



Kanagawa Prefecture

September 24, 2020

Kanagawa Prefecture Green Bond Framework

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Rating and Investment Information, Inc. (R&I) has confirmed the alignment of the Kanagawa Prefecture Green Bond Framework of Kanagawa Prefecture dated September 24, 2020 with the "Green Bond Principles 2018" and the Ministry of the Environment's "Green Bond Guidelines 2020." This opinion is based on the following views.

■ Overview of the Opinion

(1) Use of Proceeds

Proceeds will be allocated to finance new projects related to rivers, coasts, and erosion control under the "Kanagawa Prefecture Flood Disaster Prevention Strategy." The Kanagawa prefectural government assessed the impact of climate change to conclude that it would have unavoidable impact even with the maximum level of mitigation for greenhouse gas emissions. In order to adapt to such climate change, it formulated a regional climate change adaptation plan (the Kanagawa Prefecture Global Warming Prevention Plan) and positions the Flood Disaster Prevention Strategy as a concrete adaptation measure to flood disasters. R&I has confirmed that the eligible projects cover rivers, coasts, and mountainous districts and that their measures are applicable to flood disasters caused by climate change. In addition, we have confirmed how the environmental and social implications of the project will be dealt with. The eligible projects fall under the category of the Green Bond Principles, 'climate change adaptation.'

(2) Process for Project Evaluation and Selection

With the "Kanagawa Climate Emergency Declaration" as its policy for dealing with climate change, it identifies disasters caused by climate change that need to be dealt with under the "Kanagawa Prefecture Global Warming Prevention Plan" and formulates specific measures in the "Kanagawa Prefecture Flood Disaster Prevention Strategy." The eligible projects are included in the Flood Disaster Prevention Strategy. The Declaration, Plan, and individual projects are formulated and selected based on relevant laws, ordinances, etc. Expert meetings and procedures to reflect the opinions of the people of the prefecture ensure expertise and fairness.

(3) Management of Proceeds

Finance Division of the Kanagawa Prefectural Government cooperates with departments in charge of the eligible projects to grasp the allocation status of proceeds and records in the book using accounting classifications in accordance with the accounting system. The allocation of funds will be completed within the same fiscal year as the funding year under the principle of fiscal year independence. Accounting documents to be prepared for revenues and expenditures, including allocation results, are subject to audit by the Kanagawa Prefectural Auditor and approval by the Prefectural Assembly, thereby ensuring objectivity.

(4) Reporting

We have confirmed that reporting including the allocation status of proceeds and environmental benefits will be disclosed on the Kanagawa Prefecture's website annually until the allocation of funds is completed. Indicators including those that show the execution of the eligible projects will be disclosed so that environmental benefits can be confirmed.

Outline of the Issuer

- Kanagawa Prefecture has a population of approximately 9.2 million people, second only to Tokyo among the prefectures, with a high population density of approximately 3,800 people/km², second only to the prefectures of Tokyo and Osaka. Its area is approximately 2,416 km² and roughly divided into three geographical areas: the mountainous western part and hilly and costal eastern part with the central part on plains and plateaus. As for rivers, there are 38 Class A rivers of 3 river systems with the total length of approx. 342.8 km, and 81 Class B rivers of 23 river systems that are about 515.7 km long. Class A rivers of the Tama, Sagami, and Tsurumi Rivers are managed by the national government, however the designated sections are administered by the prefectural government. Class B rivers are managed by the prefectural government, while part of the Sakai River is managed by the Tokyo Metropolitan Government. The total length under the prefecture's management is about 762.4 kilometers long for 114 rivers of 26 rivers systems, when Class A and B rivers are combined.
- In addition to areas with large population and many business establishments including Yokohama City and Kawasaki City, it has a rich natural environment represented by the hot springs of Hakone and Yugawara which are part of the national parks, the mountains of Tanzawa and four prefectural natural parks. Therefore, in the event of a natural disaster, significant impact on the residents and nature is anticipated.
- Many rivers run through densely populated areas to the east of the Sagami River which runs in the center of the prefecture. With the ground surface being covered with concrete, etc. as urbanization progresses, the water retention function, etc. inherent in the watershed has deteriorated. At the same time, as assets are increasingly accumulated in areas where floods are expected, there is a risk that damage caused by river flooding will be enormous. With regards to small and medium-sized rivers running through the urban areas, there is a risk that localized torrential rains result in a rapid rise in water level, which may cause flooding damage.
- Its coasts border the Sea of Sagami to the south and Tokyo Bay to the east. Both coasts suffered damages caused by storm surges and tsunamis in the past. Coastal facilities and houses, etc. are often damaged by typhoons as well.
- As measures against climate change, Kanagawa Prefecture enacted the "Kanagawa Prefecture's Ordinance to Promote Global Warming Countermeasures" in July 2009 and established the "Kanagawa Prefecture Global Warming Prevention Plan" in March of the following year. It was initially a plan for mitigation measures to combat global warming. Subsequently in October 2016, revisions were made to add adaptation measures, etc. With those revisions, the plan is positioned as a 'local climate change adaptation plan' based on the Article 12 of the "Climate Change Adaptation Act."
- In response to the damage, etc. caused by a series of typhoons, the "Kanagawa Climate Emergency Declaration" was issued in March 2020 in order to share and 'act' on the 'sense of crisis' that the climate is in a state of emergency. One of its main initiatives is the publication of the "Kanagawa Prefecture Flood Disaster Prevention Strategy."
- For rivers and coasts under its jurisdiction as a local government, Kanagawa Prefecture formulated the 'Basic Plan for River Development' and 'Basic Plan for Coastal Conservation,' etc. in accordance with the River Act and the Coast Act, respectively, and are taking various measures.

1. Use of Proceeds

(1) Eligible Projects

- The following projects relating to rivers, coasts, and erosion control in the “Kanagawa Prefecture Flood Disaster Prevention Strategy” formulated in February 2020 are eligible for the allocation of funds. They fall under the category of ‘climate change adaptation’ for the purpose of the Green Bond Principles.

Projects eligible for the allocation and their outline	Possible phenomena expected from climate change	Current and future impacts and risks expected under the Kanagawa Prefecture Global Warming Prevention Plan
(1) Infrastructure-related measures to minimize damage through urgent implementation		
Emergency response for rivers	Rivers (flooding and inland water)	Inundation and damage to facilities caused by rainfall exceeding what is assumed for the current level of development Inundation damage due to heavy rain in a short period of time
(2) Infrastructure-related projects to accelerate initiatives from a medium- to long-term perspective		
Development of detention basins and improvement of bottleneck points, etc. in watercourses	Rivers (flooding and inland water)	Inundation and damage to facilities caused by rainfall exceeding what is assumed for the current level of development Inundation damage due to heavy rain in a short period of time
Development of coastal conservation facilities, etc.	Storm surges/high waves	Increased risk of storm surges/high waves
Development of sediment disaster prevention facilities	Debris flows, landslides, etc.	Debris flows, landslides, etc.

- In recent years, typhoons and training¹ brought record-breaking heavy rains and storms, resulting in extensive damage caused by floods and sediment disasters. Global warming is considered to be the main cause of these meteorological disasters.
- Internationally, IPCC's² most recent 5th Assessment Report shows that human activities are very likely to be the dominant factor in global warming observed since the 20th century (95% chance or higher) and that atmospheric concentrations of CO₂, methane and N₂O which are greenhouse gases have increased to unprecedented levels in the last 800,000 years. Looking forward, it projects that the global average surface temperature is likely to change by 0.3 to 4.8°C and the global average sea level is likely to rise by 0.26 to 0.82m by the end of the 21st century, and that the total cumulative CO₂ emissions will be proportional to changes in the global average surface temperature. It then develops³ four levels of RCP scenarios for GHG emissions⁴ to assess emissions and temperature changes. Further, while it calls measures to reduce and absorb GHG emissions as ‘mitigation,’ it considers those that assume new climate conditions as ‘adaptation,’ which it argues need to be incorporated into future regional plans in preparation for preventing and mitigating the impact of climate change that are unavoidable even with the maximum mitigation.
- The Ministry of the Environment released a report⁵ that predicts the impact on Japan by using RCP

¹ It means ‘areas of rain, associated with heavy rainfalls, that are line-shaped with the length of about 50 to 300 km and width of 20 to 50 km, resulting from an organized group of cumulonimbus clouds which are a string of developed rain clouds (cumulonimbus clouds) which develop continuously that move along the almost same path or stay over the almost same region.’ (From the Glossary on the Japan Meteorological Agency’s website)

² An abbreviation of the United Nations Intergovernmental Panel on Climate Change. It is an organization established in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to conduct comprehensive assessments from scientific, technical and socioeconomic perspectives of anthropogenic climate change, as well as its impacts, adaptation and mitigation measures.

³ It refers to Green House Gas

⁴ Representative Concentration Pathways scenarios

⁵ Ministry of the Environment, Environment Research and Technology Development Fund, S-8 2014 Report, “Global Warming: Impact on Japan - Comprehensive Impact Projections and Adaptation Measures Based on New Scenarios -”

scenarios and assesses the effect of adaptation measures on risk reduction. Historically, in addition to measures including the “Kyoto Protocol Target Achievement Plan,” it revised the “Act on Promotion of Global Warming Countermeasures” in March 2016 and promulgated the “Climate Change Adaptation Act” in June 2018. In response, the cabinet approved the “Climate Change Adaptation Plan” in November 2018.

- The “Climate Change Adaptation Plan” describes the basic direction of measures relating to climate change adaptation (targets, plan periods, basic roles of relevant parties, basic strategies, progress management, etc.), measures by field, and fundamental measures. Adaptation measures cover a wide range of fields, including agriculture, forestry and fisheries, water environment/resources, natural ecosystems, health, industrial/economic activities, and people’s/urban lives. Therefore, with many people involved for each field, it clarifies their specific roles.
- Kanagawa Prefecture, as a local government, plays a major role in promoting local adaptation measures and adaptation by local stakeholders and, accordingly, has formulated a regional plan required by the Climate Change Adaptation Act and is promoting various measures. It is the “Kanagawa Prefecture Global Warming Prevention Plan” that corresponds to such regional plan.
- The Climate Change Adaptation Plan in the “Kanagawa Prefecture Global Warming Prevention Plan” expects that even under the RCP 2.6⁶ scenario which assumes the most stringent global warming countermeasures, a wide range of areas in Japan will be affected. Under the recognition that the annual average temperature in Kanagawa Prefecture has increased by 1.8°C per 100 years and that the highest temperature since the start of the statistics was renewed (37.4°C) in August 2013, it predicts the temperature to increase by 0.4 to 1.8°C and the number of days with the highest temperature rising above 30°C to increase by about 10 to 60 days in the region. In considering adaptation measures, Kanagawa Prefecture determined the impact of global warming based on these projections and summarized its assessment.
- Based on the impact assessment in the opinion of the government’s Central Environment Council of Japan, the following criteria were used to extract events that are considered to have particularly large impact on Kanagawa Prefecture.

Criteria to extract events considered to be significantly affected by climate change⁷

- [1] Those for which ‘severity’ is ‘particularly high’ with both ‘urgency’ and ‘confidence level’ considered to be ‘high,’ and which are applicable to Kanagawa Prefecture
 - [2] While there is scientific uncertainty in ‘confidence level,’ phenomena that have already been confirmed in Kanagawa Prefecture, and their ‘severity’ is ‘particularly high’ and ‘urgency’ is ‘high’
 - [3] Others that are considered to be particularly applicable in Kanagawa Prefecture
- The events extracted include natural disasters in rivers, coasts, and mountains which are covered by the “Flood Disaster Prevention Strategy” (floods, inland waters, high tides/waves, coastal erosion, debris flows/landslides, etc.). The measures for the events considered to have large impact include the eligible projects in the transaction. Since Kanagawa Prefecture has been implementing measures to help adapt to global warming, such measures are also included in the plan. The government’s “Climate Change Adaptation Plan” clearly states that “we will also continue to steadily develop the levees, flood control facilities, sewerage systems, and others that we have been working on⁸.” In addition to continuing with existing infrastructure-related measures for disasters with a high probability of occurrence, it aims to protect human lives and avoid catastrophic damage to the society and economy by taking measures including those on the intangible aspects with regards to the largest possible disasters.
 - The “Flood Prevention Strategy” summarizes concrete measures related to flood prevention in response to the “Kanagawa Prefecture Global Warming Prevention Plan” and “Kanagawa Climate Emergency

⁶ ‘RCP 2.6’ is a scenario that assumes the lowest level of emissions, developed with the goal of keeping future temperature increases below 2°C (so-called ‘2°C target’).

⁷ Excerpt from the Kanagawa Prefecture Global Warming Prevention Plan

⁸ Excerpt from the Climate Change Adaptation Plan, Chapter 4, Section 1

Declaration.” As such, the impact of climate change in Kanagawa Prefecture was assessed to be unavoidable even under the RCP 2.6 scenario of the “Kanagawa Prefecture Global Warming Prevention Plan,” based on which the “Flood Disaster Prevention Strategy” has been formulated.

(2) Environmental Benefits

- The “Flood Disaster Prevention Strategy,” in which the eligible projects are listed, consists of the following three measures. By stepping up infrastructure-related measures as well as those related to the intangible aspects centered on the evacuation of residents, it aims to achieve the targets such as preventing and delaying the occurrence of flood damage, which is expected to occur frequently in the future, to minimize the impact. The eligible projects are measures that belong to (1) and (2).
 - [1] Infrastructure-related measures to minimize damage through urgent implementation
 - [2] Infrastructure-related projects to accelerate initiatives from a medium- to long-term perspective
 - [3] Measures related to the intangible aspects with a view to strengthening disaster response capabilities
- Emergency response to the rivers that belongs to (1) is projects that require immediate response and prompt improvement, including raising levees in parts where flooding has occurred, and removing sedimentary soil and sand in sections where the risk of flooding is particularly high with a risk of damage when the water levels rise. On the other hand, the development of detention basins and improvement of bottlenecks, etc. in watercourses, development of coastal conservation facilities, etc., and development of sediment disaster prevention facilities, which belong to (2), are repair and improvement projects in anticipation of future disasters.
- These are flood control projects for climate disasters that are becoming more severe and frequent due to climate change. The flood control projects consist mainly of passive measures against disasters such as dredging to cope with the increase in water levels due to heavy/concentrated rain, improving water channels such as levees, and erosion control dam works, slope works and anchor works to cope with debris flows, etc., active measures to directly control water flow such as disaster prevention operations by dams, etc., and evacuation and disaster reduction measures such as preparation and dissemination of hazard maps incorporating inundation prediction and information sharing when a disaster is predicted. As such, the eligible projects directly contribute to disaster mitigation/prevention, play a role in responding to disasters anticipated under the flood control projects, and constitute the Climate Change Adaptation Plan, together with evacuation measures such as hazard maps.
- In light of the above, the environmental benefits of individual eligible projects have been confirmed as follows.

Emergency response for rivers

The project mainly concerns the removal of soil and sand accumulated by past floods, felling of trees, and raising of concrete where sandbags are placed all the time, and represents emergency response to where expected effects have not been achieved. The project will be executed with the aim of preventing or reducing flood damage that is likely to occur frequently in the future, and the number of sites by construction work type has been confirmed. The sites at which construction work is to be carried out can be expected to have the capacity of their current facilities put to sufficient use.

Development of detention basins and improvement of bottleneck points, etc. in watercourses

The project mainly concerns the development of detention basins which adjust the flow rate by flooding from a river when its water levels rise, and the replacement of railway bridges which will widen the width of the river at the bottleneck sites. The former adjusts the water levels in the downstream areas when the river water levels increase, and the latter reduces the possibility of flooding when the river water levels rise by increasing the width of the river to improve carrying capacity. The project differs from revetment repair, etc. in that it aims at lowering the water levels, rather than concerning facilities that are durable

against rising water levels, and we have confirmed its effect through reductions in the size of inundated areas, population in the inundated areas, and the estimated damage.

Development of coastal conservation facilities, etc.

It is a project to prioritize the development of coastal protection facilities, such as revetments, with respect to coasts that suffered damage to their backlands in recent years due to storm surges and high waves, among those with insufficient levee height, wave dissipating functions, etc. for the purpose of the Basic Plan for Coastal Conservation. The number of coasts at which the development work is to be carried out has been confirmed, and protection from tidal waves and tsunamis anticipated under the Basic Plan for Coastal Conservation can be expected.

Development of sediment disaster prevention facilities

Sediment disaster prevention facilities include erosion control dam works to prevent debris flow which is caused by the sudden flow of sediment from the hillside and riverbed to the downstream due to heavy rain, etc., riverbed consolidation works to prevent the outflow of sediment from the riverbed, mountain stream conservation works such as revetment works to protect the riverbank with stones and concrete, and anchor works to prevent landslide caused by the rise of groundwater, etc. which permeates the land due to heavy rain, etc., and slope works, etc. to prevent landslide. Those facilities are provided in the areas designated as erosion control areas, landslide prevention areas, and steep slope areas in danger of failure by the Erosion Control Act, Landslide Prevention Act, and Steep Slope Failure Act⁹, respectively, based on the standards of the respective laws. The number of the areas in which construction work is to be carried out and that of construction sites have been confirmed for each project. The sites at which construction work is to be carried out can be expected to have the effect of preventing sediment disasters.

Indicators to show environmental benefits for each project are in the following table. In addition, with respect to projects subsidized by the government, the Ministry of Land, Infrastructure, Transport and Tourism carries out assessment at the time of adoption of new projects, with information including cost/benefit assessment being disclosed¹⁰.

Eligible projects		Project sites, etc.	Environmental benefits indicators
Emergency response for rivers			
River improvement project expenses	Dredging and tree felling	Sagami River, Sakawa River, Kaname River, etc.	River bed excavation/tree felling: 72 sites at 38 rivers Emergency work for raising concrete, etc.: 7 sites at 7 rivers Emergency repair work for the deteriorated parts: 17 sites at 15 rivers
River maintenance and improvement project expenses	Raising concrete, etc.	Sanno River, Mekujiri River, Sakai River	
	Emergency levee improvement, etc.	Uta River, Kaname River, Sakawa River, etc.	
River repair expenses	Dredging and tree felling	Sagami River, Sakawa River, Kaname River, etc.	
Development of detention basins and improvement of bottleneck points, etc. in watercourses			
River improvement project expenses	Development of detention basins	Hikiji River, Sakai River, Kashio River, etc.	6 projects
	Replacement of railway bridges	Sanno River and Sakai River	2 projects Effect of the improvement in the

⁹ Act on Prevention of Disasters Caused by Steep Slope Failure

¹⁰ (Reference) List of assessment results at the time of adoption of new projects in the FY2020 budget <https://www.mlit.go.jp/tec/hyouka/public/kisha/200331R01/pdf/06.pdf>

			event of flood on a scale anticipated in the plan in the project sections Inundated areas: about 75ha ⇒ 0ha Population within inundated areas: approx. 1,360 ⇒ 0 Estimated damage: 9 billion yen ⇒ 0 yen
Development of coastal conservation facilities, etc.			
Project expenses for coastal storm surge countermeasures	Coastal conservation facilities such as revetments	Odawara Coast, Hayama Coast, etc.	4 coasts
Development of sediment disaster prevention facilities			
Regular erosion control project expenses	Erosion control dam works, etc.	29 sites	11 municipalities
Disaster prevention and erosion control project expenses	Mountain stream conservation works, etc.	23 sites	12 municipalities
Erosion control facility improvement expenses	Revetment repair work, etc.	10 sites	7 municipalities
Landslide prevention project expenses	Anchor works, etc.	6 sites	4 municipalities
Steep slope area failure prevention project expenses	Slope works, etc.	189 sites	21 municipalities
Steep slope area facility improvement expenses	Slope works, etc.	12 sites	7 municipalities

- The expected disaster prevention effect will be brought about through measures based on laws and regulations including the River Act and the Coast Act as well as the Basic Plan for River Development and Basic Plan for Coastal Conservation, generating environmental benefits as adaptation measures to the impact of climate change in all implementation sites of the eligible projects. We have confirmed that measures related to the intangible aspects which are not part of the eligible projects will add to disaster mitigation effects in the event of a disaster beyond the scale anticipated under the plan, and will serve as climate change adaptation measures for Kanagawa Prefecture.

(3) Consideration for Negative Environmental and Social Impacts

- Impact on the local natural environment, etc. is expected depending on the areas where the eligible projects are implemented and the construction method. In all projects, the assessment of environmental impacts is carried out in accordance with the Environmental Impact Assessment Act and the ordinances established by Kanagawa Prefecture.
- From a social point of view, there is a possibility that residents' voices, etc. concerning danger may not be reflected in the eligible projects, however, there is a mechanism that takes in their voices, for example, in making designation of steep slope areas in danger of failure at their requests.

Proceeds will be allocated to finance new projects related to rivers, coasts, and erosion control under the "Kanagawa Prefecture Flood Disaster Prevention Strategy." The Kanagawa prefectural government assessed the impact of climate change to conclude that it would have unavoidable impact even with the maximum level

of mitigation for greenhouse gas emissions. In order to adapt to such climate change, it formulated a regional climate change adaptation plan (the Kanagawa Prefecture Global Warming Prevention Plan) and positions the Flood Disaster Prevention Strategy as a concrete adaptation measure to flood disasters. R&I has confirmed that the eligible projects cover rivers, coasts, and mountainous districts and that their measures are applicable to flood disasters caused by climate change. In addition, we have confirmed how the environmental and social implications of the project will be dealt with. The eligible projects fall under the category of the Green Bond Principles, 'climate change adaptation.'

2. Process for Project Evaluation and Selection

(1) Incorporation into Comprehensive Objectives, Strategies and so on

- Kanagawa Prefecture has issued its “Kanagawa Climate Emergency Declaration” that declares climate emergency with a view to sharing its ‘sense of crisis’ that climate is in a crisis mode with municipalities, businesses, the academia, organizations and prefectural residents, and ‘acting’ together. In terms of the pillars of its basic stance, with the philosophy of the SDGs of ‘leaving no one behind’ in mind, it intends to work with the “All Kanagawa” lineup going forward, with the following as its three basic pillars toward a goal of realizing ‘sustainable Kanagawa that protects the lives of the prefectural residents’:
 - [1] Strengthening measures against wind and flood damage, etc. to protect the lives of the people today;
 - [2] Promoting initiatives toward the realization of a ‘decarbonized society’ in 2050 in order to protect future lives; and
 - [3] Enhancing information offering/dissemination and public awareness to share climate change issues
- The “Kanagawa Prefecture Global Warming Prevention Plan” has been established as a basic plan for comprehensive and systematic promotion of measures relating to the global warming countermeasures of Kanagawa Prefecture. The plan is positioned as a ‘action plans of local governments (regional policy)’ in accordance with the Article 21, paragraph 3, of the “Act on Promotion of Global Warming Countermeasures” and a ‘local climate change adaptation plan’ in accordance with the Article 12 of the “Climate Change Adaptation Act.”
- The “Kanagawa Prefecture Flood Disaster Prevention Strategy” which includes the eligible projects is positioned as a concrete measure in the Declaration and Plan.

(2) Criteria for Project Evaluation and Selection

- The impact of climate change in Kanagawa Prefecture is shown in the “Kanagawa Prefecture Global Warming Prevention Plan” and the projects in the Flood Disaster Prevention Strategy are selected as measures to minimize the damage of meteorological disasters caused by climate change.
- The Flood Disaster Prevention Strategy has defined in-scope disasters as those resulting from floods, landslides, storm surges, windstorms, etc. caused by typhoons and heavy rains, and has selected projects aiming at minimizing damage from flood disasters and landslides, as well as promoting appropriate evacuation behavior by residents.

(3) Process for Project Evaluation and Selection

- The “Kanagawa Prefecture Global Warming Prevention Plan” which is the main criterion for evaluation and selection, was drafted by the Global Warming Prevention Measures Plan Review Committee consisting of experts, and formulated by the Kanagawa Prefectural Assembly after going through the procedure for reflecting the opinions of the people of the prefecture, collecting the opinions of the municipalities, and holding the Kanagawa Global Environment Preservation Promotion Council¹¹ in accordance with the “Kanagawa Prefectural Ordinance to Promote Global Warming Countermeasures.”
- Each project under the Flood Disaster Prevention Strategy is selected in accordance with the related laws and regulations as well as the project evaluation and selection criteria established by Kanagawa Prefecture in addition to the abovementioned Plan, and all projects are developed after the assessment of environmental impacts based on the Environmental Impact Assessment Act and the ordinances

¹¹ Established as a body to promote the Kanagawa Action Guidelines for Global Environmental Conservation, “Kanagawa Eco 10 Trials: Our Declaration of Environmental Actions,” which was formulated by the prefectural residents, businesses, and administrative bodies. It consists of the prefectural residents, business operators, and administrative bodies.

established by Kanagawa Prefecture.

With the “Kanagawa Climate Emergency Declaration” as its policy for dealing with climate change, it identifies disasters caused by climate change that need to be dealt with under the “Kanagawa Prefecture Global Warming Prevention Plan” and formulates specific measures in the “Kanagawa Prefecture Flood Disaster Prevention Strategy.” The eligible projects are included in the Flood Disaster Prevention Strategy. The Declaration, Plan, and individual projects are formulated and selected based on relevant laws, ordinances, etc. Expert meetings and procedures to reflect the opinions of the people of the prefecture ensure expertise and fairness.

3. Management of Proceeds

- Based on the principle of fiscal year independence¹², the expenditures during each fiscal year by a local government is financed by revenues including proceeds from its local government bonds during the same fiscal year, and thus the entire proceeds will be allocated to the eligible projects within the fiscal year of funding.
- Finance Department works with departments in charge to grasp the allocation status and manage it so that there will be no unallocated funds. The amount of proceeds will be less than the budgeted cost of projects eligible for allocation.
- Specifically, the allocation of funds to the eligible projects will be managed by classifying into accounting categories in accordance with the Kanagawa Prefecture accounting system, and recording the use of funds and the amount of expenditures clearly on the books.
- The execution results and accounting documents to be prepared for all the revenues and expenditures of Kanagawa Prefecture, including those for the eligible projects, at the end of the fiscal year, are subject to audit by the prefectural auditor. The accounting documents are then subject to approval by the prefectural assembly, together with the opinion of the auditor.
- Unallocated funds will be managed in highly safe liquid assets in accordance with the Kanagawa prefectural government's regulations.

Finance Division of the Kanagawa Prefectural Government cooperates with departments in charge of the eligible projects to grasp the allocation status of proceeds and records in the book using accounting classifications in accordance with the accounting system. The allocation of funds will be completed within the same fiscal year as the funding year under the principle of fiscal year independence. Accounting documents to be prepared for revenues and expenditures, including allocation results, are subject to audit by the Kanagawa Prefectural Auditor and approval by the Prefectural Assembly, thereby ensuring objectivity.

¹² Article 208 of the Local Autonomy Act

4. Reporting

(1) Overview of Disclosure

- Reporting will be made as follows:

	Items	Timing	Method
Allocation of proceeds	Allocation status by eligible project	Annually after the issuance until the allocation is completed	Kanagawa Prefecture's websites
Environmental Benefits	Expected environmental benefits within the Green Bond Framework Track records of the eligible projects (the number of cases, and examples of project implementations) Latest Flood Disaster Prevention Strategy	At the time of the bond issuance Annually after the issuance until the allocation is completed	Kanagawa Prefecture's websites

- In the event that there arises a significant change in the allocation plan for proceeds or a significant change to the allocation status after the allocation, it will be disclosed in the form of a revised budget, etc.

(2) Indicators to Show Environmental Benefits and Calculation Method, etc.

- For the indicators pertaining to environmental benefits, refer to a table shown earlier (on page 6).
- Some projects disclose the number of implementations and the areas in which they are implemented, while other projects disclose changes in estimated damage in the event of disasters assumed by those projects.
- It is emergency projects for areas where they are intended to recover damage caused by disasters due to the past climate changes or where expected flood disaster prevention effects have not been achieved, as well as projects that will achieve a certain level of effect regardless of the severity of a disaster, such as landslide prevention that will disclose the number of implementations and the areas in which they are implemented for each eligible project. These environmental benefits relate to responses to the largest meteorological disasters in the past expected by laws and regulations such as the River Act and the Coast Act, and can be confirmed through the disclosed number of implementations, etc.
- Projects for which changes in the assumed damage in the event of a disaster anticipated by a project will be disclosed are designed to control the flow rate of the rivers and, with changes in the size of the inundated area and the population size, etc. in the inundated area due to the project to be shown, environmental benefits can be confirmed.

We have confirmed that reporting including the allocation status of proceeds and environmental benefits will be disclosed on the Kanagawa Prefecture's website annually until the allocation of funds is completed. Indicators including those that show the execution of the eligible projects will be disclosed so that environmental benefits can be confirmed.

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As a general rule, R&I issues a Second Opinion for a fee paid by the issuer.

Japanese is the official language of this material and if there are any inconsistencies or discrepancies between the information written in Japanese and the information written in languages other than Japanese the information written in Japanese will take precedence.

[Expertise and Third-Party Characteristics]

R&I has launched the R&I Green Bond Assessment business in 2016, and since then, R&I has accumulated knowledge through numerous evaluations. Since 2017, R&I has been participating as an observer in the Green Bond Principles and Social Bond Principles, which have their own secretariat at the International Capital Market Association (ICMA). It also has been registered since 2018 as an Issuance Supporter (external review entity) of the Financial Support Programme for Green Bond Issuance, a project by the Ministry of the Environment.

The R&I assessment method and results can be found on the R&I website (<https://www.r-i.co.jp/en/rating/esg/index.html>).



Green Bond / Green Bond Programme

Independent External Review Form

Section 1. Basic Information

Issuer name: Kanagawa Prefectural Government

Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: Kanagawa Pref Green bond Framework

Independent External Review provider's name: Rating and Investment Information, Inc. (R&I)

Completion date of this form: September 24, 2020

Publication date of review publication: September 24, 2020

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

- | | |
|--|---|
| <input checked="" type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other (please specify): | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

Latest update: June 2018

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)

<Second Party Opinion: Second Opinion>

R&I has provided a second opinion that the green bond framework is aligned with the Green Bond Principles 2018 and the Green Bond Guidelines 2020 by Ministry of the Environment of Japan.

For details, please refer to the report above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (if applicable):

For details, please refer to "1. Use of Proceeds" in the report above.

Use of proceeds categories as per GBP:

- | | |
|--|--|
| <input type="checkbox"/> Renewable energy | <input type="checkbox"/> Energy efficiency |
| <input type="checkbox"/> Pollution prevention and control | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation | <input type="checkbox"/> Clean transportation |
| <input type="checkbox"/> Sustainable water and wastewater management | <input checked="" type="checkbox"/> Climate change adaptation |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input type="checkbox"/> Green buildings (Environmentally Responsible Building) |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other (please specify): |

If applicable please specify the environmental taxonomy, if other than GBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section *(if applicable)*:

For details, please refer to “2. Process for Project Evaluation and Selection” in the report above.

Evaluation and selection

- | | |
|--|---|
| <input checked="" type="checkbox"/> Credentials on the issuer’s environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other <i>(please specify)</i> : |

Information on Responsibilities and Accountability

- | | |
|---|---|
| <input type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

For details, please refer to “3. Management of Proceeds” in the report above.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other <i>(please specify)</i> : |

Additional disclosure:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Allocations to future investments only | <input type="checkbox"/> Allocations to both existing and future investments |
| <input checked="" type="checkbox"/> Allocation to individual disbursements | <input type="checkbox"/> Allocation to a portfolio of disbursements |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other <i>(please specify)</i> : |

4. REPORTING

Overall comment on section *(if applicable):*

For details, please refer to “4. Reporting” in the report above.

Use of proceeds reporting:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Project-by-project | <input type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other <i>(please specify):</i> |

Information reported:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Allocated amounts | <input type="checkbox"/> Green Bond financed share of total investment |
| <input checked="" type="checkbox"/> Other <i>(please specify):</i> Fund allocation plan, outline of fund allocation target, unallocated money, Amount, management method of unallocated amount, etc. | |

Frequency:

- | | |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other <i>(please specify):</i> | |

Impact reporting:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Project-by-project | <input type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other <i>(please specify):</i> |

Frequency:

- | | |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other <i>(please specify):</i> | |

Information reported (expected or ex-post):

- | | |
|--|--|
| <input type="checkbox"/> GHG Emissions / Savings | <input type="checkbox"/> Energy Savings |
| <input type="checkbox"/> Decrease in water use | <input checked="" type="checkbox"/> Other ESG indicators <i>(please specify):</i> For details, please refer to “4. Reporting” in the report above. |

Means of Disclosure

- | | |
|--|---|
| <input checked="" type="checkbox"/> Information published in financial report | <input type="checkbox"/> Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents | <input checked="" type="checkbox"/> Other <i>(please specify):</i> Issuer’s website |
| <input type="checkbox"/> Reporting reviewed <i>(if yes, please specify which parts of the reporting are subject to external review):</i> | |

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

1. The evaluation methodology and services
<https://www.r-i.co.jp/en/rating/products/esg/index.html>
2. Evaluation performance
 - (1) Green Finance
<https://www.r-i.co.jp/en/rating/esg/greenfinance/index.html>
 - (2) Sustainability Finance
<https://www.r-i.co.jp/en/rating/esg/sustainabilityfinance/index.html>
 - (3) Social Finance
<https://www.r-i.co.jp/en/rating/esg/socialfinance/index.html>

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|---|
| <input type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other (please specify): | |

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

1. **Second Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
2. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
3. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
4. **Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.