissions and thus environmental benefits are prospective. This use of proceeds falls under Clean Transportation in the Green Bond Principles and Projects for Clean Transportation among the use of proceeds illustrated in the Green Bond Guidelines.

¹³ The website of Ministry of Land, Infrastructure, Transport and Tourism at https://www.mlit.go.jp/sogoseisaku/environment/sosei_environment_tk_000007.html

Use of Proceeds 11: Project for Clean Transportation (spreading and expanding electric vehicles)

Local governments will use the proceeds from this bond to convert public vehicles into electric vehicles.

Electrifying public vehicles refers to purchasing battery electric vehicles (hereinafter referred to as "BEV"), fuel cell vehicles (hereinafter referred to as "FCV") and hybrid vehicles (hereinafter referred to as "HV") and replacing them with the existing gasoline-powered cars. BEV has high environmental benefits since it does not emit GHG while running.

It is listed to popularize next-generation vehicles and improve fuel efficiency as one of the initiatives on decarbonization in the transportation sector in the government's Global Warming Measures Plan. The aim is to reduce the environmental burdens by spreading/expanding the next-generation vehicles (EV, FCV or PHEV that is an abbreviation of Plug-in Hybrid Electric Vehicle) with excellent energy efficiency and by strategically developing EV charging facilities and hydrogen stations that are required for widespread use of the next-generation vehicles. This use of proceeds is considered to be contributable to these measures.

JCR has evaluated that HV has environmental benefits only if it meets the fuel efficiency with CO₂ emissions of 50 gram or below per person/kilometer by 2025.

This use of proceeds is expected to have environmental effects since reducing CO₂ emissions is achievable. This use of proceeds falls under Clean Transportation in the Green Bond Principles and Projects for Clean Transportation among the uses of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 12: Project for Clean Transportation (Promoting utilization of clean means of transportation)

Local governments will use the proceeds from this bond for developing bicycle riding space.

The Bicycle Use Promotion Act was enforced in 2017 as a basic concept, based on which reducing dependency upon automobiles has economic and social benefits by improving people's health, reducing traffic congestion and expanding the role of bicycle transportation in the transportation system. The national government stipulated a plan for promoting bicycle utilization at Cabinet meetings, including targets and necessary legislative and financial measures to be taken, and local governments is obliged to make the best efforts to establish a plan for promoting bicycle utilization depending upon the actual conditions in the areas under their jurisdiction in line with the 14 basic policies that are to be intensively studied and implemented under the Act. The government formulated the Bicycle Use Promotion Plan¹⁴ and many local governments set local versions of their own bicycle use promotion plans.

The latest plan has listed the creation of a favorable urban environment through the expansion of the role of bicycle transportation as one of its targets, and it is designated to increase use of bicycles with the following measures.

¹⁴ The latest (the 2nd Bicycle Use Promotion Plan) was decided in the cabinet in May, 2021.

- Promote local governments to formulate bicycle utilization promotion plans and to steadily take measures based on these plans
- Promote the systematic development of safe and comfortable bicycle riding space, which is appropriately separated from pedestrians, bicycles and automobiles.
- Promote to secure bicycle riding space through the development of off-street parking lots or parking spaces for cargo handling.

The use of the proceeds is expected to improve environmental benefits since a means of transportation with lower environmental impacts can be selected. This use of proceeds falls under Clean Transportation in the Green Bond Principles and Project for Clean Transportation among the use of proceeds illustrated in the Green Bond Guidelines.

Use of Proceeds 13: Project for Adaptation to Climate Change (measures for disasters caused by storms and floods)

Local governments will use the proceeds from this bond for developing rivers (bank protection, removal of sediment from rivers, widening rivers or flood-dam control,) improving agricultural irrigation facilities and sewerage facilities (drainage pump stations or storm drainage facilities) and the project for storm and flood control measures including the project for roads (drainage/permeable pavement or pole-free cities.)

The government considers that it is required to evaluate future climate change and to start taking measures in advance since new forms of large-scale disasters may occur due to complex factors, such as landslide/flooding, high tide/flooding as well as frequent/serious water disasters along with increases in the frequency and intensity of short-term heavy/massive rain, increases in total precipitation, rises in average sea levels, sea level anomaly or increases in extreme values in its Regional Climate Change Adaptation Plan. The government is to further its efforts of River Basin Disaster Resilience and Sustainability by All so as to reduce damage in the entire basins, such as catchment areas/rivers and floodplain areas by all stakeholders in any kind of place around basins, including those who were not involved before in order to view the flow of water as one system. Strengthening non-structural measures (software measures,) such as utilizing green infrastructure with various functions of the natural environment or enforcing observation systems/improving prediction accuracy for concentrated downpours or typhoons caused by linear precipitation zones when promoting River Basin Disaster Resilience and Sustainability by All.

Local governments quantitatively grasp the extent of the maximum storm and flood disasters assumed by the project concerned or the degree of damage to be reduced by the project in question when selecting climate change adaptation projects. Environmental benefits are prospective with this use of proceeds since it is expected to reduce damage caused by storm and flood disasters. This use of proceeds falls under Climate Change Adaptation in the Green Bond Principles and Projects for Climate Change Adaptation among the use of proceeds illustrated in the Green Bond Guidelines.

Use of Proceeds 14: Project for Adaptation to Climate Change (measures for high tide/high wave)

Local governments will use the proceeds from this bond for developing facilities for protecting the coastline and improving harbor/fishing port facilities.

Sea levels around Japan are on an upward trend (rising 2.8 (1.7 to 4.0) millimeters per year from 1993 to 2015, rising 4.19 (- 1.10 to +8.20) millimeters per year from 2004 to 2019) based on the analyses of sea level observation records according to the government's Regional Climate Change Adaptation Plan. No concrete events or research results have been confirmed regarding the relationship between high waves/tides and the effects of climate change at the current moment. On the other hand, the average global sea level will definitely rise between 2081 and 2100, based on the average between 1986 and 2005 even through the greenhouse gas emissions will be reduced in both RCP2.6 and RCP8.5 scenarios. In cases where the sea level rises by 80 centimeters, the zero-meter area in the three major bays (Tokyo Bay, Ise Bay and Osaka Bay) increases by 1.6 times and accordingly, the impacts are extended to coasts across Japan. In the event that sea levels rise, disaster risks of damage from high tides, high waves or tsunamis or coastal erosion increase compared to the current situation even if there is neither typhoon nor powerful low-pressure systems. In particular, anticipated impacts are the followings: river water intake facilities, coastal disaster prevention facilities or ports and harbors/fishing port facilities may be functionally degraded or damaged, coastal areas may be submerged/flooded, coastal erosion may be accelerated, ports and harbors/fishing port operations may be hindered and the ecosystems in the tidal areas of tidal flats or rivers may be impacted.

This use of proceeds is expected to have environmental benefits since the effects to reduce damage from high tides/waves are prospective. This use of proceeds falls under Climate Change Adaptation in the Green Bond Principles and Projects for Climate Change Adaptation among the uses of proceeds exemplified in the Green Bond Guidelines.

Use of Proceeds 15: Project for Adaptation to Climate Change (measures for sediment disaster)

Local governments will use the proceeds from this bond for measures for landslide disasters, such as development of SABO facilities, improvements of forest conservation facilities, prevention of landslides at steep slopes or control of road slopes.

There is not much research that clearly shows the cause-effect relationship between landslide disasters and climate change according to the government's Climate Change Adaptation Plan. On the other hand, changes in the situations are assumed on the basis that rainfall conditions will become more stringent in the future, including the frequent occurrence of concentrated collapses/landslides/debris flows, the impacts on social life in mountains or around slopes, the structural/non-structural measures that are relatively less effective and increases in the frequency of landslides/floods. Both of the structural and non-structural aspects are considered to be effective since landslides often occur due to a combination of complicated factors. Several concrete measures are listed in the Climate Change Adaptation Plan as specific countermeasures against landslides, including increases in the frequency, short-time warning/evacuation and deep-seated landslides.

This use of proceeds is expected to be effective for mitigating landslides; therefore, environmental benefits are prospective. This use of proceeds falls under Climate Change Adaptation in the Green Bond Principles and Projects for Climate Change Adaptation among the uses of proceeds illustrated in the Green Bond Guidelines.

Use of Proceeds 16: Project for Adaptation to Climate Change (R&D in agriculture, forestry and fisheries in preparation for climate change)

Local governments will use the proceeds from this bond to improve facilities for developing agricultural product varieties or agricultural production technology.

The government's Climate Change Adaptation Plan states that climate change will cause changes in distribution ranges or life cycles, further negative impacts will cause changes in interspecific interaction through migration/local extinction of species or species may be extinct since species cannot migrate in the distribution ranges to follow climate change due to the fragmentation of habitats. It is predicted that 30 per cent or more species worldwide will be at risk of extinction if temperature rises by 2 degrees Celsius or higher by 2050.

This use of proceeds is expected to be effective for mitigating damage, such as deterioration in quality or reduction in yields in the agriculture, forestry and fisheries, and is therefore expected to have environmental benefits. This use of proceeds falls under Climate Change Adaptation in the Green Bond Principles and Projects for Climate Change Adaptation among the uses of proceeds illustrated in the Green Bond Guidelines.

Use of Proceeds 17: Project for Green Buildings (green buildings)

Local governments will use the proceeds from this bond for green buildings.

The buildings eligible for the use of proceeds obtained or will obtain either of the two highest ratings of CASBEE certification or ZEB certification.

CASBEE (Comprehensive Assessment System for Built Environment Efficiency) is a tool to reconfigure predetermined evaluation factors from the perspective of the environmental quality of buildings (Q refers to quality) and the environmental loads (L means load) of architectural work, and BEE (Building's Environmental Efficiency) value is an indicator and is calculated with L as a denominator and Q as a numerator. High quality of overall buildings is required to be highly rated, and consideration should be given to the indoor comfort and landscape as well as the environment, such as utilizing equipment with energy conservation or low environmental burdens.

ZEB (Net Zero Energy Building) is defined as "a building that has achieved significant energy savings while maintaining the quality of the indoor environment by controlling energy loads via advanced architectural design, actively utilizing natural energy through the adoption of passive technologies or introducing highly efficient equipment systems. Such a building aims to achieve a zero annual primary energy consumption balance by introducing the use of renewable energy, thereby increasing energy independence as much as possible." ZEB is categorized into four stages as follows: (1) reduce 100 per cent or more primary energy with ZEB (energy savings (of 50 per cent or more) and energy creation,) (ii) reduce 100 per cent or more primary energy with

Nearly ZEB (energy savings (of 50 per cent or more) and energy creation of 75 per cent or more,) (iii) ZEB Ready (reduce 50 per cent or more primary energy) and (iv) ZEB Oriented (for buildings with a total floor space of 10,000 square meters or more, satisfying the requirements established by use.) The ZEB certification (four stages from (i) to (iv) above) for which local governments use the proceeds is not eligible criteria of the Joint Local Government Green Bond Framework; however, at least a 50 per cent reduction from the standard primary energy consumption is required, which means that the building must have a BEI value of five stars or higher in the BELS¹⁵. Accordingly, JCR has determined the use of the proceeds as adequate.

This use of proceeds will promote to construct buildings with high environmental performance and is expected to have environmental benefits. The use of proceeds is categorized into Green Buildings with Standards or Certifications Recognized for Environmental Performance Regionally, Nationally or internationally in the Green Bond Principles, and Project for Green Buildings among the use of proceeds exemplified in the Green Bond Guidelines.

Consequently, JCR has evaluated that the aforementioned use of proceeds from 1 to 17 are subject to projects with environmental benefits, respectively.

3. Negative Impacts on the Environment and Society

Local governments are aware of negative impacts of the projects assumed as targets for the use of proceeds and are examining the potential environmental/social effects when projects are carried out. As a result of verification by the local governments, projects with less negative impacts on the environment and society will be selected as eligible projects for the use of proceeds.

JCR has confirmed that appropriate consideration will be given to negative effects on the environment and society of the projects for which the proceeds will be used and has evaluated that appropriate avoidance/mitigation measures will be taken per project.

4. Consistency with SDGs

JCR has evaluated that the projects eligible for the use of proceeds will contribute to the SDGs' goals as indicated in the Joint Local Government Green Bond Framework.

¹⁵ BELS (Building-Housing Energy-efficiency Labeling System) evaluates and certifies the energy-saving performance of new and existing buildings by a third-party evaluation institution. The evaluation covers envelope performance and primary energy consumption, and a building must have excellent energy-saving performance to receive a high rating.

I. Criteria and Processes for Selecting the Use of Proceeds

JCR's Key Consideration in This Factor

In this section, JCR will confirm the objectives to be achieved through this evaluation target, the adequacy of the criteria and processes for selecting green projects, and whether a series of processes will be appropriately disclosed to investors.

▶▶▶ Current Status of Evaluation Targets and JCR Evaluation

JCR has determined that the departments and executives with specialized knowledge are appropriately involved in the goals of this bond and the criteria and processes for selecting green projects.

1. Goals

The climate change caused by global warming is an urgent issue that none of all creatures living on the earth is avoidable. It is unveiled that the relationship between cumulative CO₂ emissions that are anthropogenic sources and the changes in the global average temperature projected is almost proportional according to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (hereinafter referred to as "IPCC".) It is therefore necessary to keep the cumulative emissions below a certain level, taking sinks into account, and continuously reducing greenhouse gas emissions is of significance in Japan. As global warming progresses, it causes not only abnormal weather events and rises in sea levels but also a wide range of impacts, including economic impacts on agriculture, forestry and fisheries, disasters or health effects.

Japan as a whole is facing a full-fledged decline in the birthrate combined with an aging population/depopulated society. While a decline in the total population is inevitable for the next several decades, the population has been unevenly distributed at an accelerated rate, and the young/working-age population in rural areas are decreasing with continuous excess inflows into cities from rural areas especially by the young. These demographic changes undermine local communities, impede the performance of local governments' administrative functions and have serious consequences on various local administrative areas as well as local environmental conservation efforts. For instance, abandoned farmland or poorly maintained forests have increased due to the decline in people who will take over agriculture and forestry, and the damage caused by wild birds and mammals has worsened because of declines in hunters. In such areas, the vulnerability to natural disasters is increasing while rich natural habitats, such as *Satochi-Satoyama* (community-based forest areas and the surrounding countryside) are being lost, and biodiversity are endangered.

There are also issues on the environmental pollution of air, water and soil. Marine pollution has been worsened due to marine debris, such as microplastics, and global pollution also has been aggravated, including anthropogenic mercury emissions or persistent/highly bioaccumulative chemical substances, and consequently there are concerns about health effects or impacts on ecosystems through water, air or food chains. In Japan, although the achievement of environmental standards has been on an increase in the medium to long term, there are still negative impacts, such as soil contamination due to heavy metals, asbestos in buildings and polychlorinated biphenyls (PCBs) that are not detoxified, and also issues remain in the atmospheric environment, such as dealing with fine particulate matter (PM_{2.5}) or photochemical

oxidants, and there are still problems in the environmental water quality, including eutrophication in enclosed water areas.

In this way, the government is facing complex environmental challenges; therefore, it has established six priority strategies in the Fifth Basic Environmental Plan to deal with various environmental issues that are closely related to each other.

Priority Strategy 1: Building green economic systems to realize sustainable production and consumption

The aim is to achieve innovation in economic and social systems and to improve resources/carbon productivity (to realize economic growth while reducing inputs of natural resources or greenhouse gas emissions) so as to ensure sustainable production and consumption patterns. Specific measures include accelerating green purchasing/environmentally friendly contracts, promoting thorough energy conservation, introducing the maximum renewable energy, expanding the use of hydrogen and utilizing biomass as energy/recyclable resources.

Priority Strategy 2: Improving the values of national land through stock effects

The important is to promote various measures for sustainable national land management in light of a variety of issues, such as apparent effects of climate change, energy problems, aging infrastructure and increases in land that is difficult to continuously manage properly. National land development needs to consider the environment in both structural and non-structural aspects, such as social infrastructure improvements or land use and to address economic/social issues in order to handle these problems. Specific measures include developing/conserving forests, building ecosystem networks, preserving the marine environment, maintaining or restoring healthy water cycles and promoting adaptation to the effects on climate change.

Priority Strategy 3: Sustainable regional development with local resources

Local economic and social activities are generated based on a variety of local resources, such as local energy, natural resources, urban infrastructure or industry accumulation. It is important to lead to progressing economic and social activities by improving quality of local resources and maximizing the use of natural/physically produced/human capital in regions in a sustainable manner. Measures will be taken to sustainably optimize the use of local resources from the standpoint above. Specific measures include the introduction of renewable energy utilizing local resources, regional development with unused biomass resources and the promotion of resources circulation in regions, such as the use of waste biomass.

Priority Strategy 4: Realizing healthy and fulfilling life

People's life is supported by various nature's blessings (ecosystem services) provided by forests, villages, rivers or seas. It is essential to create diverse and attractive local recycling networks utilizing regional uniqueness to maintain/improve Japanese vitality. There is a need to reaffirm values of unique nature, including forests, villages, rivers or seas in respective regions and to rebuild the connections between people and nature and among people. Concrete measures contain promoting low-carbon and healthy housing, creating new demand for wood, maintaining/restoring the healthy and rich water environment, promoting proper

waste disposal, accelerating measures for marine debris, including microplastics or taking measures for heat islands.

Priority Strategy 5: Developing/disseminating technologies to support sustainability

In Japan, it is required to have technologies that can contribute not only to Japan but also to the world, such as achieving the 2 degrees Celsius target of the Paris Agreement and adapting to the effects of climate change and that can address issues, including decreasing population/declining birthrate and aging society in advance of the rest of the world, high dependence on overseas resources/energy, regional revitalization or disasters, and it is important to develop/disseminate environmental technologies that can help solve these issues. Specific measures contain developing technologies that contribute to climate change adaptation, biodiversity conservation/restoration and the disaster prevention/mitigation with ecosystems.

Priority Strategy 6: Demonstrating Japan's leadership through international contributions and building strategic partnerships

Japanese excellent environmental technologies/infrastructure and their supportive ideas, systems or human resources can greatly contribute to improving the world's environmental problems while global environmental problems are becoming more serious. In order for the aforementioned to be widely adopted globally, the ideal way of international rules, such as multilateral environmental treaties or various guidelines under respective treaties is crucially important including which positive participation in formulating fair and effective international rules is required.

Local governments can be a key in promoting these priority strategies in their regions, and they play a role as a leading promoter of local environmental conservation, which is a basis to build sustainable society and simultaneously serve as a coordinator of local initiatives. In response to which, local governments are working closely with related departments to comprehensively deploy environmental conservation measures in regions in cooperation and collaboration with residents, business operators, private organizations, other local governments or related national organizations, such as presenting goals or directions for local initiatives, establishing various systems, developing social infrastructure or promoting activities of respective entities depending upon local characteristics. Local governments play extremely important roles in taking environmental conservation measures widely, comprehensively and exhaustively even in the environmental areas in which private business operators are not involved from the perspective of economic rationality.

Local governments formulated some plans for the basic environment, global warming measures and climate change adaptation in accordance with the circumstances of respective organizations so as to play a role to promote the critical strategies mentioned above. "Net Zero Emission of CO₂ by 2050" aimed by local governments or so-called zero-carbon cities include only four local governments as of September 2019; however, the zero-carbon cities have rapidly increased to 1,013 local governments as of December 28, 2023 due to a rising sense of crises against intense weather disasters.

The national government aims to reduce greenhouse gas emissions by 46 per cent in FY 2030 from FY 2013 in its global warming measures plan. The local governments that formulated plans for global warming measures established greenhouse gas reduction targets in line with the circumstances of respective organizations.

The national/local governments aim to create a secure, safe and sustainable society while striving to prevent/mitigate damage caused by effects of climate change, stabilize the livelihood of people/residents, soundly develop society/economy, preserve the natural environment and strengthen the national land by comprehensively and systematically promoting measures on climate change adaptation based on scientific knowledge in their climate change adaptation plans.

JCR has evaluated that the use of proceeds indicated in the Joint Local Government Green Bond Framework is consistent with the plans for global warming measures or climate change adaptation plans formulated by the national or local governments.

Consequently, JCR has evaluated that the purpose of issuing the joint local government green bond is consistent with the goals or plans presented by the local governments.

2. Selection Criteria

JCR has evaluated the selection criteria stipulated in the Joint Local Government Green Bond Framework by the local governments as appropriate with environment benefits. JCR has confirmed that all of the projects covered by this bond meet the selection criteria.

3. Processes

The projects eligible for the use of proceeds financed by this bond will be determined after candidate projects will be selected cooperatively by the financial departments of respective local governments and relevant project departments.

The green characteristics of projects is determined by the relevant departments in respective local governments, and the projects for which proceeds are to be used are decided through the processes of respective local governments and thereby JCR has evaluated the selection process as adequate.

The goals, criteria and processes on this bond are stated in the Joint Local Government Green Bond Framework. The framework is also published on the website of JAPAN LOCAL GOVERNMENT BOND ASSOCIATION. Consequently, JCR has evaluated this bond as highly transparent.

II. Management of Proceeds

JCR's Key Consideration in This Factor

It is generally assumed that how to manage proceeds widely varies depending on finance raisers. JCR will confirm that proceeds financed based on this evaluation target are certainly allocated to green projects or whether the mechanisms and internal systems are in place to easily track and manage the allocation.

JCR will also give importance to whether the proceeds financed through this evaluation target will be allocated to green projects promptly and also to the evaluation of managing/operating methods for unallocated proceeds.

▶▶▶ Current status of Evaluation Target and JCR Evaluation

JCR has evaluated that the transparency is high since the financial management system of local governments is appropriately in place and that the method of managing proceeds financed is disclosed in this evaluation report and on the website.

The proceeds financed through this bond will be promptly transferred to the account designated by respective local governments via the trustee bank. Respective local governments, in principle, will allocate the proceeds financed through this bond to projects that meet the eligibility criteria during the fiscal year in which the proceeds are financed. The proceeds to eligible projects are allocated by the finance departments of respective local governments, and the amount financed is to be managed in order not to exceed the allocation of this bond in the target projects with the bond management table that records the business expenses or the bond issuance amounts per project. In cases where the project originally scheduled for appropriation is delayed or interrupted, the proceeds of respective local governments will be appropriated to cash or highly safe financial assets until the appropriation of the proceeds is fixed.

Performance results and financial statements are prepared for all revenues and expenditures in each local government and are audited by the Audit Committee at the end of each fiscal year. Thereafter, the financial statements are submitted to the assembly of each local government for approval, with the opinions of the audit committee members attached. It is therefore considered to be appropriately controlled.

Unallocated proceeds will be managed in cash or highly safe financial assets among the proceeds financed with this bond. Documents related to the joint local government green bond financed are stored until the repayment based on document management rules, and thereby the document management is adequate.

Accordingly, JCR has evaluated the financial management by respective local governments as appropriate.

III. Reporting

JCR's Key Consideration in This Factor

JCR will evaluate whether the disclosure systems to investors before and after financing based on this evaluation target is planned in a detailed and effective manner in this section.

▶▶▶ Current status of Evaluation Target and JCR Evaluation

JCR has evaluated local governments' reporting as a plan in which both of the appropriation of proceeds and environmental benefits are adequately disclosed to investors.

Reporting on the appropriation of proceeds

The use of the proceeds by this bond will be disclosed on the JLGBA's website and will be explained to investors ahead of time. JLGBA plans to annually disclose the appropriation of the use of proceeds related entirely to this bond on its website. Some local governments may disclose the appropriation of their own group's proceeds as well as the appropriation of the proceeds related totally to the bond on their websites. In cases where any major change is made in the plan to appropriate the use of proceeds, that effect will be disclosed on the website.

Reporting on environmental benefits

JLGBA will annually disclose contents specified in the Joint Local Government Green Bond Framework as reporting on the environmental benefits of the eligible projects of this bond as a whole on its website. Some local governments may disclose their own group's environmental benefits as well as the environmental benefits of the eligible projects of this bond as a whole on their websites. Reporting on environmental benefits include the details by which the benefits are quantitatively recognizable.

Consequently, JCR has evaluated the reporting system by local governments as adequate.

IV. Organizational Environmental Initiatives

JCR's Key Consideration in This Factor

JCR will evaluate whether the management of finance raisers regards sustainability issues as high-priority management issues or whether sustainable finance policies/processes or selection criteria for green projects are clearly positioned by establishing departments that specialize in sustainability categories or in cooperation with external organizations in this section.

▶▶▶ Current Status of Evaluation Target and JCR Evaluation

JCR has evaluated that local governments regard sustainability issues as important issues of policies and are promoting sustainability initiatives by widely incorporating the knowledge of outside experts.

The 2030 Agenda for Sustainable Development (hereinafter referred to as "The 2030 Agenda") adopted by the United Nations General Assembly in September 2015 presents 17 goals and 169 targets as Sustainable Development Goals (hereinafter referred to as "SDGs.") The 2030 Agenda includes many goals for issues related to the global environment itself and challenges closely related to the global environment, such as water/sanitation, energy, sustainable cities, sustainable production and consumption, climate change, terrestrial ecosystems or marine resources, which signify the international sense of crisis for the sustainability of the global environment. In particular, serious, wide-ranging and irreversible effects of climate change can unexceptionally reach Japan, and thus increasing risks of natural disasters is concerned. The climate systems are undoubtedly warming, and it is apparent that the relationship between cumulative CO₂ emissions that are anthropogenic sources and the changes in global average temperature projected is almost proportional by 2100 according to the Fifth Assessment Report of the IPCC.

On the other hand, while Japan as a whole is facing a full-fledged decline in the birthrate combined with an aging population, the population has been unevenly distributed at an accelerated rate and the young/working-age population in rural areas are decreasing due to continuous excess inflows into cities from local regions especially by the young as issues surrounding local governments mentioned above. These demographic changes undermine local communities, impede the performance of local governments' administrative functions and have serious consequences on local environmental conservation efforts in addition to frequency/severity of natural disasters in recent years.

After recognizing these environmental issues, the government formulated Fifth Basic Environmental Plan (Cabinet decision in April 2018) in light of the fact that environmental and social issues (e.g., low birthrate/aging population, a declining population, a reform of work style practices or preparation for large-scale disasters) and economic issues (e.g., battered regional economy or addressing technological innovation, such as IoT) are interconnected and complicated. The plan is designed to focus on the environmental issues and measures while simultaneously solving economic and regional issues, making maximum use of local resources in a sustainable manner and improving economic/social activities.

The government has formulated plans for global warming measures and climate change adaptation to respond to various environmental issues. The current plans for global warming measures cover all greenhouse gases, including those other than carbon dioxide, in order to achieve the goal of reducing greenhouse gases by 46 per cent in FY 2030 (from FY 2013) and

include the measures and policies that support the targets. The government aims to prevent/reduce damage caused by the effects of climate change, stabilize people's living, soundly develop society/economy, preserve the natural environment and strengthen the national land in a safe, secure and sustainable manner in the current climate change adaptation plan. The roles in which local governments should play are described in the Global Warming Measures Plan and the Climate Change Adaptation Plan, respectively.

The government, in response to the adoption of the 2030 Agenda with SDGs at its core, established the Sustainable Development Goals Promotion Headquarters in May, 2016 and determined Sustainable Development Goals Implementation Guidelines, a mid- to long-term national strategies to achieve the SDGs in December, 2016. The Implementation Guidelines were revised in December 2019 in which local governments are expected to further accelerate efforts to achieve the SDGs, proactively disseminate/share local best practices domestically and internationally and approach diverse stakeholders with the aim of disseminating the SDGs still more. In the Guidelines, local governments are required to create "Regional Circular and Symbiotic Spheres" (a concept for local vitality to be exercised to a maximum extent by forming self-reliant/decentralized society per region with various regional resources, including natural resources, such as renewable energy as well as human resources or proceeds by complementing and supporting regions each other depending upon their characteristics) proposed in the government's "Fifth Basic Environmental Plan."

Local governments that are required to create such "Regional Circular and Symbiotic Spheres" have formulated a basic environmental plan, aiming to simultaneously solve environmental, social and economic issues in regions in harmony with the circumstances of respective organizations. Local governments also formulated plans for global warming measures and climate change adaptation as necessary and promoted to take measure to migrate and adopt climate change based on the specific environmental issues in respective regions. Prefectures and municipalities work together to formulate/promote these plans, taking the situation of each local government into consideration.

Local governments collaboratively work with external institutions; for instance, collaboration is made between the Ministry of Internal Affairs and Communications and JLGBA.

Ministry of Internal Affairs and Communications (hereinafter referred to as "MIC") has provided local governments with information on issuance of green bonds since FY 2017 when the Tokyo Metropolitan Government issued a green bond as a local government for the first time in collaboration with JLGBA. In recent years, MIC is considering issuing green bonds utilizing the joint bond framework in order for local governments to stably finance proceeds to meet the investors' need in light of the growing need for ESG investments in the domestic markets or the expansion of issuance of green bonds by individual local governments. MIC contributes to solving issues, such as ensuring issuance lots (a financing amount that is enough to issue green bonds) or labor-saving of local governments.

JLGBA that is supporting to formulate green bond frameworks has established a working group in the "Research and Study Committee on Local Bonds" as the Secretariat to organize challenges when issuing green bonds and to investigate/consider concrete measures in order to promote issuing, including jointly issued green bonds. JLGBA provides local governments that issue joint local government green bonds with the knowledge obtained through the Research and Study Committee on Local Bonds.

Consequently, JCR has evaluated that the local governments regard issues on sustainability as significant challenges and are considering policies/initiatives on sustainability by widely incorporating the knowledge of outside experts.

Evaluation Phase 3: Evaluation Results (Conclusion)

Green 1

JCR assigned "g1" to the "Green Evaluation (Use of Proceeds)," "m1" to the "Management, Operation and Transparency Evaluation" and "Green 1" to the "JCR Green Bond Evaluation" for this bond based on JCR Green Finance Evaluation Methodology. JCR has evaluated that this bond meets the criteria for the factors required in the Green Bond Principle and the Green Bond Guidelines.

<JCR Green Bond Evaluation Matrix>

		Management/Operation/Transparency Evaluation				
		m1	m2	m3	m4	m5
Green Evaluation	g1	Green 1	Green 2	Green 3	Green 4	Green 5
	g2	Green 2	Green 2	Green 3	Green 4	Green 5
	g3	Green 3	Green 3	Green 4	Green 5	N/A
	g4	Green 4	Green 4	Green 5	N/A	N/A
	g5	Green 5	Green 5	N/A	N/A	N/A

(Responsible Analysts) Atsuko Kajiwara, Rieko Kikuchi, Shintaro Arai, Takuto Toda

Important Explanation on this Evaluation

1. Assumptions, Significance and limitation of JCR Green Finance Evaluation

JCR Green Finance Evaluation, which is granted and assigned by Japan Credit Rating Agency (hereinafter referred to as "JCR") is a comprehensive statement of JCR's current opinion on the extent to which proceeds financed through issuing green bonds or making green loans to be evaluated, respectively (hereinafter, green bonds and green loans are collectively referred to as "green finance" and issuance of green bonds and execution of green loans is collectively referred to as "execution of green finance") are allocated to green projects as defined by JCR and the extent of the initiatives to ensure management, operations and transparency on the use of proceeds of the green finance concerned. JCR Green Finance Evaluation does not fully present the allocation of proceeds financed through the green finance in question and the extent of the initiative to ensure management, operation and transparency on the use of proceeds.

JCR Green Finance Evaluation is to appraise the plan or status of proceeds allocation when the execution of green finance is planned or made and does not guarantee the status of proceeds allocation in the future. JCR Green Finance Evaluation neither proves the green finance effects on the environment nor assumes any responsibility for the environmental effects. JCR, in principle, does not directly measure the environmental benefits through proceeds financed by executing green finance although JCR confirms that the environmental benefits are quantitatively and qualitatively measured by the issuer or the borrower (hereinafter the issuer and the borrower are collectively referred to as the "finance raiser") or the third party requested by the finance raiser. Green equity may be included in the evaluation only when the assets are categorized into green projects, such as investment corporations.

2. Methodology Used in this Evaluation

The methodology used to make this evaluation is posted as JCR Green Finance Evaluation Methodology in the Sustainable Finance/ESG section on the JCR's website at <https://www.jcr.co.jp/>

3. Relations with Conduct for Credit Rating Business

The conduct of assigning and providing JCR Green Finance evaluation is performed by JCR as its related business and is different from the conduct for the credit rating business.

4. Relations with Credit Rating

This evaluation is different from a credit rating and does not commit to providing a predetermined credit rating or make available for inspection.

5. Impartiality when Evaluating JCR Green Finance

There are no capital or personnel relationships that could create a conflict of interest between this evaluation target and JCR.

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- ICMA (observer registration as an external evaluator with the International Capital Market Association)
- UNEP FI Positive Impact Financial Principles Working Group Member
- Climate Bonds Initiative Approved Verifier

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■ For further information, contact

Information Service Dept. TEL: 03-3544-7013 FAX: 03-3544-7026

Japan Credit Rating Agency, Ltd.

Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026

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