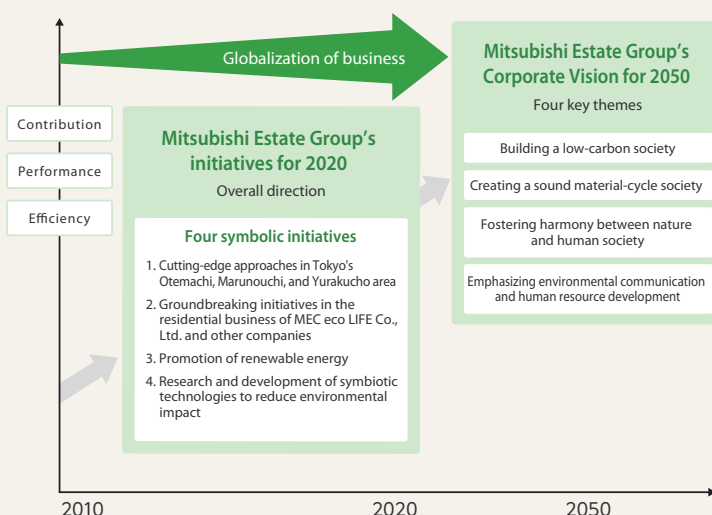


# Long-term Environmental Vision Aiming for Harmony

## Mitsubishi Estate Group Long-term Environmental Vision

The Mitsubishi Estate Group has established the Long-term Environmental Vision for 2050 in order to clarify its future goals for environmental management and proactively reduce its environmental impact. The Group's vision for 2050 is articulated in four key themes: building a low-carbon society, creating a sound material-cycle society, fostering harmony between nature and human society, and emphasizing environmental communication and human resource development. The Group also established four symbolic initiatives to achieve each of these. In this section, we introduce the main activities that the Mitsubishi Estate Group is currently engaged in as it works toward this long-term vision.



## Case 1

Initiatives in Tokyo's Otemachi, Marunouchi, and Yurakucho area

**Use of renewable energy in the Shin-Marunouchi Building—Also contributing to earthquake reconstruction, a recycling-oriented society, and local consumption of local products**

Beginning in April 2014, Mitsubishi Estate switched almost half of the Shin-Marunouchi Building's contract demand to renewable energy, namely electricity generated using woody biomass, biogas and solar power.

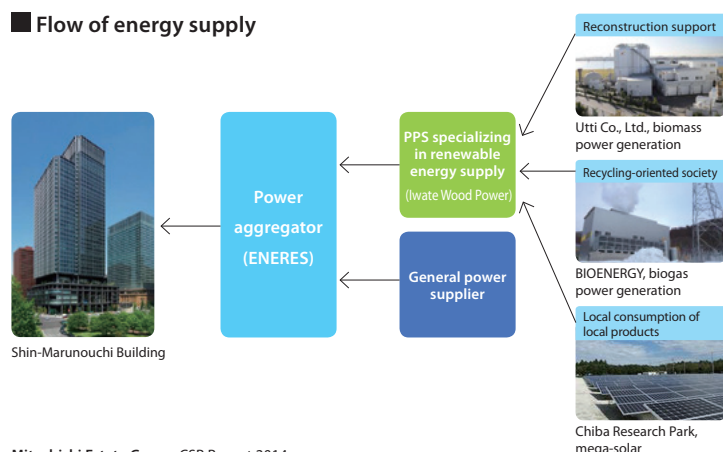
The Shin-Marunouchi building had been relying entirely on renewable energy from wind power and hydroelectric power since 2010, but conditions for power procurement have changed since the start of the feed-in tariff program for renewable energy, making it difficult to purchase power in traditional forms. Accordingly, we concluded a contract for electricity purchase by proxy with ENERES Co., Ltd. so that we could continue using renewable energy by receiving power from both general power suppliers and PPS (power producer and supplier).

The woody biomass power is generated at a biomass power plant constructed by Utti Co., Ltd. in Miyako City, Iwate Prefecture, as one of the

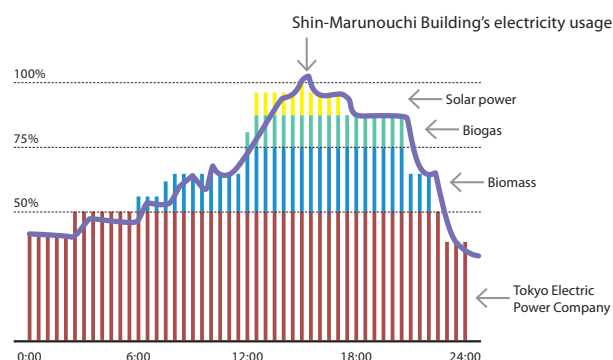
measures supporting reconstruction following the Great East Japan Earthquake. Forest thinnings and other wood scraps are used to generate power. The biogas power is generated by a company called BIOENERGY using the methane gas derived from food waste produced in buildings in the Marunouchi area. The solar power comes from a large-scale solar power plant in Chiba Research Park that Mitsubishi Estate built in Sakura City, Chiba Prefecture.

Utilizing these sources of renewable energy in this unique way not only reduces environmental impact, but also supports earthquake reconstruction efforts and helps to make energy use more efficient by repurposing food waste and encouraging local consumption of local products.

### Flow of energy supply



### Power use illustration



# with the Environment

Case 2

Research and development of symbiotic technologies to reduce environmental impact

## Unique approaches in the Kayabacho Green Building—An office building for the new era that uses Japan-first, cutting-edge technologies

The Kayabacho Green Building, which epitomizes the Mitsubishi Estate Group's vision for next-generation office buildings, was completed in May 2013. This was the first tenant-occupied building in Japan to adopt a wide range of cutting-edge technologies that completely change the conventional office environment.

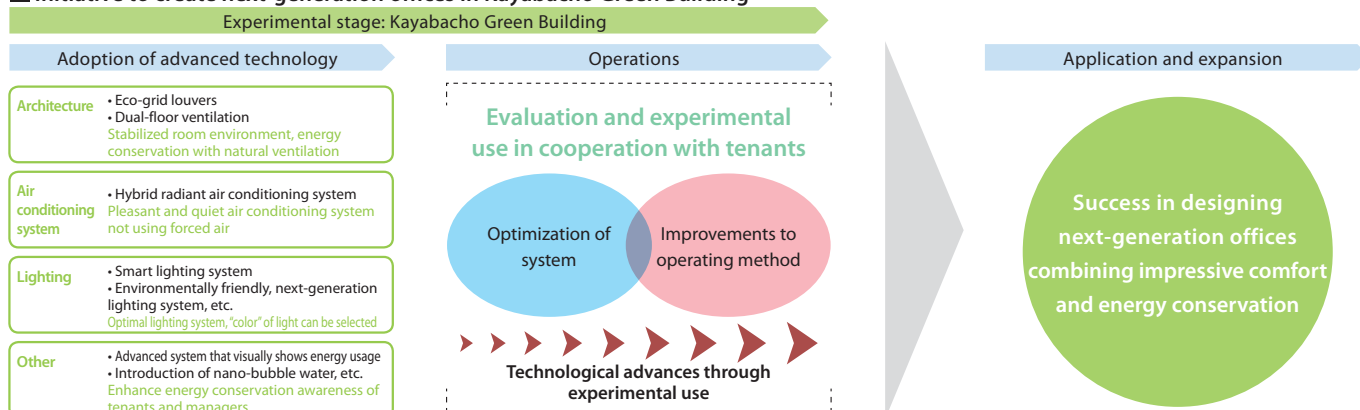
This building has introduced sophisticated technology such as hybrid radiant air conditioning systems that the Group tested out internally, a smart lighting system that provides optimal lighting to match each individual's working conditions, and an innovative system that presents energy-use data in a visual format to encourage workers to conserve energy. These systems

create an office environment that ensures the intellectual productivity of employees and also achieves a high level of environmental performance.

These systems are expected to reduce energy use by about 45% compared to a typical office building, and earned the S rank (working design step) in the CASBEE system.

Going forward, we will strive to establish optimal operation of the building in light of actual use by tenants, aiming to make the most of the potential of those cutting-edge technologies. In so doing, we hope to provide a model next-generation office that delivers more comfort and better environmental performance at the same time.

### Initiative to create next-generation offices in Kayabacho Green Building



Case 3

Initiatives in the residential business

## Largest solar power generation business in Japan utilizes roofs of existing multi-family buildings

MEC eco Life, the company that runs the environmental programs of the Mitsubishi Estate Group's residential business, launched a solar power generation business that uses the roofs of 25 rental homes in New Town Oyamada Sakurada, Urban Renaissance (UR) rental housing in Machida, Tokyo (to be completed in March 2015).

MEC eco Life has installed solar panels on 8,200m<sup>2</sup> of roof space on 25 UR rental houses, and will use the feed-in tariff program for renewable energy to sell the power it generates. This is expected to reduce greenhouse gases by 500 tons a year in terms of CO<sub>2</sub>, and is the largest-scale solar power project to utilize the roofs of existing multi-family residences.



Solar power panels on roofs of UR rental housing

Case 4

Promotion of renewable energy

## Use of renewable energy at Takanawa Forum training center

Takanawa Forum is a training center for Group employees that was opened in 2013 as a model project epitomizing the Group's basic environmental policy. It features large-scale solar power generators and hot water supply equipment using solar heat collection, as well as car sharing for electronic vehicles, LED lighting and an irrigation system using rain water. This facility, which brings together the Mitsubishi Estate Group's collective strengths, has become a place of exchange for Group employees. In 2014, this facility won the Grand Prize in the Ministry of the Environment's Fourth Energy-Efficient Lighting Design Award (fiscal 2013) in the "community, housing and other" category.



Of partial wood construction, the building uses about 10 times the amount of Japan-grown timber stipulated by the timber usage criteria based on Minato Ward's Minato Model Carbon Fixation Accreditation Program. This was the first building to earn the highest rank of three stars, including private-sector and public buildings in the ward.

## Activity Report

## Basic Policy and Performance Highlights

## ■ Mitsubishi Estate Group Basic Environmental Policy

The Mitsubishi Estate Group has established the Mitsubishi Estate Group Basic Environmental Policy, which is based on its corporate mission. The entire Group works together to implement sound environmental management.

## Mitsubishi Estate Group Basic Environmental Policy

The Mitsubishi Estate Group has developed an environmental management system and strives to protect the environment by promoting environmental initiatives and reducing environmental impact, as well as complying with all environmental laws and regulations. Mitsubishi Estate is determined to ensure that its business activities play a leading role in the development of sustainable communities.

## 1. Building a low-carbon society

We are proactive about the efficient use of resources and energy, and encourage the use of renewable energy to contribute to the creation of a low-carbon society.

## 2. Creating a sound material-cycle society

We strive to reduce, reuse, and recycle in every stage of our business, including planning, development, design, construction, management and dismantlement, in order to contribute to building a sound material-cycle society.

## 3. Fostering harmony between nature and human society

We endeavor to foster new cultural values and to practice environmental responsibility by demonstrating concern for biodiversity and developing attractive urban spaces that harmonize with the surrounding natural environment, thus helping to build a society that lives in harmony with nature.

## 4. Promoting environmental communication

We proactively provide information on the environment and communicate with society on a broad range of issues in our efforts to coordinate and cooperate with a wide range of stakeholders.

## 5. Increasing employees' ecological awareness

In our efforts to increase employees' awareness of environmental conservation issues and ensure highly effective environmental activities, we provide environmental education and awareness programs, aiming to develop an ecologically aware workforce.

## ■ Environmental slogan and logo

The Mitsubishi Estate Group developed an environmental slogan and logo to strengthen dissemination of information on environmental coexistence and to raise environmental awareness internally and outside the company. Under the slogan, "For Sustainable Cities, For the Sustainable Earth," the Group will proactively develop measures that contribute to environmental coexistence and create a truly meaningful community, as articulated in its mission.

街の力を、  
地球の力に。

## ■ Operational framework for environmental management

The Mitsubishi Estate Group appoints an Environmental Director at Mitsubishi Estate to take responsibility for promoting the Group's environmental management, and also appoints Environmental Management Officers in each of Mitsubishi Estate's business groups and each Group company. The CSR Committee and CSR & Environmental Sustainability Subcommittee, which conducts deliberations on environmental issues and on CSR overall, meet twice a year to discuss and share information on the status of each organization's environmental initiatives and environmental objectives.

## ■ Development and administration of the environmental management system

The Mitsubishi Estate Group has acquired ISO14001 certification for organizations with relatively significant environmental impact, and has also developed and is administering an independent Environmental Management System corresponding to ISO14001 at organizations with relatively small environmental impact. In fiscal 2013, five organizations\* from the Mitsubishi Estate Group operated an environmental management system certified under ISO14001 standards.

The independent EMS, which is primarily intended for office facilities, is used at Mitsubishi Estate Co., Ltd. (office activities), Mitsubishi Real Estate Services Co., Ltd., and MEC Information Development Co., Ltd. In terms of specific programs, the corporate organizations—particularly those that have acquired ISO14001 certification—set their own environmental targets, and pursue programs to realize a low-carbon society and build a recycling-oriented society in line with these targets.

\* Mitsubishi Estate's Office Building Group (concurrent certification with Mitsubishi Jisho Property Management Co., Ltd.); Mitsubishi Jisho Community Co., Ltd.; Mitsubishi Estate Home Co., Ltd.; Mitsubishi Jisho Sekkei Inc.; Royal Park Hotels and Resorts Co., Ltd. (concurrent certification with Royal Park Hotel Co., Ltd.). In April 2014, Mitsubishi Estate underwent an organizational reform, and the scope of organizations with systems certified under ISO14001 was reviewed accordingly. Yokohama Sky Building Co., Ltd. and Mitsubishi Estate Home Co., Ltd. relinquished their ISO certification in April 2011 and in September 2014, respectively. These companies will continue to set environmental objectives and goals for each fiscal year and run and manage their environmental program under their own systems in line with the Group's Basic Environmental Policy.

## ■ Mitsubishi Estate Group's Green Procurement Guidelines

The Mitsubishi Estate Group established its Green Procurement Guidelines with the aim of promoting the procurement of materials and equipment and the use of construction methods with low environmental impact (green procurement) in order to help reduce adverse impact on the global environment and build environmentally sound communities.

These guidelines are applicable to all products, services, designs, and construction procured by the Mitsubishi Estate Group.

## Building a Low-Carbon Society

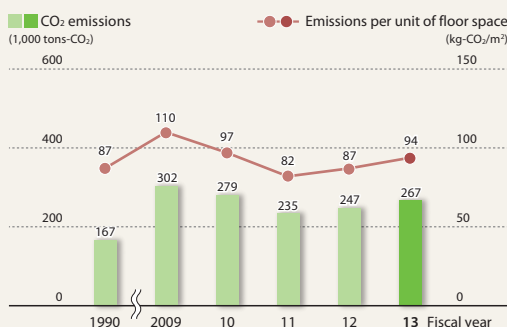
### ■ Building management programs to reduce CO<sub>2</sub> emissions

In fiscal 2013, the energy consumption of Mitsubishi Estate's 29 ISO14001-certified buildings\* stood at 5,763,681 GJ, and CO<sub>2</sub> emissions totaled 267,265 tons-CO<sub>2</sub>. Compared to fiscal 2012 results, energy consumption decreased by 15,595 GJ, and CO<sub>2</sub> emissions increased by 20,017 tons-CO<sub>2</sub>. The increase in the CO<sub>2</sub> emissions is attributed to an increase in the emissions coefficient used. In ISO14001-certified buildings, the Group took a range of energy-saving measures, including partially shutting off the hot water supply and using air conditioners/heaters efficiently, not just in summer months but throughout the year. As a result of these efforts, energy use per unit of floor space in fiscal 2013 was maintained almost at the same level as in fiscal 2012, at 2.03 GJ/m<sup>2</sup>, while CO<sub>2</sub> emissions per unit of floor space increased 7kg-CO<sub>2</sub>/m<sup>2</sup> to 94kg-CO<sub>2</sub>/m<sup>2</sup>.

In fiscal 2014, Mitsubishi Estate is working toward its target for reducing energy consumption in each building to the stricter of either a 1.0% reduction compared to fiscal 2012 or the reduction mandated by city regulations such as the Tokyo Metropolitan Ordinance on Environmental Preservation. These goals drive the effort to keep reducing energy consumption.

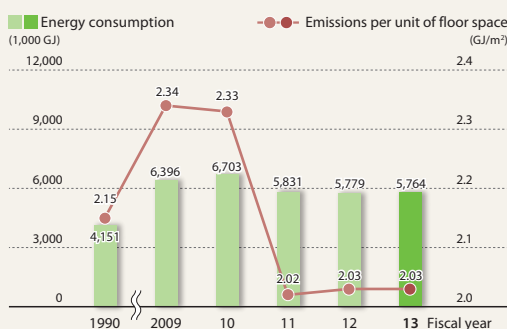
\* CO<sub>2</sub> emissions are calculated for the 29 buildings that had acquired ISO14001 certification as of March 2014. The names of the applicable buildings are provided on the Mitsubishi Estate website in Japanese.

#### CO<sub>2</sub> emissions and CO<sub>2</sub> emissions per unit of floor space from Mitsubishi Estate's ISO14001-certified buildings



\* CO<sub>2</sub> emissions are calculated using the emissions coefficients determined for individual electrical power suppliers, reflecting actual status.  
 \* The number of ISO-certified buildings may change each fiscal year due to renovations and sales/purchases.  
 \* The data for 1990 includes buildings prior to renovations (such as the former Marunouchi Building).

#### Energy consumption and energy consumption per unit of floor space in Mitsubishi Estate's ISO14001-certified buildings



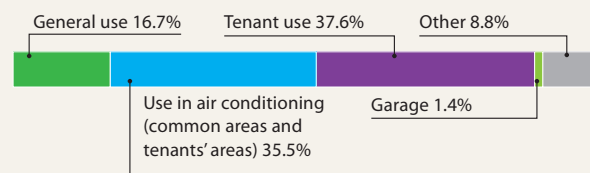
\* The number of ISO-certified buildings changes each fiscal year due to renovations and sales/purchases.

### ■ Collaborating with tenants to conserve energy

By type of energy, electricity accounted for about 70% of the energy consumed in buildings managed by Mitsubishi Estate, whereas by application, tenant use accounted for the majority of energy consumption. Given this, Mitsubishi Estate has been regularly holding a Global Warming Mitigation Measures Committee made up of tenants since 2008 at each of its buildings in the Tokyo metropolitan area, including Yokohama, in an effort to work with tenants to reduce energy consumption.

The committees each meet twice a year, once in the spring and again in the fall, to present and discuss progress and outcomes in reducing CO<sub>2</sub> emissions and energy use in compliance with the Tokyo Metropolitan Ordinance on Environmental Preservation and the Act on the Rational Use of Energy. The Group will continue to support these committee activities, aiming to produce and share informational materials about the energy conservation activities carried out in buildings and specific reduction targets, as well as the energy conservation initiatives practiced by tenants.

#### Fiscal 2013 energy consumption by application (for 29 ISO14001-certified buildings)



### ■ Recognized as "top-level installation" under the Tokyo Metropolitan Ordinance on Environmental Preservation

In February 2014, the Marunouchi Park Building (including Mitsubishi Ichigokan) was recognized as a "top-level installation" in accordance with the Tokyo Metropolitan Ordinance on Environmental Preservation. This program relaxes the mandatory reductions in greenhouse gas emissions for buildings that have implemented excellent measures to counter global warming on their own. Mandatory reductions are cut by half for "top-level installations" and by one-fourth for "near-top-level installations."

Since the cooperation of the tenant companies is essential in reducing the environmental impact of office buildings, we formed the Global Warming Mitigation Measures Committee, made up of tenant companies, and set up a promotion system. The building also features equipment with a low environmental impact, such as high-efficiency lighting and air conditioning systems and a reclaimed water purification system. We also took exhaustive measures to reduce CO<sub>2</sub> emissions in the way the building is operated. These wide-ranging initiatives have received high acclaim, leading to this recognition.

In addition to the Marunouchi Park Building, eight other buildings developed by Mitsubishi Estate have been recognized as "top-level installations" and "near-top-level installations."



## Activity Report

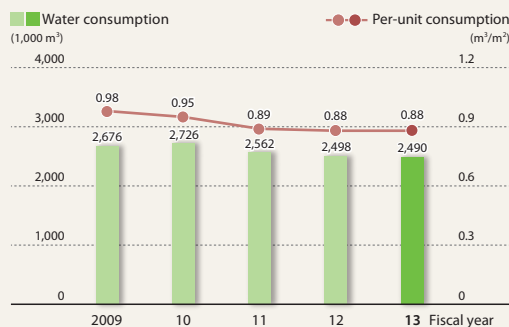
## Creating a Sound Material-Cycle Society

## Effective consumption of water resources in buildings

Mitsubishi Estate is working to curb water consumption at its buildings by taking measures to streamline water consumption such as adjusting the amount of water used in toilets and hot-water service rooms. In fiscal 2013, water consumption totaled 2,490,851m<sup>3</sup> in Mitsubishi Estate's ISO14001-certified buildings, down 0.3% compared to fiscal 2012. Also, in an effort to conserve water resources, the company is effectively using reclaimed water by treating used water such as cooling tower blow water and kitchen wastewater and reusing it as toilet flush water. In fiscal 2013, the amount of reclaimed water used at buildings using reclaimed water as of March 2014\* totaled about 626,404m<sup>3</sup>.

\*Marunouchi Building, Mitsubishi UFJ Trust and Banking Building, Marunouchi Kitaguchi Building, Tokyo Building, Shin-Marunouchi Building, Landmark Tower Yokohama, Hibiya Kokusai Building, Shin-Aoyama Building, Marunouchi Park Building, and Marunouchi Eiraku Building

## Water consumption and water consumption per unit of floor space in ISO14001-certified buildings

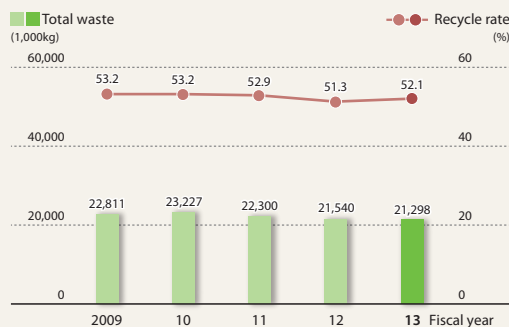


\* Number of buildings included in scope of data may differ by fiscal year due to renovations and sales/purchases.

## Disposal of waste generated by buildings

The Mitsubishi Estate Group strives to improve the waste-recycling rate in the buildings it manages and operates. Efforts include calling for tenants' cooperation in sorting waste, as well as recycling kitchen waste from some buildings as livestock food and fertilizer. Moreover, in fiscal 2013, there were no leaks that would have a marked impact on the surrounding environment, such as toxic substances.

## Total waste and recycle rates for ISO-certified buildings



\* CO<sub>2</sub> emissions are calculated using the emissions coefficients determined for individual electrical power suppliers, reflecting actual status.

\* Number of buildings included in scope of data may differ by fiscal year due to renovations and sales/purchases.

## Fostering Harmony between Nature and Human Society

## "Business Innovation in Harmony with Nature and Community" certification earned

The Otemachi 1-1 Project (tentative name), Dai Nagoya Building, the third-phase of the Otemachi Chain Redevelopment Project, and the "MARK IS minatomirai" projects, which are being developed and run by the Mitsubishi Estate Group, earned the "Business Innovation in Harmony with Nature and Community" certification (city and SC version) from the Association for Business Innovation in Harmony with Nature and Community (ABINC) as office buildings and commercial facilities that respect biodiversity.

This certification program was created to encourage corporate activities that promote coexistence between people and nature. ABINC provides third-party assessments and certifications based on the Japan Business Initiative for Biodiversity's *Guidelines for Sustainable Business Sites*.

The Otemachi 1-1 Project (tentative name) was recognized for its harmony with the water and greenery of the Imperial Palace and outer gardens and the community plaza, in which many plants native to the region are planted. MARK IS minatomirai has been praised for its participatory, experience-based events with customers.



Dai Nagoya Building



MARK IS minatomirai

## Biological monitoring in Marunouchi area

The Marunouchi area is close to the Imperial Palace and moat, as well as natural beauty such as Hibiya Park, giving visitors the chance to observe living creatures year-round. Mitsubishi Estate carries out biological monitoring surveys in Marunouchi and published the results in the *Marunouchi Biological Handbook* in June 2013. The living creatures that have made Marunouchi their home are introduced with pictures according to themes such as seasons, waterside animals and animals that come out at night. The handbook also includes suggestions for ways in which even individuals can preserve biodiversity, as well as columns written by experts on nature in the city. It is distributed to area visitors free of charge. The handbook is also intended as a PDCA tool for ecological management in the region that can be used to promote efforts to preserve biodiversity.

This program won the Japan Committee for United Nations Decade on Biodiversity Prize at the Tokyo Biodiversity at the GTF Green Challenge Awards 2013's Greater Tokyo Biodiversity Competition, sponsored by the Greater Tokyo Festival's GTF Committee.



Marunouchi Biological Handbook

## Reducing Environmental Impact

### Initiatives to earn DBJ Green Building Certification

Mitsubishi Estate considers the society and environment in its real estate business and proactively publicizes information. In fiscal 2013, eight buildings owned by Mitsubishi Estate earned Development Bank of Japan (DBJ) Green Building Certification.

This certification program assesses buildings with impressive environment and social awareness ("green buildings") using its own comprehensive scoring model, which evaluates buildings in terms of environmental performance, comfort for tenants, risk management, consideration of surrounding environment and community, and cooperation with stakeholders. The buildings are then evaluated using a five-stage ranking system (Platinum, Gold, Silver, Bronze, and Certified). DPJ recognized Mitsubishi Estate's efforts to make its development projects environmentally friendly.

With growing expectations and interest in eco-friendly buildings, Mitsubishi Estate will continue to develop valuable real estate properties and respond to stakeholder tenants and investors.

### Logiport Sagamihara earns highest ranking of Platinum

Logiport Sagamihara, Japan's largest logistics facility, was developed jointly by Mitsubishi Estate and LaSalle Investment Management, and it earned the highest ranking of Platinum 2013 in the DBJ Green Building certification program.

Logiport Sagamihara was commended for its ability to meet a wide range of tenant needs with ample basic specifications, the use of an anti-seismic structure, and anti-disaster measures such as emergency generators that can be used for 72 hours. In addition, property management and administration takes into account the convenience and comfort of people working in the facility with stores and break rooms, while LED lighting and sandwich panel and double-folded plates with high heat insulation capacity are used in offices and common areas. These environmentally friendly features won high acclaim from the DBJ, and the building was recognized as "a logistics center that exhibits environmental and social awareness at the highest level in Japan."



Logiport Sagamihara

## Increasing Ecological Awareness

### Environmental Initiatives Publication

The Mitsubishi Estate Group has published a brochure entitled *Environmental Initiatives*, aiming to familiarize tenants and visitors with the various initiatives that the Group undertakes to reduce environmental impact and pursue harmony with the environment. The Mitsubishi Estate Group Basic Environmental Policy, examples of Group initiatives and key points are laid out in the leaflet, and environmental measures taken in Marunouchi are shown in graphic form in illustrated maps that are easy for the reader to understand, together with a description of the living creatures that can be observed in this area.



Eco Map from *Environmental Initiatives*

### Environmental education for employees

We also focus on employees' environmental education to raise the level of our environmental activities. The Mitsubishi Estate Group publishes an environmental information publication for employees entitled, *For Sustainable Cities, For the Sustainable Earth*, twice a year. By integrating environmental information and sharing this information about the Group's environmental programs and environmental conservation activities, we strive to raise environmental awareness and promote activities.

Moreover, Mitsubishi Estate provides environmental education through e-learning every year. Employees learn by going through four chapters covering general environmental problems as well as environmental management systems and the environmental impact of Mitsubishi Estate's business activities. Employees complete the e-learning program with a comprehensive test. As of fiscal 2013, 1,107 employees had completed this training. The participating employees stated that, thanks to the training, "I realized again the issues facing the Mitsubishi Estate Group" and "My understanding of the issues that should be addressed when planning global expansion has deepened."



Environmental information publication *For Sustainable Cities, For the Sustainable Earth*