

Global environment

JR-West Group's approach to the global environment

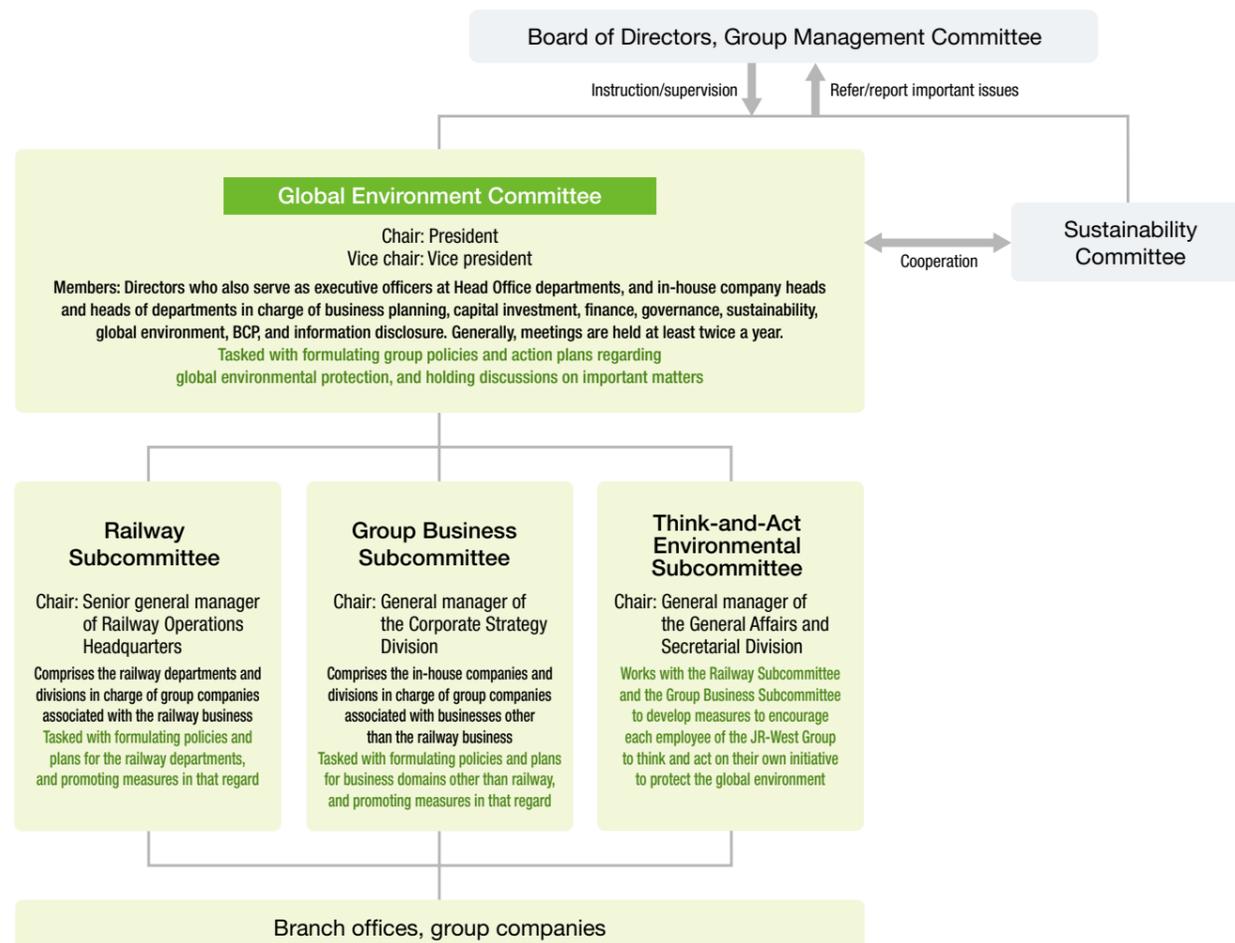
As a corporate group that supports social infrastructure, the JR-West Group has a long-term vision under which it strives to help achieve safe, worry-free transportation that is kind to people and the planet, and a sustainable society. We continue to work towards sustainability through environmental conservation and other ways.

The world is accelerating efforts to move towards decarbonization in the face of global warming and climate change, and the pace at which it works to protect natural capital such as water and ecosystems. We consider combatting climate change a crucial task in order to continue doing business. We will therefore avert climate-related risks, improve the railway's strength as an environmentally friendly mode of transport, and spread the word about how green railways are among customers and communities. These efforts will affect change towards decarbonization and create opportunities that we will take full advantage of by focusing the JR-West Group's business on contributing to a sustainable society.

Systems for environmental protection

We consider protection of the global environment to be one of our key business challenges and have therefore established a Global Environment Committee. The committee is chaired by the president and comprises executive directors in charge of Head Office departments and general managers of the principal divisions. It deliberates and facilitates action on important matters, such as the

Group's basic policy for global environmental protection and the setting of medium and long-term targets and plans. Important items deliberated by the Global Environment Committee are also reported to and discussed with the Sustainability Committee, Group Management Committee, and Board of Directors in order to share this information among senior management.



JR-West Group Basic Environmental Policy

The JR-West Group Basic Environmental Policy was created so that we could be a corporate group supporting social infrastructure that contributes to the realization of safe, worry-free transportation that is kind to people and the planet, and a sustainable society, as outlined in the Long-Term Vision 2032. We have made global warming prevention and climate change action, contributing to the

creation of a circular economy, and living in harmony with nature as the three pillars of this policy. In our Long-Term Vision 2032 and Medium-Term Management Plan 2025, we have set target indicators in these three areas for the Group, as a whole and as individual companies, to work together towards reducing the environmental impact of our business activities.

JR-West Group Basic Environmental Policy



Long-Term Vision 2032 and Medium-Term Management Plan 2025 KPIs

Note: Bold numbers indicate the FY2026 target has been achieved ahead of schedule.

Category	Indicator	FY2025 (result)	Target
Group wide	CO ₂ emissions (consolidated; Scope 1+2; vs. FY2014)	1.70 million t-CO ₂ (-21%)	FY2026: 1.39 million t-CO₂ (vs. FY2014: -35%) FY2031: 1.07 million t-CO ₂ (vs. FY2014: 50%)
	Amount of used plastic bottles provided	57 t/year	FY2026: 50 t/year
	Water used (per unit of consolidated net sales)	5.7 m³/million yen	FY2026: 6.5 m³/million yen
Railway company	Energy-saving railcars as a percentage of total rolling stock	94.9%	FY2026: 93% FY2028: 95%
	Energy intensity reduction rate (vs. FY2014)	-2.8%	FY2026: -5.5% FY2028: -6.5%
	Electricity from renewable energy as percentage of all power to operate trains*1	Shinkansen (bullet trains) 4.7% Osaka Loop Line and JR Yumesaki Line 100%	FY2026: Shinkansen 6% Osaka Loop Line and JR Yumesaki Line total 60% FY2028: Shinkansen 10% Osaka Loop Line and JR Yumesaki Line total 100%
	Practical use of renewable diesel in trains	Conducted driving tests, results were good	FY2026: Implementation in diesel trains
	Station and onboard garbage recycling rate	99.3%	FY2026: 99%
	Facility construction material recycling rate	95.1%	FY2026: 97%
Goods sales and food services company	Electricity consumed in convenience store and gift shop business (annual electricity consumed per unit of store floor space)	505 kWh/m²	FY2026: 553 kWh/m²
	Reducing plastic product usage	<ul style="list-style-type: none"> •Plastic toiletries and other items*2 made of 100% environmentally friendly materials •Use of single-use plastic items: Approx. 21 t/year •Drinking water provided in guest rooms switched to paper cartons 	FY2026: Plastic toiletries and other items*2 made of 100% environmentally friendly materials Use less than 10 t/year of single-use plastic items (vs. FY2020: -70%) Completely eliminate plastic bottles as guest room water containers
Shopping center company	CO ₂ emissions (annual emissions per total sales floor space)	0.0346 t-CO ₂ /annual sales hours x 1,000 m ²	FY2026: 0.0321 t-CO₂/annual sales hours x 1,000 m²
Real estate company	CO ₂ emissions from rental properties (vs. FY2014)	32,000 t-CO₂/year	FY2026: 44,000 t-CO₂ (vs. FY2014: -42%)

*1 For Shinkansen, renewable energy as a percentage of total electricity for operating JR-West's portion of the Sanyo Shinkansen and Hokuriku Shinkansen.

*2 Covers 10 plastic items (used in the hotel business) identified in Japan's Plastic Resource Circulation Act: cutlery such as spoons and forks, and toiletries such as hair brushes.

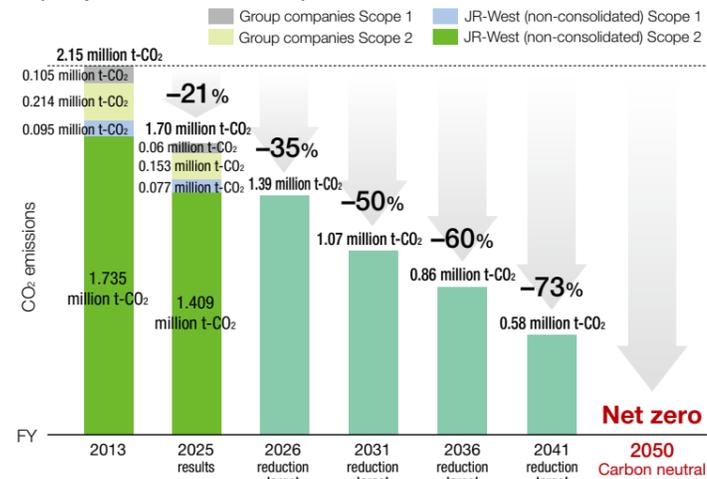
Global warming prevention and climate change action

JR-West Group Zero Carbon 2050 long-term environmental goals

Understanding that our businesses emit a large amount of CO₂ and responding to climate change, such as intensifying natural disasters caused by global warming, are important management issues that must be addressed for the JR-West Group to continue doing business. In recognition of the need for the JR-West Group to be more active in addressing climate change, we have formulated the JR-West Group Zero Carbon 2050 long-term environmental goals. The goal for overall group CO₂ emissions (scope 1 and 2, consolidated) has been set at net zero by 2050. As an intermediate goal, we have set an emissions reduction of 35% by fiscal 2026 and 50% by fiscal 2031 (against fiscal 2014).

Taking advantage of the fact that, in February 2025, Japan's nationally determined contribution added intermediate goals for fiscal 2036 and fiscal 2041, the JR-West Group has also set additional goals of a 60% reduction in emissions by fiscal 2036 and a 73% reduction in emissions by fiscal 2041 (both against fiscal 2014), ambitious goals that put us on a direct path to achieving net zero by 2050. To achieve these goals, besides reducing total energy consumption through energy conservation, we are working to replace the energy we use with renewable energy while decreasing fossil fuels in the mix of energy that we purchase.

JR-West Group CO₂ emissions reduction targets (Scope 1+2, consolidated)



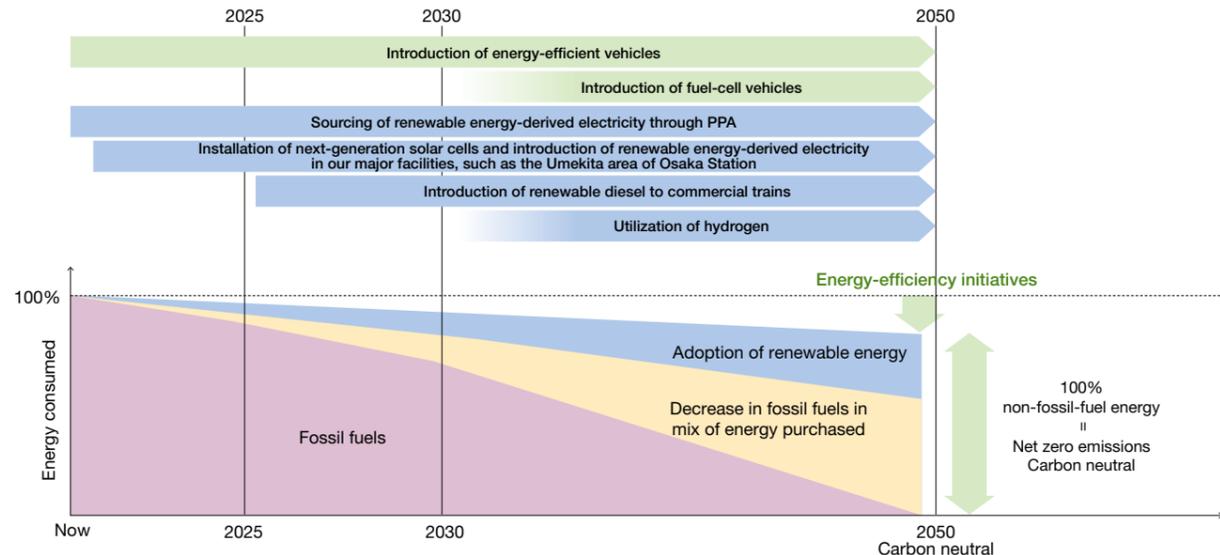
Scope 3 CO₂ emissions

	FY2024	FY2025
Non-consolidated	1.918 million t-CO ₂	1.376 million t-CO ₂
Group companies*	1.600 million t-CO ₂	3.281 million t-CO ₂
Total	3.518 million t-CO₂	4.657 million t-CO₂

- Scope 1** Total CO₂ directly emitted by the JR-West Group from combustion of fuels, such as diesel oil for diesel train operation, and kerosene and heavy oil for operational purposes (includes the CO₂ equivalent mass for leaked fluorocarbons)
- Scope 2** Total CO₂ emitted indirectly by the JR-West Group from the use of power and heat purchased from power companies and others
- Scope 3** Total CO₂ emitted from other companies in relation to the JR-West Group's business activities (indirect emissions other than Scope 1 and Scope 2)

*The scope of calculation (boundary) for group companies has been changed to include only all consolidated subsidiaries for fiscal 2025. Note that the calculation boundary for fiscal 2023 and 2024 includes all consolidated subsidiaries and Osaka Energy Service Co., Ltd.

Road map to carbon neutrality



Note: This graph is for illustration purposes only. It does not represent concrete percentages.

Reducing CO₂ emissions to achieve carbon neutrality

To achieve our long-term environmental goals, we have set CO₂ emissions as a common target indicator for the JR-West Group and are working as one to reduce CO₂ emissions. In particular, the railway business accounts for a large proportion of the Group's energy consumption, and we recognize its importance in achieving our long-term environmental goals.

In the railway business, we are focusing on introducing renewable energy sources for train operation electricity, which

accounts for the majority of the Group's CO₂ emissions. We are also working to introduce next-generation renewable diesel to diesel railcars, which directly emit CO₂, and to utilize hydrogen with a view to replacing them with fuel-cell trains in the future. In addition, we have begun to put into practical use negative emission technologies to address residual emissions that cannot be reduced by decarbonizing fuel.

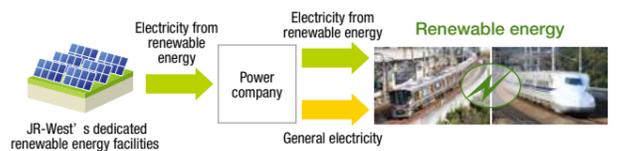
Utilizing renewable energy

Using renewable energy-derived electricity for train operation

We are actively using electricity derived from renewable energy sources for train operation, mainly through off-site corporate PPAs (power purchase agreements). For our main Shinkansen lines (Sanyo Shinkansen and Hokuriku Shinkansen), which are high-speed intercity railways, we are aiming to replace at least 10% of our total electricity consumption with electricity from renewable energy sources by fiscal 2028, but we now expect to achieve 17% renewable electricity by fiscal 2028. For the Osaka Loop Line and JR Yumesaki Line, which were the main access routes for Expo 2025, we advanced our target by four years to start operating on 100% renewable energy in February 2024. The introduction of electricity derived from renewable energy is being expanded to major lines in the Kansai urban area, such as the JR Kyoto Line, Kobe Line, and Takarazuka

Line. By fiscal 2028, approximately 15% of electricity used for operating conventional lines is scheduled to be replaced by electricity from renewable energy. In order to further expand the use of electricity derived from renewable energy, we will also consider expanding beyond solar power to introduce new methods of power generation, such as wind power generation.

Off-site corporate PPA



PPA adoption rate by route

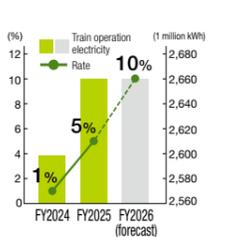


Scope 3 reduction efforts

Starting with fiscal 2025 data, the JR-West Group has begun using primary data in calculating Scope 3 emissions. In

addition, we have held information sessions for suppliers and engaged with them individually to reduce Scope 3 emissions.

Renewable energy rate in total train operation electricity



Newspaper ad announcing the start of carbon-neutral operations on the Osaka Loop Line and JR Yumesaki Line (March 2024)

Utilizing hydrogen in cooperation with local communities and businesses

The JR-West Group has been studying establishing a comprehensive hydrogen system within our train stations and other railway assets, and how to use this system as a base for supplying hydrogen to fuel-cell trains, buses, trucks, and cars, and as a means to transport the hydrogen. In addition to the Himeji area, we have begun conducting feasibility studies in the Okayama area, stretching from the Mizushima area of Kurashiki city to Tsuyama city, as well as the Yamaguchi/Shunan area, looking at supplying hydrogen to various types of mobilities and transporting hydrogen via freight.

The feasibility study in the Himeji area has been selected for a grant project by NEDO (New Energy and Industrial Technology Development Organization). Together with The Kansai Electric Power Co., Inc., Japan Freight Railway Company, NTT, Inc., NTT Anode Energy Corporation, and Panasonic Corporation, the project is conducting research and investigation into the large-scale transportation and utilization of green hydrogen from fiscal 2025 to fiscal 2026, with the aim of creating demand for hydrogen and building an efficient hydrogen supply chain.

For the Okayama area, we received a FY2024 and FY2025 railway technology development subsidy (to study the implementation of railway decarbonization facilities) from the Ministry of Land, Infrastructure, Transport and Tourism, and we are conducting a joint survey with ENEOS Corporation and Japan Freight Railway Company. For the Yamaguchi/Shunan area, the second Shunan City hydrogen utilization plan was announced in April 2024, reflecting our hydrogen utilization plan.



m-DAC plant factory (Farmarium) demonstration testing

In conjunction with Expo 2025, a demonstration test was conducted at Bentencho Station on a plant factory that uses m-DAC® technology, which directly captures and utilizes CO₂ from the air. This project aims to be put into practical use as a future model for CO₂ reduction. It seeks to make the general public familiar with a system for capturing CO₂ and utilizing it on the spot, while taking advantage of the technology's compact and decentralized features.

At the m-DAC plant factory, CO₂ is captured from the air and used to grow vegetables. This demonstration test was conducted in collaboration with Carbon Xtract Corporation and Spice Cube Inc., using Osaka Prefecture's FY2025 carbon neutral technology development and demonstration project subsidy, and the amount of CO₂ captured was monitored.

The results of this test will be analyzed and improvements to the technology will be made with the aim of expanding this technology to stations and other urban areas in the future to promote this new CO₂ reduction model.

*Carbon Xtract's world-first technology uses an innovative nano-membrane separation technology (m-DAC®) with overwhelmingly high CO₂ permeability to capture CO₂ from the air through membrane separation. m-DAC® is a registered trademark of Kyushu University, from the air through membrane separation.



Demonstration testing at Bentencho Station



Introducing next-generation renewable diesel

In fiscal 2023 and fiscal 2024, JR-West conducted performance tests and running tests as part of the fiscal 2023 new technology development challenges program of the Ministry of Land, Infrastructure, Transport and Tourism's railway technology development and adoption promotion system. We participated through a joint technological development body of seven JR companies and the Railway Technical Research Institute. The initiative aims to develop technologies that will facilitate the use of renewable diesel to power trains. Long-term running tests were conducted using commercial trains on the Gantoku Line and Sanyo Main Line in fiscal 2025 and favorable results were confirmed. The goal is to replace 100% of the fuel in currently owned diesel railcars with renewable diesel, with the aim of using it on commercial trains in fiscal 2026.

Collaborative efforts with local communities

As part of efforts to contribute to the decarbonization of the region, we launched Kansai Machi We'll, a regional decarbonization promotion consortium, with Hankyu Corporation in January 2025 (Osaka Metro Co., Ltd. joined in May 2025), and concluded collaboration agreements with 15 municipalities in the Kansai region. The collaboration agreement stipulates that the consortium will work together on issues such as the installation of local renewable energy sources and promoting the use of public transportation. As a specific initiative, in September 2025, we became the first railway operator to launch a project to generate J-Credits by having households and businesses that own solar panels in the 15 municipalities provide environmental value associated with power generation.

Previously, efforts aimed at the realization of a low-carbon economy have been pursued by companies on an individual basis, but this collaboration agreement has made it possible for the region and society to come together in pursuing a low-carbon economy. Going forward, we will also work on

promoting the use of public transportation by taking advantage of the railway's strength of lower CO₂ emissions compared to other modes of transportation, including a project to promote the introduction of renewable energy in the region using the J-Credit scheme.



Shifting modes of transportation

To make Japan's transport sector decarbonized, it is essential to reduce carbon emissions in the various modes of transport, and at the same time shift to railways and other low-carbon transport mechanisms. With this in mind, we are striving to achieve a passenger modal shift by making trains and other public transportation more convenient through the JR-West WESTER app and publicizing the environmental friendliness of trains as transport modes within and between cities.

Specifically, in terms of modal shift in passenger transportation, from the second half of 2023, we have been working with the JR Group and the Japan Private Railway Association on a railway industry-wide initiative to promote understanding of the environmental advantages of railways. As part of this effort, a common logo and slogan were created. From the second half of 2024, the Japan Subway Association also joined in, further strengthening PR efforts.

As part of modal shift, for corporate customers, we offer a carbon offset program in our online e5489 business trip reservation service, as well as a service for Express online reservation corporate members—GreenEX—that uses CO₂-free electricity to ensure that CO₂ emissions associated with business trips on the Shinkansen are virtually zero. Together with companies committed to protecting the global environment, we are actively working to reduce CO₂ emissions and develop a sustainable society through the use of railways. We are also working in collaboration with local governments on various initiatives, such as digital stamp rallies to encourage people to change their habits from driving to traveling by train and environmental education for elementary school students. Of these, the digital stamp rally using the WESTER app won the Kinki District Transport Bureau's FY2025 Transportation-Related Environmental Conservation Excellent Business Award.



Common logo and slogan of the JR Group, the Japan Private Railway Association, and the Japan Subway Association



A service for corporate customers that results in virtually zero CO₂ emissions from travel on the Tokaido, Sanyo, and Kyushu Shinkansen lines



Joint PR poster by the JR Group, the Japan Private Railway Association, and the Japan Subway Association



A digital stamp rally (held from October to November 2025) aimed at promoting understanding of the environmental advantages of railways and encouraging people to switch from car to rail travel



Video to promote the environmental advantages of railways

Contributing to the creation of a circular economy

As a common goal of the JR-West Group, we promote bottle-to-bottle recycling of plastic bottles, and each group company is also carrying out resource recycling initiatives.

Recycling clothing

JR West Shopping Center Development Company, which oversees our shopping center business, is pursuing the realization of a circular economy model that starts with commercial facilities.

In Japan, 470,000 tons of clothing are discarded each year. In response to this issue, fashion-focused retail complexes like Lucua Osaka, where clothing accounts for a large portion of tenant sales, are working to address this problem and realize a sustainable fashion business. Taking advantage of its location directly connected to a major station and the many touchpoints this provides, and through its connections with the local community, customers, and businesses, Lucua Osaka has been collecting used clothing in order to fulfill its role as a platform provider that supports a circular economy-oriented apparel industry.

Specifically, clothing is collected in three categories. In fiscal 2025, the items were handed over to Bookoff Co. Ltd. and Biotechworks-H2, Inc., which is engaged in producing hydrogen from textile waste, for resale and hydrogen production, thereby contributing to resource utilization. Further utilization methods will be explored in the future.

As another initiative, we launched The Journey of Clothes

82 project, which offers customers options other than throwing clothing away. This project aims to promote a change in consumer awareness and to address the social issue of clothing waste.



Final presentation at the Program for Emerging Fashion Leaders



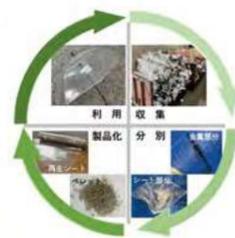
The Journey of Clothes 82 suggests alternatives to throwing clothing away

Recycling forgotten umbrellas (umbrella-to-umbrella)

In the Kansai urban area alone, the number of umbrellas left behind in stations and on trains reaches around 9,000 per month. Previously, umbrellas that could not be returned to their owners were disposed of as industrial waste. Starting in fiscal 2026, the JR-West Group launched a circular economy initiative focusing on these forgotten umbrellas to recycle them into new umbrellas. Specifically, we collect plastic umbrellas from those slated for disposal and then separate them into metal and sheet parts. The sheet material is processed into pellets and remanufactured into sheets, which are then used to make new plastic umbrellas.

The plastic umbrellas made from discarded umbrellas are being used as rental umbrellas for guests at JR West Via Inn Hotels, and we are considering expanding them across our hotel business in the future. In addition, in the Kansai urban area, we are collaborating with the I-kasa umbrella sharing service to provide umbrella-to-umbrella recycled umbrellas at stations on the Osaka Loop Line and JR Yumesaki Line from August 2025.

Through this initiative, the recycling rate of plastic umbrellas has increased to approximately 90% by weight, leading to reduced industrial waste and effective use of resources. Also, the pellets produced from discarded plastic umbrellas can be used for products other than umbrellas. Japan Railway West Trading Co. will take the lead in considering the development of other products. Going forward, the JR-West Group will continue to work together to contribute to the creation of a circular economy.



Umbrella-to-umbrella recycling



Participating in the Osaka City—No Umbrellas Needed project in collaboration with I-kasa

Living in harmony with nature

The JR-West Group has set a common goal for reduced water usage while each group company is also pursuing its own efforts to better live in harmony with nature.

Osaka Station (Umekita area) initiatives for living in harmony with nature

We have positioned Osaka Station (Umekita area) as a testing ground for innovation called the JR West Labo, where we are creating new value together with various external partners. Through innovation, we seek to reduce environmental impact together with customers, and with this in mind, we have put into practical use a variety of environmental technologies, including those related to decarbonization.

Osaka Station (Umekita area) has adopted thin, lightweight, next-generation perovskite solar cells, automatic lighting control that adjusts illumination levels according to natural daylight, and district heating and cooling. In addition, the station uses electricity derived from renewable energy sources, making it the first JR-West station to achieve net-zero CO₂ emissions from electricity.

In the Umekita phase 2 area, including Umekita Green Place, which opened in March 2025, we carried out green space development focused on living in harmony with nature. At Umekita Green Place, approximately 1,900 m² of rooftop and wall surfaces

were greened and approximately 1,600 m² of green space was also developed in the plaza. Together with a green coverage rate of approximately 30%, the design also contributes to the creation of a symbolic gateway space befitting the entrance to the Umekita phase 2 area. This initiative is expected to absorb approximately 40 tons of CO₂ per year. It is also expected to reduce rainwater runoff by about 10% compared to conventional paving.



Umekita Green Place

Forest regeneration in cooperation with the local community

The former Sanko Line connected Gotsu City in Shimane Prefecture and Miyoshi City in Hiroshima Prefecture, but railway operations were discontinued in April 2018. There were many railway forests along the former Sanko Line, and their effective use had been an issue. These forests were maintained to protect the tracks from snow damage and landslides, and they also play an important role in preserving the local environment.

Demonstration testing on forest regeneration was carried out using the former railway tracks through a collaboration of industry (JR-West), government (Misato Town), academia (Tottori University, Hiroshima University), and citizens (Ochi District Forestry Association). The project addressed three key themes: 1) timber extraction technology using the railway tracks; 2) the possibility of utilizing forest resources around the tracks; and 3) a reforestation plan that takes into account wildlife management.

The results of this demonstration testing confirmed that railway forests, which had previously been subject to natural regeneration and had been unable to undergo thinning or reforestation due to active railway operations, can have forest resource volumes equivalent to those of general forests and are viable for business, depending on the location. Furthermore, the old railway track meets the forest road regulations' standards for roadbed strength, horizontal alignment, and vertical alignment,

and it was confirmed that heavy forestry machinery can run on the track even if the rails and ties remain in place, and that the track functions as part of the forest road network.

We will continue our forest regeneration demonstration testing using the old railway tracks and will consider expanding forestry measures to privately owned forests adjacent to the railway forests so that we can contribute to the revitalization of the areas along the railway line. We will also use infrared sensor cameras and environmental DNA analysis of air samples to understand the behavior of wild animals and will use these findings to carry out wildlife protection measures and evaluate biodiversity along the railway line, including the railway forests.



Collecting timber using heavy machinery on the old railroad tracks



On-site forest survey by project members

Information disclosure based on TCFD/TNFD

Basic approach

Realizing that environmental protection is an important management task, we have formulated the JR-West Group Basic Environmental Policy under which we pursue increasingly deeper initiatives from a long-run perspective.

Protecting the global environment is an important management issue for the future continuity of our business, and we are working to understand the various climate change and nature-related risks and opportunities. We support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and the Task Force on Nature-related Financial Disclosures (TNFD) and will proceed with appropriate disclosure and analysis of information on climate change and nature-related risks and opportunities.

These risks and opportunities, and the analysis thereof, focus on those areas comprising our core businesses: railways, sales of goods and food services, hotels, shopping centers, and real estate. With regard to nature-related risks and opportunities and their analysis, we narrowed down the scope of our targets based on the size of our business bases and the extent of their contact with natural capital during operations, and we focused on general depots (rolling stock factories where inspections, repairs, and modifications of railway vehicles are carried out). The details of the analysis are shown on pages 79 and 80.

Governance

The JR-West Group will contribute to the creation of a sustainable society, and we will pursue initiatives to protect the environment and allow us to grow sustainably in the long term. And to serve as the driving force behind these initiatives, we have established the Global Environment Committee, which is chaired by the president and comprises executive directors in charge of Head Office departments and general managers of the principal divisions. This committee generally meets twice annually to deliberate on the Group's

basic policy for global environmental protection and on the setting of medium- and long-term environmental targets and plans. It also monitors the progress of concrete initiatives aimed at achieving the plans and targets.

Items on the Global Environment Committee agenda are reported to and discussed by the Sustainability Committee, Group Management Committee, and Board of Directors as necessary.

Strategy

Climate change-related

Based on the impacts of climate change and socioeconomic scenarios in light of the situations presented by the IPCC (Intergovernmental Panel on Climate Change), the JR-West Group has analyzed the risks and opportunities that climate change represents to its entire business.

We are aware of such risks as the heightened costs accompanying the introduction of carbon pricing, and increased damage brought on by more frequent typhoons and floods. Conversely, the superior environmental characteristics of railway have been recognized, and it was found that the increased convenience offered by the spread of MaaS and other similar services also provides opportunities to increase railway use.

The details of the analysis are shown on pages 75 to 80. The analysis was conducted using a 1.5°C increase scenario (RCP¹ 1.9) and a 2°C increase scenario (RCP 2.6) in which society aggressively addresses climate change to prevent temperature rise; and a 4°C increase scenario (RCP 8.5) in which measures are insufficient to prevent a temperature rise. Note that the qualitative analysis is based on a 1.5°C increase scenario and a 2°C increase scenario.

The JR-West Group has formulated the JR-West Group Zero Carbon 2050 long-term environmental goals and has set the objective of achieving net-zero CO₂ emissions² for the entire Group by 2050. We have set interim goals of reducing emissions by 35% by fiscal 2026 and 50% by fiscal 2031 (both against fiscal 2014 levels). Additionally, we have set goals of a 60% reduction by fiscal 2036 and a 73% reduction by fiscal 2041 (both against fiscal 2014 levels).

Towards these goals, as environmental protection initiatives under our Long-Term Vision and Medium-Term Management Plan 2025, we are further improving energy savings by, for example, introducing energy-efficient railcars, adopting power made from renewable energy, and using renewable diesel. We are also striving to achieve a passenger modal shift by, for example, making trains and other public transportation more convenient through MaaS apps and publicizing the environmental friendliness of trains as

transport modes within and between cities. It is all part of collaborative efforts with regions and communities to achieve a decarbonized society.

Nature-related

We analyzed and evaluated the railway business, which is the majority of the mobility segment and which accounts for approximately 60% of the JR-West Group's revenue, in accordance with the LEAP (locate, evaluate, assess, prepare) approach advocated by the TNFD as an integrated approach to evaluating nature-related issues. Specifically, in order to clarify the scope of the study and the nature-related topics to be analyzed, we first used the ENCORE³ nature risk assessment tool to confirm the overall status of our railway business' dependence, and impact, upon nature. Of the identified items, we confirmed operational details that have a high point of contact with natural capital, focusing on items that are not subject to climate change causal analysis under the TCFD.

Our railway business is broadly comprised of train operation and equipment maintenance. As a result of narrowing down the scope of our analysis, we decided to focus on our general depots, which are the largest business base in terms of scale and, therefore, have the greatest dependency, and impact, upon natural capital, as well as use the most water.

Regarding dependence on natural capital in the operation of our general depots, we recognized a certain degree of dependence on water resources for washing parts, water supply, and other uses. However, when we assessed the water stress around our bases using the Aqueduct⁴ water risk assessment tool, we found that none of our general depots are located in areas with high water stress or risk of water depletion. Regarding the impact of our operations on natural capital, we recognize the risk of violating regulations and incurring liability for damages due to water and soil contamination caused by improper handling of wastewater and waste. However, we are taking steps, through our own ISO 14001-compliant environmental management system, to prevent environmental pollution, minimize damage if it does occur, and reduce our environmental impact.

We also learned that, through nature-conscious business, we can gain opportunities to deepen collaboration with local communities and expand sales of group company products and services that contribute to reducing environmental impact. The details of the analysis are shown on pages 79 and 80.

As a goal related to natural capital, the JR-West Group set a target for water usage per unit of consolidated sales, which indicates the efficiency of water use in business activities, to 6.5 m³/million yen or less by fiscal 2026. This target was achieved in fiscal 2024 through actions to reduce water usage, such as water-saving efforts by all employees, facilitated via water-related education, and the replacement of equipment with water-saving ones in each business department. We will continue to push efforts that contribute to the protection of natural capital in general, including biodiversity.

Moving forward, the JR-West Group will take appropriate measures to address the risks and opportunities it has identified, thereby working to improve corporate value in a sustained, long-term manner as a corporate group responsible for social infrastructure, while contributing to the realization of a sustainable society.

¹ RCP: Representative concentration pathways
² Scope 1 and Scope 2 emissions (consolidated)
³ ENCORE (exploring natural capital opportunities, risks and exposure): A TNFD presentation tool that visualizes the risks posed to business by dependence, and impact, upon nature and by environmental change.
⁴ Aqueduct: A TNFD presentation tool provided by the World Resources Institute (WRI) that can assess water-related risks, such as water stress and water depletion

Railway business dependence, and impact, upon nature

Analysis using ENCORE

Within scope of TCFD analysis				Outside scope of TCFD analysis			
Dependence		Impact		Dependence		Impact	
Adjustment		Climate change		Supply		Contamination	
Climate adjustment	Flood protection	Erosion protection	GHG emissions	Ground-water	Surface water	Non-GHG air pollution	Life hindrance
Medium	Medium	High	High	Medium	Medium	High	High

Note: Identified with the July 2024 updated version. Only identified results of "medium" or higher are listed.

JR-West's ISO 14001-compliant environmental management system



Risk management

The JR-West Group will update the content of its analysis based on information such as changes in the business environment and the publication and update of a range of forecasts issued by public institutions in relation to climate change and nature-related risks and opportunities, along with measures to address them. Also, in meetings of the Global Environment Committee, we will also periodically deliberate on and monitor the content of the analysis and the state

of initiatives aimed at achieving environmental targets.

Content discussed by the Global Environment Committee is reported to and discussed by the Sustainability Committee, Group Management Committee, and Board of Directors as necessary, sharing and managing matters such as climate change-related risks as important issues for management.

Indices and goals

The JR-West Group has formulated the JR-West Group Zero Carbon 2050 long-term environmental goals and has set the objective of achieving net-zero CO₂ emissions for the entire Group by 2050. We have set interim goals of reducing emissions by 35% by fiscal 2026 and 50% by fiscal 2031 (both against fiscal 2014 levels). Additionally, we have set goals of a 60% reduction by fiscal 2036 and a 73% reduction by fiscal 2041 (both against fiscal 2014 levels).

We believe that this is a level that will result in Japan meeting the goals that it has set for CO₂ reduction and lead to the achievement of the targeted temperature increase of 1.5°C or less, or less than 2°C higher than that of the time of the

industrial revolution—the goal of the Paris Agreement.

With regard to water, which is the main natural capital related to our business activities, we have set a target for reduction of water usage per unit of consolidated sales, which indicates the efficiency of water use in our business activities, to 6.5 m³/million yen or less by fiscal 2026. Moving forward, we will continue to investigate what nature-related indicators and targets the Group should set, with reference to the disclosure indicators recommended by the TNFD.

The JR-West Group will contribute to the realization of a sustainable society by promoting efforts to reduce CO₂ emissions and protect natural capital.

Qualitative analysis of climate change-related risks and opportunities

Potential risks

*Sales of goods and food services; SC: shopping centers

Type	Risks to JR-West	Impact	Railways	Sales/food*	Hotels	SC*	Real estate	Response
Risks associated with the transition to a decarbonized society (transition risks)	Policy and legal	Heightened costs accompanying the introduction of carbon pricing	Large	○	○	○	○	<ul style="list-style-type: none"> Promote energy-efficient rolling stock, energy-saving equipment, and energy-saving driving Use alternative fuels, switch electricity to renewable sources Transition to low-carbon equipment and facilities through the use of internal carbon pricing (5,000 yen/t-CO₂ as of Sept. 2025) Install energy-efficient equipment (high-efficiency air conditioners, LED lighting, water-saving equipment, etc.) Decrease the amount of electricity purchased from retail electricity providers by incorporating solar power from on-site PPAs and other means Reduce basic contract fees by managing demand values through cooperation with tenants Respond to growing green investment through sustainable finance
		Increased green investment brought on by emissions controls	Large	○	○	○	○	<ul style="list-style-type: none"> Control development costs through open innovation and joint development with other companies Use subsidy systems from the government and other organizations
		Increased development costs to support next-generation technology	○	○	○	○	○	<ul style="list-style-type: none"> Investment that takes environmental values into account using internal carbon pricing (5,000 yen/t-CO₂ as of Sept. 2025)
	Technology	Failed investment due to errors in assessing environmental values	○	○	○	○	○	<ul style="list-style-type: none"> Use alternative fuels Study sustainable modes of transportation that are environmentally appropriate for the region
		Increased costs for procuring fossil fuels	○	○	○	○	○	<ul style="list-style-type: none"> Control the cost of purchasing materials by updating equipment and reviewing facilities
		Increase in material prices due to suppliers passing on environmental costs through their pricing	Large	○	○	○	○	<ul style="list-style-type: none"> Promote energy-efficient rolling stock, energy-saving equipment, and energy-saving driving Establish in-house systems and methods to respond to power shortage warnings
	Market	Increase in electricity shortages caused by disturbances in the supply-demand balance associated with the electrification of society and the expanded use of renewable energy	○	○	○	○	○	<ul style="list-style-type: none"> Use subsidy systems from the government and other organizations (ZEH support project of the Sustainable Open Innovation Initiative, etc.)
		Increase in construction costs with the dissemination of ZEH and ZEB	○	○	○	○	○	<ul style="list-style-type: none"> Achieve smart, green transport by using MaaS in urban areas and intercity transportation Consider sustainable transport systems that are environmentally appropriate for the region, in consultation with the region concerned Pursue business (new store set-up, etc.) from the perspective of the environment and ethical consumption Expand EV parking spaces so EVs can coexist with public transportation Adopt environmentally friendly product planning, construction planning, and equipment specifications (use solar power systems, make rooftop gardens, make wooden apartment buildings fire-proof) Use environmentally friendly sales promotion tools in model homes (use posters and banners made of green materials, buy environmentally friendly equipment, switch to digital pamphlets, etc.)
		Increase in construction costs with the dissemination of ZEH and ZEB	○	○	○	○	○	<ul style="list-style-type: none"> Disclose information on the status of TCFD analysis and the JR-West Group Zero Carbon 2050 long-term environmental goals Conduct research on the development of social infrastructure through the Kyoto University Disaster Risk Management Engineering course (JR-West), and hold regular lectures for citizens, both funded by the company Acquire environmental certifications, such as DBJ Green Building Certification (Development Bank of Japan) and CASBEE, and publicize these Create environmentally friendly standard specifications Incorporate new technologies in collaboration with installation contractors
	Reputation	Growth of ethical consumption in society	○	○	○	○	○	<ul style="list-style-type: none"> Publish information on JR-West safety initiatives, including planned suspensions of operations Provide information to customers in a timely and appropriate manner when train operations are suspended
Decline in the environmental preeminence of railways due to the electrification of automobiles		Large	○	○	○	○	<ul style="list-style-type: none"> Initiatives mainly in the railway business Measures to prevent flooding of railway facilities Implement both facilities-based and operations-based measures to prevent flooding and relocate rolling stock at important facilities such as general depots, rolling stock holding facilities, signal equipment facilities, and control centers Weather disaster response system Introduce a weather disaster response system on major railway lines in the Kansai area to prepare for worsening weather disasters and minimize the risk of human error Deploy radar rainfall monitoring systems on all conventional railway lines to improve safety in the event of localized heavy rainfall Reinforcement measures of slopes on railway lines Reinforce sloping areas and establish drainage systems to improve safety and shorten times when operation is restricted, primarily in the Kyoto/Osaka/Kobe area Create slope disaster charts and utilize sensing technologies to understand slope deformation and enhance detection precision Strengthening of railway track equipment Improve train operations' safety and durability by replacing old wooden railroad ties with concrete ones Planned suspensions of operations Implement planned suspensions of operations, including relocation of rolling stock, as necessary when large typhoons approach or make landfall Appropriately provide information regarding planned suspension and resumption of operations Emergency response training Initiatives common to all businesses Create a crisis management manual Ensure safe operation of business through proper shutdowns, and early or delayed openings or closings of stores Have BCP measures (supplies, BCP back-up power source, etc.) in place in new office buildings. Install emergency equipment (water and flood gates, etc.), have back-up power, install cubicles on higher building floors Collaborate with local government to offer usage of buildings with floors and cubicles that don't flood, and elevated water tanks, for use as regional evacuation shelters (e.g., Machiya Building, Yokohama Portside Building) Use hazard maps to minimize risks and boost market competitiveness (e.g., do not put apartments on the first floor of buildings in areas in danger of flooding) 	
Negative effect on material procurement due to reduced ESG rating		Large	○	○	○	○	<ul style="list-style-type: none"> Taking BCP into account, install emergency power generators at control centers in order to maintain function during power blackouts Establish in-house systems and methods to respond to power shortage warnings Deploy the N700S to the Tokaido and San'yo Shinkansen lines (Its onboard battery-based self-propulsion system allows us to help customers in the event of extended blackouts) 	
More criticism from stakeholders due to delays in initiatives and insufficient information disclosure		Large	○	○	○	○	<ul style="list-style-type: none"> Ensure critical train-operation items have multiple supply sources and sufficient inventory on hand Pursue initiatives to mitigate damage to railway facilities (stated above) 	
Risks associated with the physical impact of climate change (physical risks)	Abnormal weather	Loss of consumer confidence due to increased suspensions of train operations	○	○	○	○	<ul style="list-style-type: none"> Green rooftops and building walls, adopt heat-insulating materials Improve air conditioning efficiency by introducing district heating and cooling systems Reduce energy consumption by installing high-efficiency air conditioners 	
		Increased damage to railway facilities due to the increasing frequency of typhoons and floods	Large	○	○	○	○	<ul style="list-style-type: none"> Expand measures to prevent damage from animals (install fences to keep deer from entering, develop sound equipment for repelling animals, improve vehicle obstruction guards, etc.) Step up food hygiene
		More suspension of train operations and stoppage of business due to damage to railway facilities	Large	○	○	○	○	<ul style="list-style-type: none"> Measures to prevent heat stroke Prepare equipment to counter heatstroke, such as air-conditioned clothing, use the WBGT index, work in the morning and evening hours Equip crew compartments on railcars with air conditioners Reconstruction of railway systems Reduce workload along railway lines through onboard and sensor-networked ground inspections, surveying with MMS technology, and the mechanization and automation of construction work Reduce workload along railway lines through the integration of functions into vehicles and the simplification of ground facilities
		Increased disruption of train services and business operations due to power blackouts	Large	○	○	○	○	
		Material shortages due to disruptions in supplier logistics	○	○	○	○	○	
	Working environment	Increased damage insurance	○	○	○	○	○	
		Increased air conditioning costs due to rising temperatures	○	○	○	○	○	
		Increased damage from animals due to the expanding range of wildlife caused by decreased snowfall	○	○	○	○	○	
		Increase in the risk of food poisoning due to rising temperatures	○	○	○	○	○	
		Increase in labor accidents such as heat stroke due to rising temperatures	○	○	○	○	○	

Potential opportunities

*Sales of goods and food services; SC: shopping centers

Type	Opportunities for JR-West	Impact	Railways	Sales/food*	Hotels	SC*	Real estate	Seizing opportunities
Resource efficiency	Reductions in CO ₂ emissions and energy consumption by updating rolling stock and equipment to energy-efficient ones	○	○	○	○	○	○	<ul style="list-style-type: none"> Accelerate the installation of high-efficiency equipment such as devices that utilize regenerative power, by using new subsidy programs and energy-saving facilities Install energy-efficient equipment when upgrading (high-efficiency air conditioners, LED lighting, water-saving equipment) Use ZEH subsidy systems and other support from the Ministry of Land, Infrastructure, Transport and Tourism, Ministry of Economy, Trade and Industry, and Ministry of the Environment
	Equipment updates making effective use of government support systems such as tax incentives	○	○	○	○	○	○	<ul style="list-style-type: none"> Study new energy sources (renewable diesel, carbon-free next-generation rolling stock, fuel-cell co-generation systems, etc.) Reduce the cost of installing storage batteries by utilizing national and local government grants
	Wider use of fuels with net-zero CO ₂ emissions, fuel cells, and storage batteries through technological progress and reductions in pricing	Large	○	○	○	○	○	<ul style="list-style-type: none"> In areas where the characteristics of railway can be put to good use, railways are acknowledged as being environmentally superior, with use increasing due to policy-based promotion of public transport and greater environmental awareness of customers (modal shift) Increase usage of trains and the JR-West Group's many other services by publicizing trains' environmental advantages and the Group's green initiatives Enhance secondary transport services linked with railway (park and ride, electric bicycle sharing services, etc.) Enhance services using digital technology Enhance MaaS (Kansai MaaS, WESTER app mobile life navigation app, etc.) Create synergy by offering public transport users the courtesy services of other JR-West Group businesses
Energy sources	In areas where the characteristics of railway can be put to good use, railways are acknowledged as being environmentally superior, with use increasing due to policy-based promotion of public transport and greater environmental awareness of customers (modal shift)	Large	○	○	○	○	○	<ul style="list-style-type: none"> Upgrade equipment and systems for bike sharing and other parts of the sharing economy
	Increased use due to the greater convenience of public transport associated with the proliferation of MaaS, and due to a growth in non-resident populations	Large	○	○	○	○	○	<ul style="list-style-type: none"> Cooperate with regional communities using demand-based transportation to make regional public transport more convenient Promote BRT development projects using self-driving and convoy driving technologies
	Increasing the use of public transport and spreading the sharing economy	○	○	○	○	○	○	<ul style="list-style-type: none"> Develop environmentally friendly housing (architectural planning, equipment specs, sales methods*) *e.g., save on building materials by reusing a model home for multiple properties; use VR to give prospective buyers virtual tour of housing units
Products and services	Spread of sustainable modes of transportation that are environmentally appropriate for the region	Large	○	○	○	○	○	<ul style="list-style-type: none"> Study participation in renewable energy business Expand renewable energy use by installing solar power equipment through on-site PPAs that utilize building rooftops and idle land
	Spread of sustainable modes of housing that are environmentally appropriate for the region	○	○	○	○	○	○	<ul style="list-style-type: none"> Use 100% renewable energy for new lease properties Encourage customers and others to carry out ESG investing by acquiring environmental certifications, such as DBJ Green Building Certification (Development Bank of Japan) and CASBEE
	Reduction of electricity procurement costs through expansion of renewable energy	○	○	○	○	○	○	<ul style="list-style-type: none"> Study participation in VPP (virtual power plant) business
Market	Wider use of electricity with net-zero CO ₂ emissions through technological progress and reductions in pricing	○	○	○	○	○	○	<ul style="list-style-type: none"> Pursue measures to mitigate damage to railway facilities (see previous page) and disclose related information Gain customers by developing real estate resistant to natural disasters Have BCP measures (supplies, BCP back-up power source, etc.) in place in new office buildings Install emergency equipment (water and flood gates, etc.)
	Acquisition of real estate that has low environmental impact and meets rental needs	○	○	○	○	○	○	<ul style="list-style-type: none"> Ongoing forest conservation activities through Club J-West Forest Study the effective use of railway forests
	Securing of revenue in the electricity supply and demand market using JR-West equipment	○	○	○	○	○	○	
Resilience	Ensuring of reliability through successful BCP measures in the event of weather disasters so as to reduce suspensions of train operations and stoppage of business	○	○	○	○	○	○	
	Maintaining railway forests helps reduce CO ₂ emissions and prevent disasters	○	○	○	○	○	○	

Assumptions for quantitative impact of TCFD risks and other concerns

For risks and other concerns extracted through qualitative analysis, we have made quantitative impact assumptions for those items that we expect to have a significant impact and for which objective future forecast data corresponding to the scenarios used in the analysis are available. In addition, we have estimated the trend in transportation revenues based on estimated population and GDP data derived from socioeconomic scenarios.

Our assumptions are based on society in 2030 or 2050. The transition risks are calculated based on a 1.5°C/2°C

scenario in which society acts proactively to address climate change. The physical risks and impacts on transportation revenues are calculated based on 1.5°C/2°C and 4°C scenarios. (The results of the estimated impacts are shown in the chart on page 78.)

In particular, the physical risks and impacts on transportation revenues are greater in the 4°C scenario than in the 1.5°C/2°C scenario. Based on these factors, we will take measures to address the risks and promote initiatives to realize a decarbonized society, so as to help curb climate change.

Presuppositions for assumed transition risk and physical risk impact

Transition risks	Item	Source of forecast data used for trial calculation	Assumed impact in 2030	
			4°C scenario	1.5°C/2°C scenario
	Heightened costs accompanying the introduction of carbon pricing	IEA "World Energy Outlook 2024"	—	US\$ 140/t-CO ₂ (2030, NZE scenario, developed countries) Exchange rate: US\$ 1 = ¥149
	High material prices due to suppliers passing on environmental costs	Kiyoshi Fujikawa (author) "Load of Carbon Tax by Region and Income Group," others	—	About 2% higher than the current level

Physical risks	Item	Source of forecast data used for trial calculation	Assumed impact in 2050	
			4°C scenario	1.5°C/2°C scenario
	Greater damage to facilities due to increase in natural disasters	Technical Study Group on Flood Control Planning in Light of Climate Change "Recommendations for Flood Control Planning in Light of Climate Change" (revised April 2021); Ministry of Land, Infrastructure, Transport and Tourism	Approx. four times more frequent than current levels	Approx. two times more frequent than current levels
	Reduced revenue owing to increased operational suspensions due to natural disasters			

Quantitative impact assumptions (financial impact) for transition risks and physical risks

Transition risks	Item	Assumed impact in 2030	
		4°C scenario	1.5°C/2°C scenario
	Heightened costs accompanying the introduction of carbon pricing	—	+22.3 billion yen/year
	High material prices due to suppliers passing on environmental costs	—	+2 billion yen/year

Physical risks	Item	Assumed impact in 2050	
		4°C scenario	1.5°C/2°C scenario
	Greater damage to facilities due to increase in natural disasters	10 billion yen/year	3 billion yen/year
	Reduced revenue owing to increased operational suspensions due to natural disasters	4.5 billion yen/year	1.5 billion yen/year

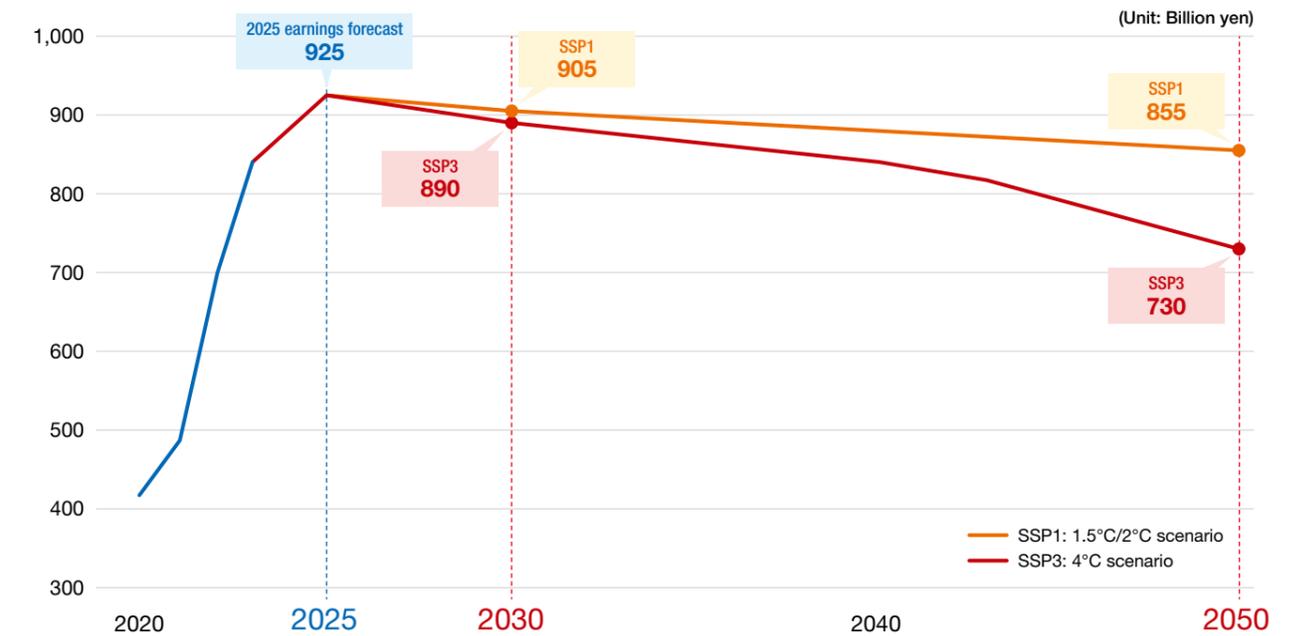
Trial calculation of changes in rail transportation revenue

Based on population and GDP data derived from socioeconomic scenarios, which are used in cross-disciplinary climate change research, we have estimated the changes in rail transportation revenue up to 2050.

The population data is derived from "Japanese SSP Population Estimates by City, Town, and Village," published by the National Institute for Environmental Studies. GDP data is derived from "Socioeconomic Projections of the Shared Socioeconomic Pathways (SSPs) Release 3.1," published by IIASA (International Institute for Applied Systems Analysis).

Based on projected demographic and domestic GDP changes in our business areas, we have estimated the changes that will occur after implementation of the JR-West Group Medium-Term Management Plan 2025. (For the data referenced here, the 1.5°C/2°C scenario = SSP1 and the 4°C scenario = SSP3.)

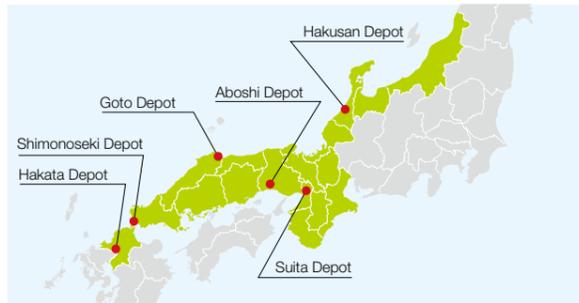
The future forecasts in our trial calculation are based on demographic and GDP estimates only and do not take into account individual factors that may affect revenues, such as future sales measures.



Qualitative analysis of nature-related risks and opportunities

Analysis target

The JR-West Group focuses on its general depots, which are central locations with significant points of contact with natural capital, and conducts analysis and assessments in accordance with the LEAP approach advocated by the TNFD as an integrated approach to assessing nature-related issues. We have six general depots: Hakusan Depot (Hakusan, Ishikawa Prefecture), Hakata Depot (Nakagawa, Fukuoka Prefecture), Suita Depot (Suita, Osaka Prefecture), Aboshi Depot (Ibo, Hyogo Prefecture), Goto Depot (Yonago, Tottori Prefecture), and Shimonoseki Depot (Shimonoseki, Yamaguchi Prefecture). In carrying out regular inspections of railcars and large-scale improvements to trains, these depots remain aware of their dependence, and impact, upon natural capital.



Analysis of regional characteristics

Scoping using the LEAP approach was used to assess water and biodiversity-related risks based on results considering operations at general depots.

Water-related risks

To assess water-related risks at general depots, we conducted an analysis using Aqueduct. The results showed that, at all general depots, the risk level of water stress and water depletion for water resources, which are heavily relied upon in the regular inspection process, did not exceed "low to medium," thus we view the risk as being low. We will continue to recognize water as an important resource and promote daily water conservation practices, utilization of recycled water, and other actions.

Water-related risk assessment Analysis using Aqueduct

Water-related risk	Hakusan	Hakata	Suita	Aboshi	Goto	Shimonoseki
Water stress*	Low to medium					
Water depletion**	Low to medium	Low	Low to medium	Low to medium	Low to medium	Low to medium

*Water stress: Ratio of total water demand (consumptive and non-consumptive) to renewable surface and groundwater supplies

**Water depletion: Ratio of total water demand (consumptive) to renewable surface and groundwater supplies

Biodiversity-related risks

To assess biodiversity-related risks at general depots, we conducted an analysis using IBAT*. From the results, seven biological habitats and protected areas were identified within a 3 km radius of general depots. However, all of these were at IUCN category IV to VI levels, and no areas were designated as strict nature reserves, wilderness areas, national parks, or natural monuments.

*IBAT (integrated biodiversity assessment tool): A TNFD presentation tool for biodiversity-related assessment developed by four organizations: BirdLife International, the World Conservation Monitoring Centre (WCMC), the International Union for Conservation of Nature (IUCN), and Conservation International.

Biodiversity-related risk assessment

Analysis using IBAT (number of applicable areas within a 3 km radius)

IUCN category*	Hakusan	Hakata	Suita	Aboshi	Goto	Shimonoseki
Ia Strict nature reserve	0	0	0	0	0	0
Ib Wilderness area	0	0	0	0	0	0
II National park	0	0	0	0	0	0
III Natural monument	0	0	0	0	0	0
IV Habitat/species management area	0	1	1	0	1	1
V Protected landscape/seascape	0	0	0	0	0	0
VI Protected areas with sustainable use of natural resources	1	0	0	0	1	1
Total number of applicable areas	1	1	1	0	2	2

*Based on the IUCN's "Guidelines for Applying Protected Area Management Categories"

Dependence, and impact, upon nature

With regard to regular inspections, which are the main job of the general depots, we checked the actual conditions at the depots and used ENCORE to clarify their dependence, and impact, upon natural capital. We identified water, soil, air, and living things (animals) as natural capital related to operations.

Water

● Dependence: Large amounts of water are used in processes such as the washing of rolling stock and their parts during regular inspections and the supplying of water to rolling stock. Therefore, if water becomes unavailable, it may not be possible to carry out these tasks adequately. However, even in such cases, apart from some impact on service quality, there will be no problems with ensuring safety or train operations, and there will be no immediate impact on rail transportation revenue. We have also determined that the risk of water stress and water depletion is low in the areas where all of our general depots are located and that the likelihood of these risks materializing is low. At the same time, because water is a vital resource, we are using water resources efficiently, in preparation for the risk of water being unavailable, by raising awareness of water conservation through education, utilizing water recycling systems, and regularly monitoring water usage.

● Impact: At general depots, oil and grease are in the washing water effluent from rolling stock and their parts, as well as used in repair work, so there is a risk of water contamination due to improper handling. We work to reduce this risk by performing work in accordance with work manuals, as well as by conducting regular inspections and site visits and by monitoring usage.

Soil

● Impact: There is a risk of soil contamination due to improper handling of industrial waste or materials containing organic solvents, or due to oil spills during refueling. To address this risk, we have taken measures such as continuing education on how to handle industrial waste, conducting regular site visits, and managing usage. We are also working to reduce risk by using water-based paints, which have a lower environmental impact.

Air

● Impact: There is a risk of air pollution due to improper disposal of volatile organic compounds (VOCs) used in painting. We are working to reduce this risk by properly installing and operating dust collection equipment and regularly monitoring and measuring emissions.

Living things (animals)

● Impact: The noise associated with work operations may have an impact on animals. With regard to biodiversity-related risks, although there are no areas within a 3 km radius of general depots that are categorized as IUCN categories Ia to III, we are working to reduce the burden on living things through strict operational management based on our environmental management system, the installation of soundproof fences, and noise monitoring.

Qualitative analysis of risks and opportunities

We analyzed risks and opportunities, and our actions in response to them, based on dependencies and impacts. The main risks identified were those related to water. We have been steadily addressing this issue through our environmental management system, and we will continue to conduct object- and policy-based measures, which include the thorough implementation of our environmental management system.

With regard to opportunities, we will pursue collaboration with local communities and undertake various energy conservation and recycling activities for the effective use of resources. We will also work to expand sales channels to companies outside the Group for products and services from group companies that help reduce environmental impact.

Analysis of contact with nature at each stage of regular inspections

Regular inspection flow	Dependence		Impact		
	Water	Water	Soil	Air	Animals
Entrance/entrance inspection	—	—	—	—	Noise from work
Equipment and parts removal	—	—	—	—	
Inspection and repair	Washing	Oil and organic solvent spillage	—	—	
	Supplying water	Industrial waste scattering and spillage	—	—	
Painting	—	Wastewater	—	—	
	Boiler equipment drying	Organic solvent spillage	—	VOC emissions	
Equipment and parts installation	—	—	—	—	
Exit inspection/exit	Supplying water	—	—	—	

Risks

Type	Risks to JR-West	Response	
Physical risks	Chronic risks	Improper cleaning of railcars and parts due to depletion of water	<ul style="list-style-type: none"> ● Raise awareness of, and practice, daily water conservation ● Save water through water usage monitoring ● Utilize recycled water
Transition risks	Policies	Stronger regulations on wastewater and other emissions from business activities	<ul style="list-style-type: none"> ● Comply with relevant laws and regulations via thorough implementation of our environmental management system and implement measures to adapt to tighter regulations ● Respond with both object- and policy-based measures, such as maintenance and management of wastewater treatment equipment and water quality monitoring
	Reputation	Damage to company reputation as a result of negative impact of operations-related noise on neighboring residents and community	<ul style="list-style-type: none"> ● Implement measures corresponding to the cause of noise, such as installing soundproof sheets or changing the work location ● Build relationships with local residents and the community, such as through collaboration in community service projects
	Liability	Water and soil contamination caused by improper handling of waste and other materials	<ul style="list-style-type: none"> ● Avoid risks of environmental pollution and reduce environmental impact via our ISO 14001-compliant environmental management system ● Conduct regular training and education aimed at ensuring proper handling of waste and other materials ● Establish a system for rapid response and communication in the event of contamination

Opportunities

Type	Opportunities for JR-West	Seizing opportunities	
Business performance	Market	Progress in collaboration with local communities	<ul style="list-style-type: none"> ● Collaborate with local communities, such as through partnership agreements
	Resource efficiency	Progress in efficient use of water resources	<ul style="list-style-type: none"> ● Raise awareness of, and practice, daily water conservation ● Save water through water usage monitoring ● Utilize recycled water
		Progress in efficient use of resources other than water	<ul style="list-style-type: none"> ● Recycle items and materials related to the operation of general depots ● Railcar material waste ● Recyclable train waste such as bottles, cans, and plastic bottles ● Wooden pallets ● Used cooking oil from employee cafeterias...etc.
Products and services	Popularization of low-environmental-impact products in response to growing societal demand for reduced environmental impact	<ul style="list-style-type: none"> ● Use renewable diesel fuel on diesel trains ● Use environmentally friendly materials, such as low-VOC materials 	
	Expansion in sales of products and services that contribute to reducing environmental impact	<ul style="list-style-type: none"> ● Expand sales channels to companies outside the Group (e.g., West Japan Railway Technia Co., Ltd. J-TREAT highly efficient wastewater purification equipment, West Japan Railway Technos Corporation renovation work based on existing trains, etc.) 	
Sustainability performance	Sustainable use of natural resources	Progress in collaboration with local communities	<ul style="list-style-type: none"> ● Actively participate in cleanups and environmental conservation activities in collaboration with local communities

Conserving water resources when washing vehicles

From the perspective of water resource conservation, Hakata Depot is reusing a portion of the factory wastewater. Previously, the entire factory used approximately 560 m³ of industrial-use water and tap water per day, but by introducing a blended water treatment system, we are now able to reuse approximately 100 m³ of factory wastewater and rainwater per day, protecting water resources and reducing the amount of water discharged into the sewer system. As one example, we use vehicle washing equipment that reuses factory wastewater and rainwater, eliminating the need for industrial-use water.

