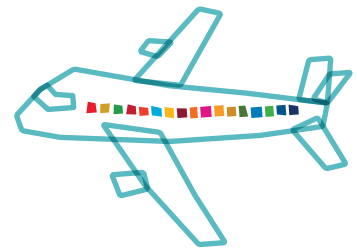
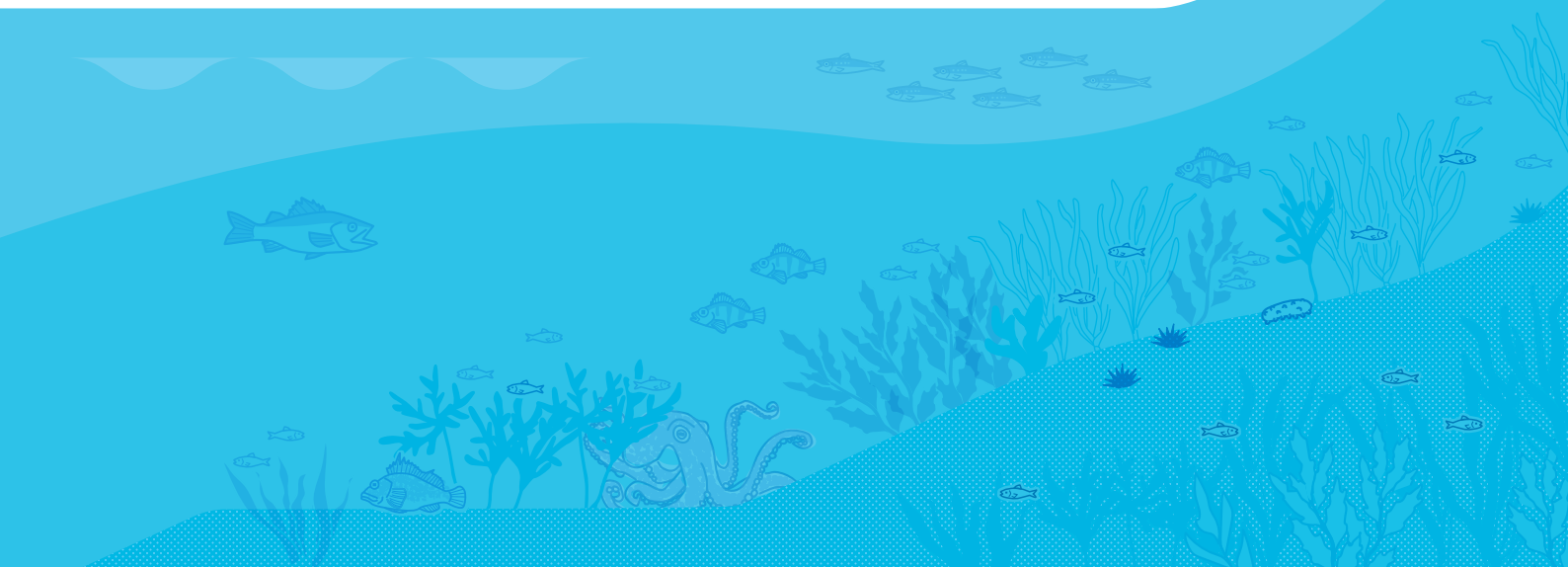


Shaping a New Journey



Kansai International Airport / Osaka International Airport / Kobe Airport

Environmental Report 2020



Committed to Operating Eco Friendly, Smart Airports



Shaping a New Journey

Kansai Airports Environmental Statement

Kansai Airports group is engaged in various activities to reduce the impact on the environment at 3 airports (Kansai International Airport, Osaka International Airport and Kobe Airport). In order to further promote our activities, we have created a new environmental plan "One Eco-Airport Plan", set specific targets and measures have been established based on the following 4 pillars as indices for future initiatives toward reduction of environmental impact.

- **Response to climate change**

We promote efficient energy usage to reduce environmental burdens and engage in measures aimed at reducing greenhouse gas emissions. We also encourage the use of solar, hydrogen and other types of sustainable energy and new energy that contributes to protecting the global environment.

- **Resource usage**

We reduce, separate, recycle and reuse all the waste and plastics generated. We also contribute to resource conservation through the promotion of "Reduce, Reuse and Recycle (the 3Rs)" with respect to both waste and water, including efforts to make water use more efficient through data analysis, expand the adoption of recycled water and examine rainwater usage.

- **Environmental harmony**

We continue to work on reducing aircraft noise, conduct environmental monitoring appropriately and disclose monitoring results. We will also promote the creation of positive spaces where airport users can relax and feel comfortable while striving to preserve biodiversity through the maintenance and expansion of greenbelts and conducting environmental surveys to verify species.

- **Environmental management**

Using environmental evaluation programs, we have created a mechanism to enable the understanding and assessment of environmental burdens that lead to their reduction. We also make an effort to engage in dialogues with customers, airport staff and local communities through the dissemination of environmental information and the provision of environmental education, as well as alliances with airport-related businesses and airports throughout Japan and overseas.

Kansai Airports group is fully aware of its responsibility toward the global and regional environmental changes. We will continue to promote initiatives aimed to reduce our environmental impact and to develop the airport while coexisting with the surrounding environment.

【Our environmental targets: (target year: FY 2022, base year: FY 2016)】

1. Reduce our energy use per unit of traffic by 1% per year on average.
2. At each airport, reduce our CO₂ emissions per unit of traffic by 1% per year on average.
3. At each airport, reduce the use of city water per passenger by 2% per year on average.
4. Increase the rate of recycling to 35 %.
5. At each airport, reduce the use of one-way plastics by 25%
6. Enter each airport in environmental certification programmes such as Airport Carbon Accreditation and ISO14001.
7. Perform biodiversity assessments and protect biodiversity on and around our airports.
8. Actively support the development of hydrogen as a clean energy source.

Yoshiyuki YAMAYA
Chief Executive Officer
Kansai Airports

Benoit RULLEAU
Co-Chief Executive Officer
Kansai Airports



Company Profile

Name	Kansai Airports
Date of incorporation	December 1, 2015
Location	1-banchi, Senshu-Kuko Kita, Izumisano-shi, Osaka 549-8501, Japan
Company representatives	Yoshiyuki YAMAYA Chief Executive Officer Benoit RULLEAU Co-Chief Executive Officer
Business scope	<ul style="list-style-type: none"> ● Operation and management services, etc. of Kansai International Airport and Osaka International Airport ● Operation of Kobe Airport by Kansai Airports Kobe
Capital	25 billion yen
Shareholders	ORIX Corporation 40% VINCI Airports 40% Other investors 20%

* On April 1, 2018, Kansai Airports Kobe commenced its business as an operator of Kobe Airport (KOBE).



● Kansai International Airport
Website: www.kansai-airport.or.jp
Official Facebook page:
www.facebook.com/KansaiInternationalAirport/



● Osaka International Airport
Website: www.osaka-airport.co.jp
Official Facebook page:
www.facebook.com/OsakaInternationalAirport/



● Kobe Airport
Website: www.kairport.co.jp
Official Facebook page:
www.facebook.com/kobeairports/



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Editorial Policy

● Purpose of this report

This report is published to convey to stakeholders in an easy-to-understand manner initiatives, including data, for reducing environmental impacts being carried out by Kansai International Airport, Osaka International Airport and Kobe Airport to help realize sustainable society, which are managed by Kansai Airports.

● Reporting boundary

This report focuses on the activities of Kansai Airports and also covers the activities of certain Group companies and businesses operating at the airports its manages.

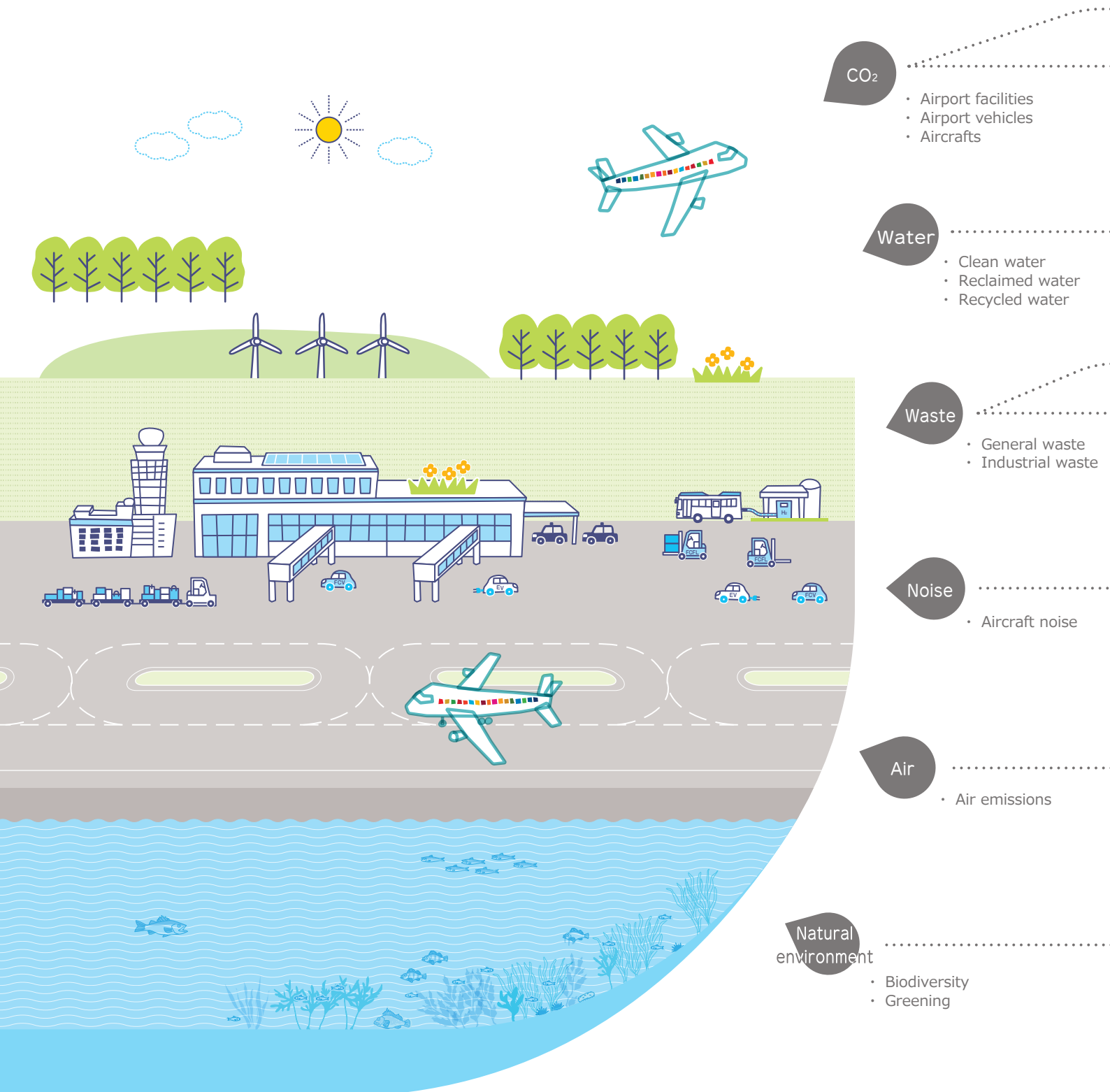
● Reporting period

Activities carried out during fiscal 2019 (April 2019 to March 2020).

Addressing Environmental Impact at Airports

- Causal relations between our operations at airports and environmental impact -

At the Kansai Airports Group, we are aware of the need to take great responsibility for environmental issues on regional and global scales. Accordingly, we have clarified our environmental impact and issues having arose through our airport operations to determine the impact quantitatively and established goals to reduce the impact. By regularly confirming and evaluating the progress of activity and striving to improve our initiatives and address new challenges, we are proceeding proactively with our activities to reduce the environmental impact.





Promote Energy Conservation >> P17



Reducing GHG Emissions >> P19



Reduction of Clean Water Consumption >> P23



Waste Recycling >> P25



Plastic waste-reducing activities >> P26



Monitor the Local Environment >> P27



Monitor the Local Environment >> P27



Preserve Biodiversity >> P33



KIX : Kansai International Airport



ITAMI : Osaka International Airport



KOBE : Kobe Airport

Kansai Airports Group's targets

Promote energy conservation

Use renewable energy and hydrogen

Promote zero emission vehicles (ZEVs)
[Electric vehicles
Fuel cell vehicles]



Zero Emission Airport

2050

Commit to achievement by 2050!

Net-zero CO₂ emissions

Reduce

Reuse

Recycle



Plastic Free Airport

2022

Commit to achievement by 2022!

Reduce the use of one-way plastics by **25%**

Reuse and recycle **60%** of plastic packaging and containers

One Eco-Airport Plan

We established the One Eco-Airport Plan, an environmental plan covering the three airports of Kansai International Airport, Osaka International Airport, and Kobe Airport. This plan, which got underway in fiscal 2018, spans the five-year period up to fiscal 2022, using four policies to promote activities across all three major airports in the Kansai region aimed at reducing our environmental impacts.

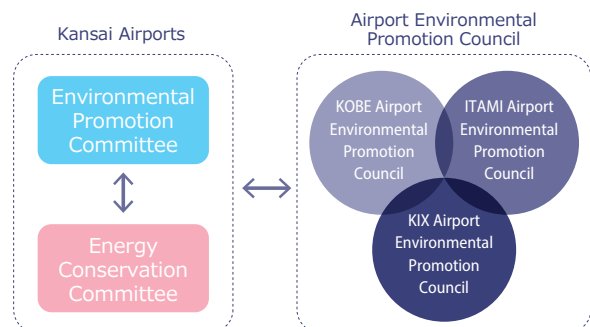
Committed to Operating Eco Friendly, Smart Airports



Environmental Promotion System

Working in conjunction with airport-related businesses

Kansai Airports established the Environmental Promotion Committee to promote plans, analyze and assess the status of target achievement and improve initiatives. The Energy Conservation Committee promotes specific actions aimed at conserving energy and reducing greenhouse gas emissions. Further, each of the three airports has its own Airport Environmental Promotion Council through which they promote cooperation, collaboration and initiatives with airport-related businesses.



- Leaflets and introductory movies of One Eco-Airport Plan are available from:
<http://www.kansai-airports.co.jp/efforts/environment/efforts/oneecoairport.html>



How the One Eco Airport Plan is progressing

1 Response to Climate Change

We promote efficient energy usage to reduce environmental burdens and engage in measures aimed at reducing greenhouse gas emissions. We also encourage the use of solar, hydrogen and other types of sustainable energy and new energy that contributes to protecting the global environment.

Promote Energy Conservation



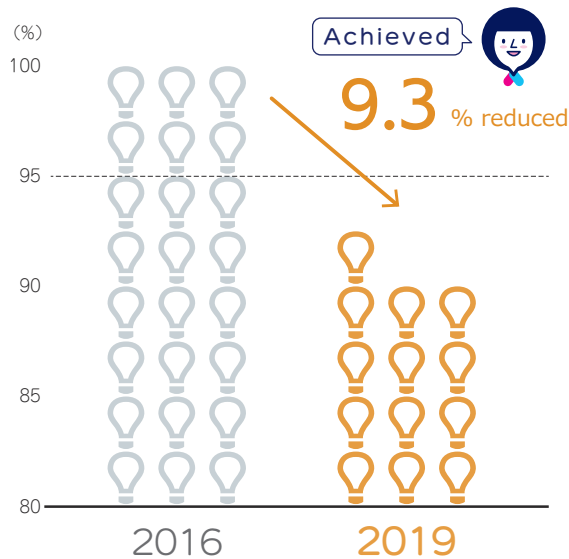
By fiscal 2022 : energy usage
5 % reduction
 (compared to fiscal 2016, per traffic unit)

Reduce GHG Emissions

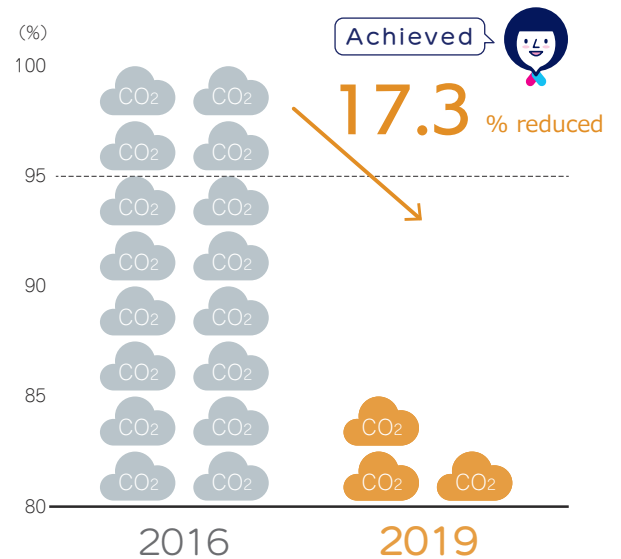


By fiscal 2022 : CO₂ emissions
5 % reduction
 (compared to fiscal 2016, per traffic unit)

[Major FY 2019 initiatives] -----



[Major FY 2019 initiatives] -----



3 Environmental Harmony

We continue to work on reducing aircraft noise, conduct environmental monitoring appropriately and disclose monitoring results. We will also promote efforts to create the creation of positive spaces where in which airport users can relax and feel comfortable while striving to preserve biodiversity through the maintenance by maintaining and expansion expanding of green belts and conducting environmental surveys to verify species.

Monitor the Local Environment



Measure environmental parameters

Preserve Biodiversity



Increase biodiversity

Working on appropriately 

[Major FY 2019 initiatives] -----

- Monitor aircraft noise and other factors under the Plan for Environmental Monitoring

- Seaweed bed survey
 Seaweed bed area **59** ha
 (As of the monitoring survey in March 2019)

2

Resource Usage

We reduce, separate, recycle and reuse all the waste and plastics generated. We also contribute to resource conservation through the promotion of "Reduce, Reuse and Recycle (the 3Rs)" with respect to both waste and water, including efforts to make water use more efficient through data analysis, expand the adoption of recycled water and examine rainwater usage

Reduction of Clean Water Consumption



By fiscal 2022 : Clean water usage

10 % reduction

(compared to fiscal 2016, per PAX)

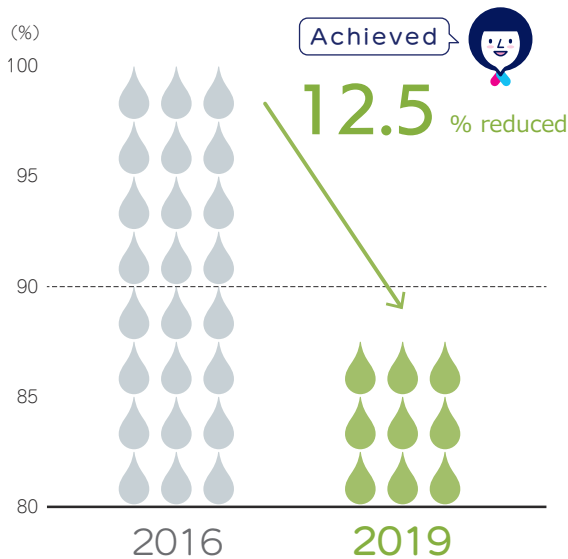
Waste Recycling



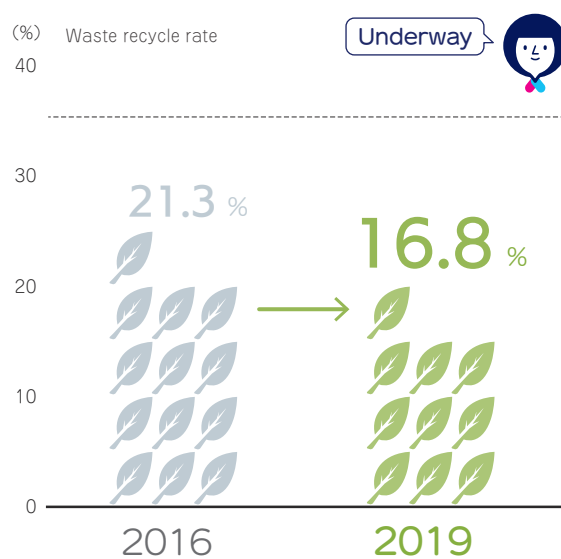
By fiscal 2022 :

- Waste recycling rate **35 %まで向上**
- Amount of one-way plastics waste **25 % reduction**

[Major FY 2019 initiatives] -----



[Major FY 2019 initiatives] -----



4

Environmental management

Using environmental evaluation programs, we have created a mechanism to enable the understanding and assessment of environmental burdens that lead to their reduction. We also make an effort to engage in dialogues with customers, airport staff and local communities through the dissemination of environmental information and the provision of environmental education, as well as alliances with airport-related businesses and airports throughout Japan and overseas.

Utilize Evaluation Programs



Acquire environmental certification

Cooperation and Education



Establish management framework

Working on appropriately



[Major FY 2019 initiatives] -----

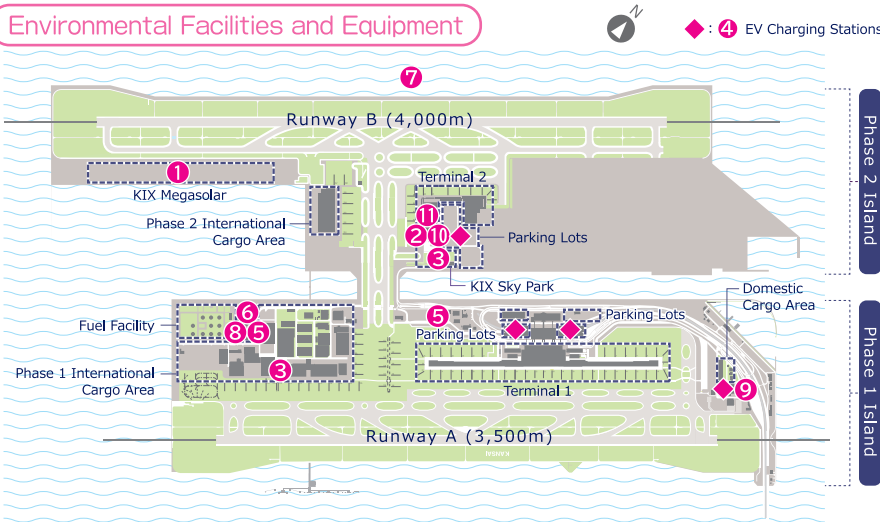
- Upgrade the Airport Carbon Accreditation (ACA) level
KIX / ITAMI: LEVEL 3, KOBE: Level 2
- Dissemination of environmental information
- Airport Environmental Promotion Council activities
- Participate in the Airports Council International (ACI)
- Environmental Ambassador Initiatives

Airport Summary



Runways 2	Annual Aircraft Movements approximately 196,000	Operating Hours 24 hours
Aircraft Parking Stands 102	Annual Passenger Traffic approximately 28,770,000 (FY2019 operational results)	Size Phase 1 Island approximately 510 ha / Phase 2 Island approximately 545 ha

Environmental Facilities and Equipment



1 KIX Megsolar

One of the largest megasolar power plants operated by an airport in Asia.



5 Heat supply plant

The plant serves as a community heating and cooling system that centrally supplies cold water and steam.

4 EV charging stations

EV charging stations are available to encourage the use of eco-friendly vehicles.



3 Hydrogen stations

Two stations serve fuel cell vehicles and industrial vehicles such as forklifts, etc.



2 Small-scale wind turbines

Three wind turbines are installed at the airport. The generated electricity is used to power streetlights.





6 Water treatment center

Wastewater from each facility is treated onsite and reused as reclaimed water.

7 Seaweed bed

The gently sloping rubble mound breakwater surrounding the airport island fosters the growth of seaweed, providing a habitat for sea life.



10 KIX Sky Park

This roughly 4 hectares park features an expansive lawn and views of the sea.



8 Waste disposal center

General waste from the airport is sorted and either incinerated or recycled.



9 Environmental Center

Introduces environmental information and initiatives inside the Sky View Observation Hall.



11 Solar Panels

The electricity generated by these panels is used in various places of the Terminal 2 building.



Airport Summary



Runways 2

Annual Aircraft Movements

approximately 137,000

Operating Hours

7 a.m. to 9 p.m.

Aircraft Parking Stands

52

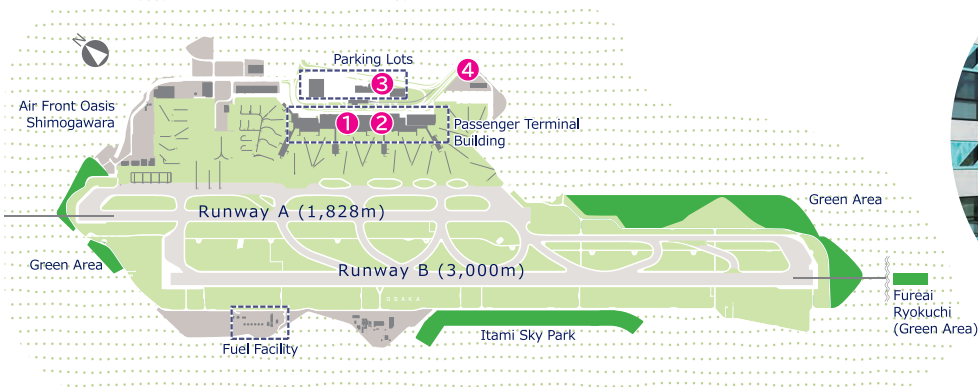
Annual Passenger Traffic

approximately 15,770,000
(FY2019 operational results)

Size

approximately 311 ha

Environmental Facilities and Equipment



1 Light blocking panels

Light blocking panels are installed on the windows of the passenger terminal buildings as part of the airport's energy conservation efforts.

3 EV charging stations

EV charging stations are available to encourage the use of eco-friendly vehicles



2 Rooftop greenery

Rooftop greenery is encouraged and used on top of the passenger terminal building.



4 Hydrogen station

A station serves fuel cell vehicles.





Runways 1

Annual Aircraft Movements

approximately 33,000

Operating Hours

7 a.m. to 23[※] p.m.
(※From the summer of 2020)

Aircraft Parking Stands 10

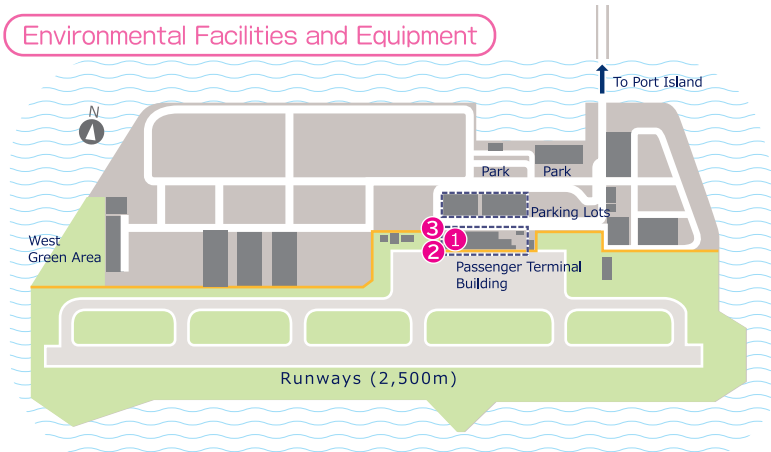
Annual Passenger Traffic

approximately 3,190,000
(FY2019 operational results)

Size

approximately 156 ha

Environmental Facilities and Equipment



1 EV charging stations

EV charging stations are available to encourage the use of eco-friendly vehicles.



2 Rainwater filtration system

Rainwater is filtered and reused as recycled water.



3 Co-generation facility

The facility uses heat from the generation of electricity to heat and cool the passenger terminal building.





Encouraging the Use of Renewable Energy

Rooftop solar panels of the Terminal 2 building

KIX

In January 2020, we newly installed solar panels on the rooftop of the Terminal 2 building and started generating electricity. With 4,180 such solar panels installed, the electricity generated used throughout the building will help reduce annual CO₂ emissions by around 600 tons. This reduction is equivalent to the emissions generated by some 200 ordinary households or the amount absorbed by some 42,300 cedar trees annually.



Optimizing Air-Conditioning System



Upgraded heat-source equipment for air-conditioning system



ITAMI

In upgrading terminal buildings, we have upgraded the heat-source equipment for air-conditioning system, including centralizing multiple heat-source equipment and introducing an energy-efficient inverter-controlled turbo chiller from 2019 over 2020. We expect that this will help reduce annual CO₂ emissions by approximately 1,100 tons.



Minimizing Single-Use Plastics

From plastic to eco-friendly shopping bags used in our directly owned shops

KIX ITAMI KOBE

At Kansai Airports Group, we proactively promote plastic smart efforts to become a "Plastic Free" and eco-friendly smart airport.

Since April 2020, all plastic shopping bags used in any airport shops we own directly have been switched for eco-friendly FSC®-certified paper bags. We also use plastic bags including 30% biomass materials for goods requiring plastic bags.



Click here →



2019.6.14
Press Release



2019.12.20
Press Release

CO₂

Rolling out Zero-Emission Vehicles (ZEVs)

Introducing fuel-cell forklifts on the cargo terminal rooftop

KIX

Kansai Airports Group is actively promoting the use of hydrogen energy, which is increasingly coming into the spotlight. Fuel-cell forklifts (FCFLs), vehicles running on hydrogen, have been introduced on the rooftop of the CKTS import cargo building in the KIX International Cargo Area.

With an additional 15 FCFLs introduced in FY 2019, a total of 22 FCFLs are now in operation. Accordingly, all forklifts except the large type have now been replaced with FCFLs.



Trial begins for eGPU

KIX

In March 2020, we began a trial for the electrical Ground Power Unit (eGPU), a vehicle providing a mobile electrical power source and powering aircraft in the apron of the Terminal 2 building area. Introducing the trial unit like this marks a first for any Japanese airport.

Rechargeable eGPU is low-noise and a people- and environment-friendly equipment with lower CO₂ emissions than APU and mobile diesel GPUs.



Click here → [2020.3.26 Press Release](#)



Conservation of a Rich Environment for Seaweed Bed

Transplanting donor algae of the Ecklonia cava

KIX

At the 1st phase airport island, which was damaged by Typhoon Jebi (No. 21) in 2018, we executed installation works of wave dissipation blocks to enhance its disaster-prevention function. Moreover, to restore the rich seaweed beds from an early stage, we transplanted donor algae from the Ecklonia cava (a brown seaweed native to Japan) inhibited by seawalls on the south and east sides of the 1st phase airport island to the 2nd phase airport island seawalls from September to October 2019. We transplanted the donor algae using eco-friendly materials for the marine environment.

We will create more donor algae in areas over water surrounded by newly installed wave dissipation blocks.



Energy Conservation Efforts in response to COVID-19



Following the spread of COVID-19 infections, domestic and international human traffic has substantially declined due to global immigration restrictions and the official state of emergency declared in Japan.

In particular, the number of international passengers at KIX for the first half of fiscal 2020 (from April to September) decreased by 99.5% compared to the previous fiscal year due to restrictions minimizing travel, which sunk to its lowest level ever.

The number of domestic passengers at the three airports bottomed out under the state of emergency in May and has still remained largely below the level of the previous year, although gradually increasing.

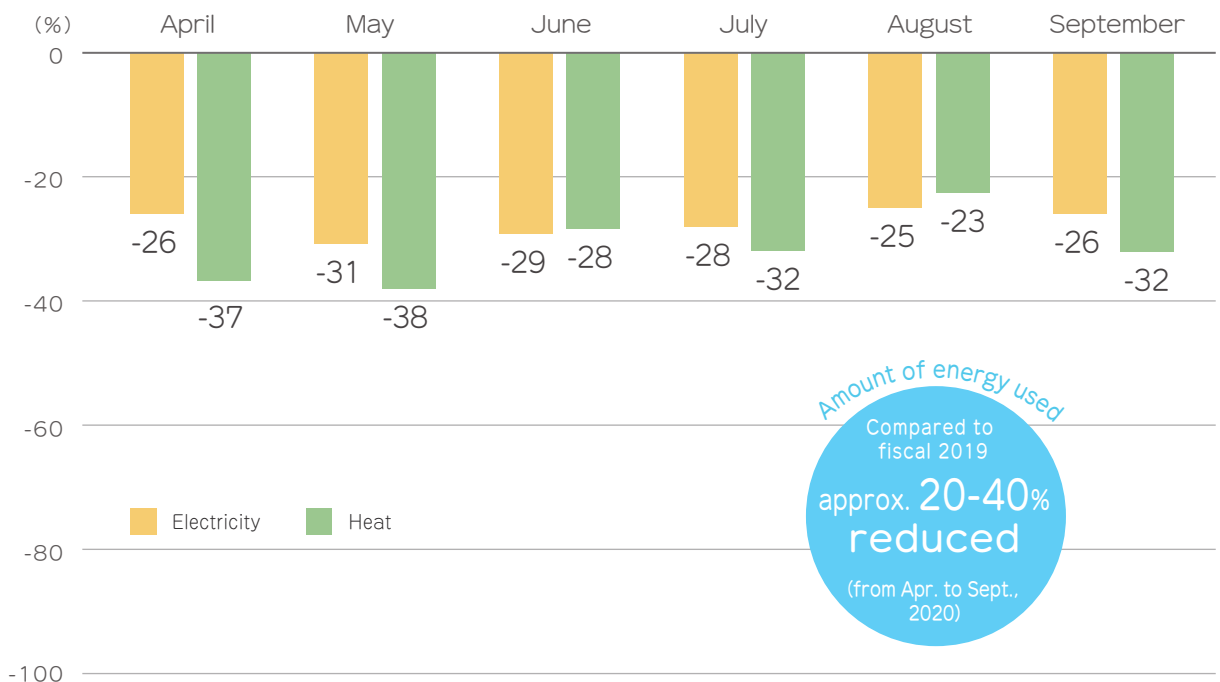
Under the circumstances, the Kansai Airports Group has promoted energy conservation measures such as reviewing the operational scope of partial facility closure and striving to ensure energy-efficient operation while patrolling and maintaining our customer service level.

The energy used at those facilities managed by Kansai Airports in KIX during the first half of fiscal 2020 decreased by around 20 to 40% compared to the previous fiscal year.

[Major initiatives]

- Close part of facilities and shorten operational hours of equipment according to flight procedures
- Promote thorough light-off and device shut-down
- Identify energy conservation targets by monitoring and analyzing regular use of energy

YOY comparison of energy use at facilities managed by Kansai Airports in KIX (the first half of fiscal 2020: April to September)



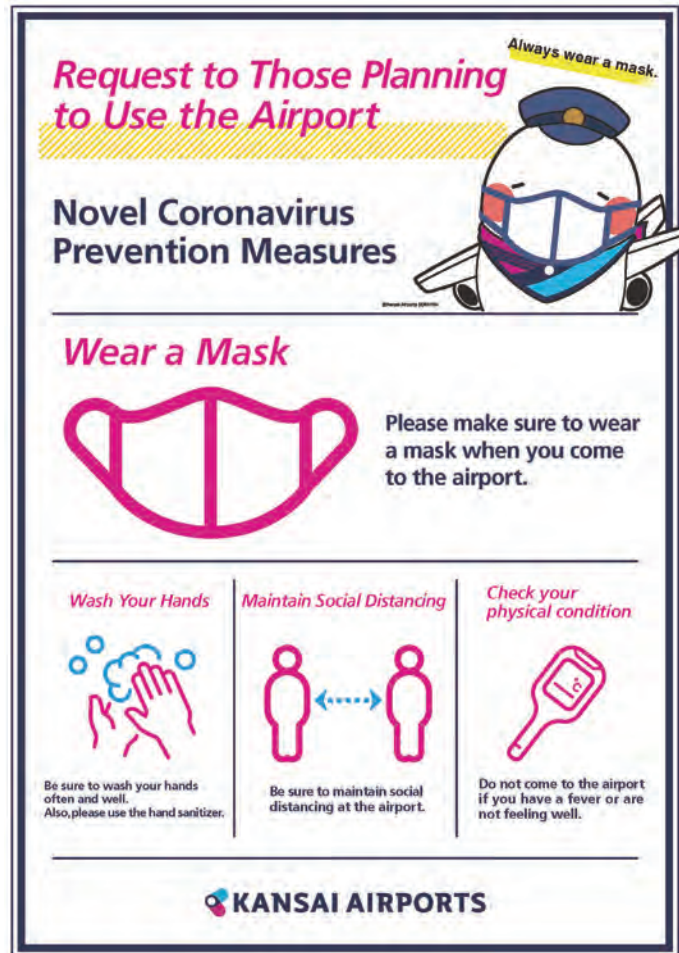
○ Preventive measures against COVID-19 at airports

At Kansai Airports, we strive to prevent the spread of infectious diseases while making the safety of customers and employees our top priority to ensure that our customers can use our airports safely.

● Measures to prevent the infection of passengers/employees



Airport staff wear mask and gloves to prevent droplet infections of COVID-19 at counters (by using clear shields, etc.).



● Health Screening



We measure the body temperature of aircraft passengers by using thermography.

● Disinfection/Cleaning



We thoroughly disinfect and clean counters, security checkpoints, escalators and other facilities,

1

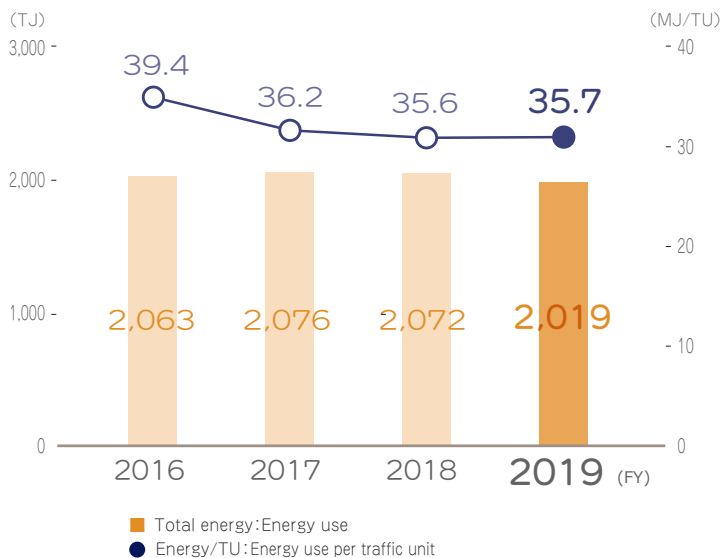
Response to Climate Change



Promote Energy Conservation



Energy use of the Kansai Airports Group



- Terajoules (TJ): 1 TJ = 1012 J
- Traffic unit (TU): Passengers (persons) + Cargo (per 100kg)
- Megajoules (MJ): 1 MJ = 106 J

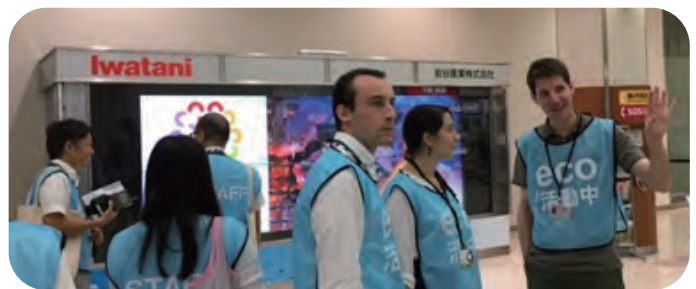
Kansai Airports Group has established a carbon management plan to rein in CO₂ emissions. This plan outlines how we intend to reduce our carbon footprint going forward, including an energy conservation promotion system, reduction targets and medium- to long-term plans.

Energy conservation measures

As well as streamlining equipment and plant operation, upgrading building insulation, switching to LED lighting and taking other tangible measures, we will proceed with intangible measures, including work to optimize and visualize operations or energy consumption.

Promoting Energy-Saving Operations

Energy Conservation Committee members and Environment Ambassadors patrol all three airports regularly to ensure the facility set-up and operation save as much energy as possible. We have also introduced a Building Energy Management System (BEMS) and processed data analysis to identify excessive energy consumption and optimize air-conditioning control.

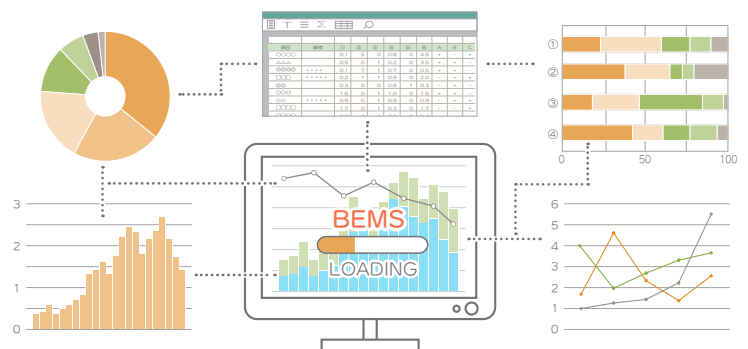


Environment Ambassadors patrol

Major FY 2019 Initiatives

KIX BEMS data analysis helps prevent mix-related loss of air-conditioning energy within a single area and optimize cold-water pump operation, helping reduce the energy we use.

ITAMI KOBE We plan to maintain a data analysis environment by introducing BEMS.



Data analysis leveraging BEMS

* Pages 17 to 37 highlight initiatives carried out by each airport mainly in fiscal 2018.

KIX : Kansai International Airport **ITAMI** : Osaka International Airport **KOBE** : Kobe Airport

Energy-Efficient Air-Conditioning System

We strive to optimize the control of air-conditioning systems and make them as energy-efficient as possible.

KIX KIX Terminal 1 building and other major facilities are heated and cooled by Kansai International Airport Heating & Cooling Supply Co., Ltd., a Kansai Airport group company. We also work hard to ensure only energy-efficient heat source equipment is used for heating. Thanks to an energy-efficient inverter-controlled turbo chiller introduced from 2018 over 2019 and other initiatives, we achieved a substantial reduction, amounting to around reduce approximately 2,450 tons of CO₂ annually.



Heat-supply inverter-controlled turbo chiller

ITAMI In renovating the terminal building, we have also upgraded heat-source equipment for air-conditioning from 2019 over 2020. With this upgrading, including centralizing multiple heat-source equipment and introducing an energy-efficient inverter-controlled turbo chiller, we expect to reduce approximately 1,100 tons of CO₂ annually.



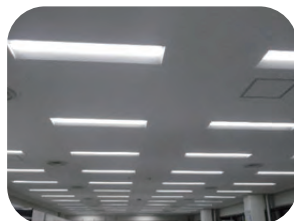
Inverter-controlled turbo chiller

Energy-Efficient Lighting System

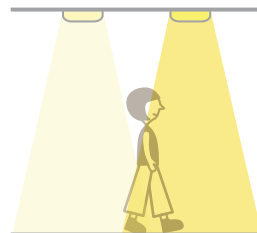
Our plans include switching to LED lighting (underway) and sensor-controlled optimized illuminance.

● Major FY 2019 Initiatives

KIX We reduced the amount of CO₂ used in the Airline Office Building by around **340 tons** by upgrading to LED lighting. As well as this switch, we achieved a further **10% energy-saving** by correcting initial illumination, dimming light sensors at the windows and installing motion sensor controls in corridors.



Brightness sensor



Human sensor

Anti-sunlight Measures

As well as upgrading our facility, we also prioritize window insulation, sunlight blocking and other building upgrades as part of our energy conservation measures.



ITAMI

When renovating the terminal building, we introduced double low-e glass and applied heat-shielding paint to the windows.

KOBE

We installed automatic curtains and applied heat-shielding paint to the waiting room of the terminal building.



1 Response to Climate Change

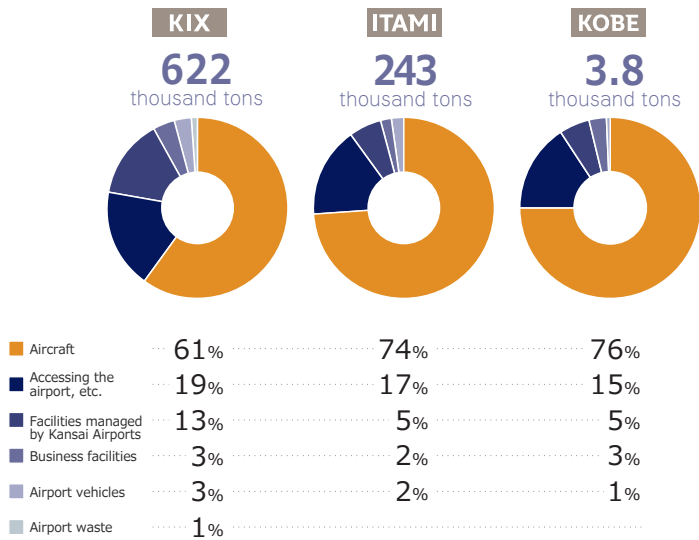


Reducing GHG Emissions



Reducing CO₂ from Our Airports

CO₂ Emissions from all the three airports (in fiscal 2019)



Note: Calculation Conditions

- Airport vehicles refer to passenger vehicles and GSE vehicles.
- Waste materials are based on carbon neutrality.
- Emissions from accessing the airport, etc. and aircraft are based on estimates.
- Emissions from aircraft are based on the LTO (Landings and Takeoffs: aircraft activity at altitude of 3,000ft and under) cycle stipulated by ICAO.

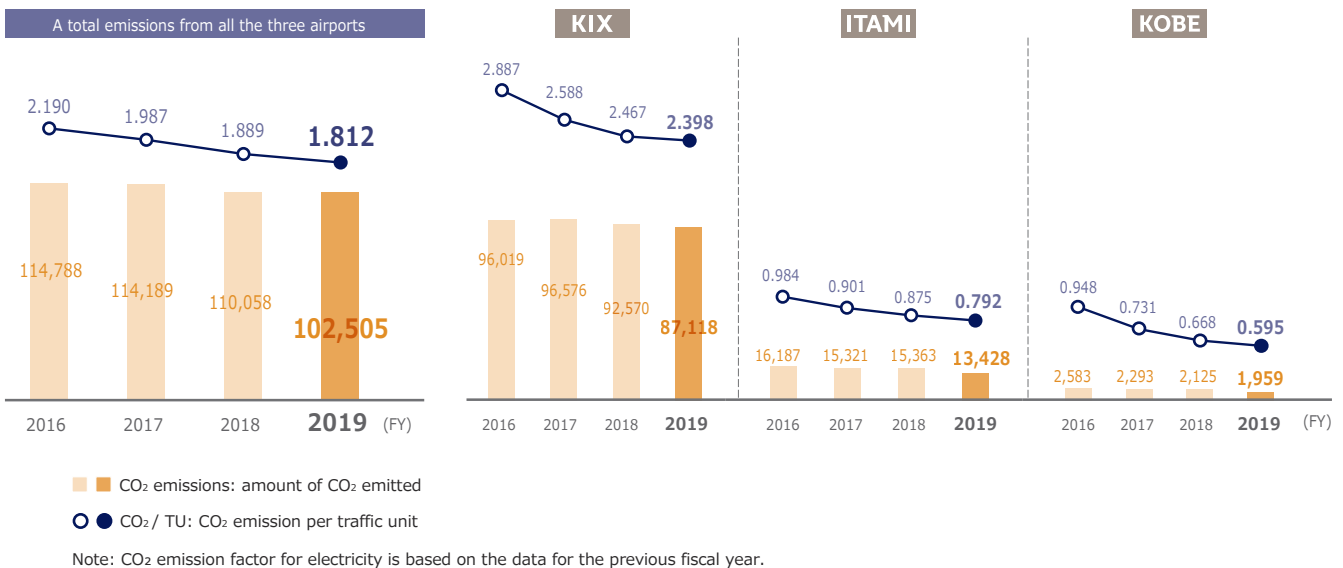
Thanks to the reduction of electricity emission factor, Kansai Airports Group has **reduced total CO₂ emissions by 10.7%**, marking a **decrease of 17.3% per traffic unit*** compared to those in fiscal 2016.

Despite more aircraft landing and taking off and an increased percentage of small aircraft, total CO₂ emissions from aircraft per traffic unit increased against the backdrop of the COVID-19 crisis. Meanwhile, CO₂ emissions per traffic unit decreased for airport facilities managed by Kansai Airports and other businesses. This was partly thanks to emission-reduction efforts, including energy conservation. The largest share of CO₂ emissions came from aircraft, followed by accessing the airports, passenger terminals and other airport facilities.

Going forward, we will strive to lower energy use and improve overall energy efficiency at our airports.

* Traffic Unit (TU):
Passenger (persons) + cargo volume (per 100 kg)

CO₂ Emissions of Kansai Airports Group
 Total CO₂ emissions **decrease by 10.7%** per traffic unit **decrease by 12.1%** (from fiscal 2016)



KIX : Kansai International Airport **ITAMI** : Osaka International Airport **KOBE** : Kobe Airport

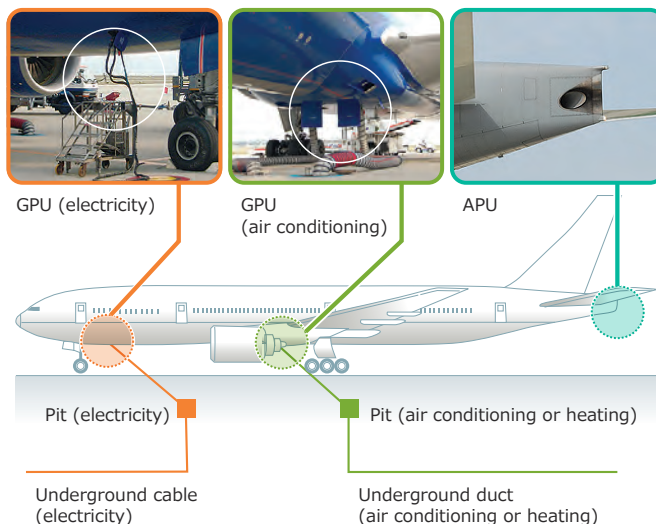
Promoting the Use of GPU

CO₂ emissions can be controlled by increasing the use of GPU (Ground Power Units) instead of an aircraft's APU (Auxiliary Power Units) to supply electricity to parked aircraft. Kansai Airports has requested that all airlines using its airports use GPU.

In terms of GPU use, partial changes were made to the AIP(Aeronautical Information Publication) effective January 2010. This included shortening the time allowed for APU use at KIX from 30 minutes to 15 minutes prior to scheduled departure, making KIX the first airport in Japan to do so.

At ITAMI and KOBE, the AIP defines the time allowed for APU use as 30 minutes prior to scheduled departure, effective from March 2018 and January 2019, respectively. Accordingly, we strive to promote the use of GPU.

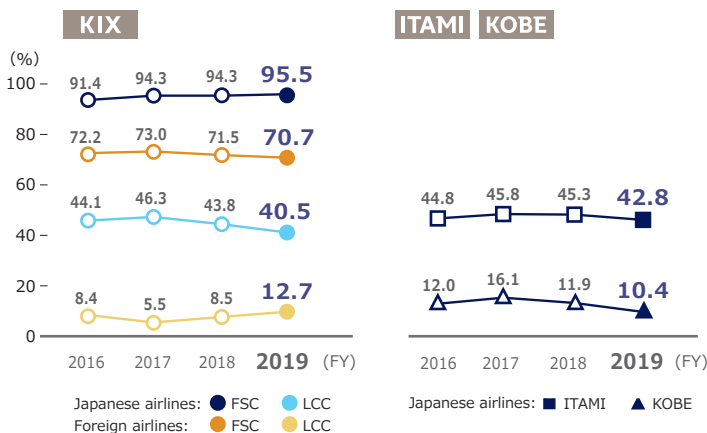
Outline of GPU



GPU utilization rate

These are **33airlines** below(in alphabetical order), which have over 95% of GPU utilization rate in 2019.

- | | |
|----------------------------|---------------------------|
| Amakusa Airlines | Japan Airlines |
| Xiamen Airlines | Japan Transocean Air |
| Air France | NokScoot |
| Aircalin | Pacific Airlines |
| AirAsia X | Vanilla Air |
| Air Hong Kong | Hawaiian Airlines |
| Emirates | Philippine Airlines |
| Garuda Indonesia | Finnair |
| Air China Cargo | FedEx Express |
| Thai Airways International | British Airways |
| China Airlines | Vietnam Airlines |
| Air China Cargo | Malaysia Airlines |
| Air China | Lufthansa Cargo AG |
| China Eastern Airlines | Lufthansa German Airlines |
| China Southern Airlines | United Airlines |
| Delta Air Lines | United Parcel Service |
| JAPAN AIR COMMUTER | |



Note: Indicates the ratio of flights supplied to the number of flights with an opportunity to be supplied. Rate of use includes mobile GPUs.

Beginning a trail for eGPU, a first in Japanese airports

In March 2020, we began a trial for the electrical Ground Power Unit (eGPU)*, an electrical mobile power source vehicle supplying electricity to aircraft in the apron of the Terminal 2 building. Introducing such a trial unit marks a first for any Japanese airport.



An electrical Ground Power Unit (eGPU)

* The rechargeable eGPU is low-noise and a people- and environment-friendly unit, with lower CO₂ emissions compared with APU and mobile diesel GPUs.

1 Response to Climate Change

Promoting the Use of Eco-Friendly Vehicles

To become a zero-emission airport, we promote the introduction of vehicles that mitigate our impact on the environment. Within the Kansai Airports Group, we are promoting the introduction of EV- and FCV-type eco-friendly vehicles in our fleet as well as establishing a vehicle sharing system that streamlines our vehicle operation.

As of March 2020, within the Kansai Airports Group fleet, 57.8% of passenger vehicles and 23.8% of GSE vehicles were classed as eco-friendly.* Alongside these measures, we will also keep calling on airport-based businesses to follow suit.

- * EV, FCV, CNG, HV, PHV, CDV, and low emissions vehicles (see note)
- Note: Low emissions vehicle refers to vehicles that satisfy the following emissions and fuel economy standards.
 - 1) Gasoline vehicles
 - Emissions: 75% less than 2005 standards
 - Fuel economy: At least 2015 standards or 25% above 2010 standards
 - 2) Diesel vehicles
 - Emissions: Post new long-term regulation
 - Fuel economy: At least 2015 standards

Installation of EV Charging Stations

Our three airports have a full complement of electric vehicle charging stations to encourage the use of eco-friendly vehicles.

In October 2019, a new rapid charger was also installed in ITAMI.



EV Charging Station

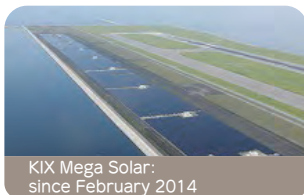
Expanding the Use of Clean Energy

We are encouraging the use of renewable energy and new forms of energy to lower our GHG emissions.

KIX

Solar Power

In February 2014, KIX Mega Solar commenced operations using solar panels installed at a site on the south side of the 2nd phase airport island and the airport's cargo terminal rooftop. The airport began operating a solar power system installed on the rooftop of the International Cargo Area at the 1st phase airport island in September 2015, later extending the scope to the roof of the Nankai Bus Terminal in the Domestic Cargo Area in March 2016. Further expanding the initiative, February 2020 saw a solar power system come into operation on the rooftop of the Terminal 2 building to promote the spread of solar power onsite. This clean energy installation now generates sufficient power to cover around 10% of total electricity use in KIX.



KIX Mega Solar: since February 2014



Rooftop of the Phase 1 International Cargo Area: since September 2015



Phase 2 Terminal rooftop: since February 2020



Small wind turbines



Roof of the Nankai Bus Terminal in the Domestic Cargo Area: since March 2016

Small Wind Turbines

The airport began operating a 5kw small wind turbine as part of a trial in September 2014 becoming the first airport in Japan to do so. Currently, the airport has three of these turbines.

The electricity generated by these small wind turbines is used to power the street lights inside KIX Sky Park.

KIX : Kansai International Airport

ITAMI : Osaka International Airport

KOBE : Kobe Airport

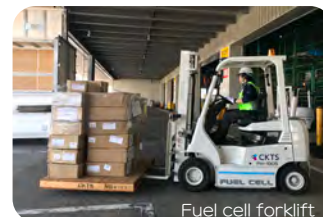
KIX ITAMI

Hydrogen Energy

The airport marked the full-scale launch of the Hydrogen Grid Project in May 2014 as a vehicle for promoting the use of hydrogen energy in collaboration with airport businesses. Since it emits only water when burned, it is considered the ultimate clean energy benchmark and is attracting considerable attention as an anti-global warming measure.

The Kansai Airports Group has introduced fuel-cell vehicles (FCVs) into its fleet. In fiscal 2019, we introduced one FCV and a total of four FCVs are now operating in KIX and ITAMI. With an additional 15 fuel-cell forklifts (FCFLs) introduced in the CKTS import cargo building, a total of 22 FCFLs are now in operation in the KIX cargo area.

Meanwhile, most forklifts, except the large type, were replaced with FCFL at the CKTS import cargo building, helping mitigate the environmental impact and greatly improving the working environment.



Fuel cell forklift

Fuel Cell Vehicles

A hydrogen station is able to service fuel-cell vehicles (FCV). In future, it will also accommodate fuel-cell buses expected to operate on limousine bus routes from ITAMI and as shuttle buses operating within KIX.

- May 2007: Opens hydrogen station and introduces vehicles with a hydrogen engine into its fleet
- October 2012 to March 2014: Conducts real-life testing using an FC bus as a shuttle bus from the Aeroplaza to KIX Terminal 2
- April 2015: Introduces the Toyota Mirai, the world's first mass produced hydrogen fuel cell vehicle, into its vehicle fleet
- January 2016: Iwatani Hydrogen Station KIX, the first commercial hydrogen station to be introduced in a Japanese airport, commences operations in the 2nd phase KIX airport island
- December 2016: Introduces the Honda Clarity Fuel Cell in KIX
- March 2019: Introduces the first FCV in ITAMI
- April 2019: The ITAMI Iwatani Hydrogen Station is installed and goes into operation
- September 2019: The third FCV introduced in KIX

Fuel Cell Forklifts

In April 2017, the airport completed work on Japan's first hydrogen infrastructure for industrial vehicles at the International Cargo Area that includes liquid hydrogen tanks and high pressure hydrogen supply lines. The largest trial operation in Japan using hydrogen February infrastructure and fuel cell forklifts is now taking place. Introducing fuel cell forklifts to handle air cargo 24 hours a day can help to lower CO₂ emissions compared to forklifts powered by fossil fuel or electricity. In addition, fuel cell forklifts can be refueled in around three minutes, meaning they can be operated continuously without the hassle of charging or replacing battery packs. As a result, they can offer significant improvements in both work efficiency and work environment.

- February 2015: Begins trial operation of fuel cell forklifts at the International Cargo Area as part of the Fuel Cell Forklift Practical Application and Development / Testing of Optimal Hydrogen Infrastructure Improvements Project, selected by the Ministry of the Environment, becoming the first airport in Asia to do so
- November 2016: Introduces first mass produced fuel cell forklift
- April 2017: Commences operations of hydrogen station for industrial vehicles
- February 2018: With additional two FCFLs, three FCFLs in total
- February 2019: With additional four FCFLs, seven FCFLs in total
- February 2020: With additional 15 FCFLs. 22 FCFLs in total

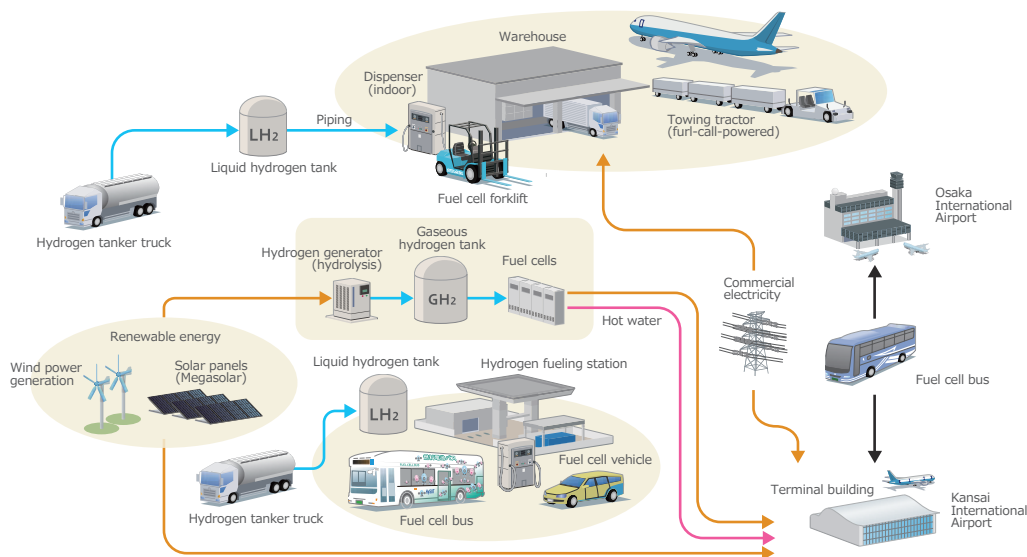
KIX Hydrogen Grid(Concept)

FC = Fuel Cell

Heat grid

Electricity grid

H₂



Iwatani Hydrogen Station Kansai International Airport



Iwatani Hydrogen Station ITAMI



Hydrogen station for industrial vehicles (KIX international cargo area)

2

Resource Usage



Reduction of Clean Water Consumption



We have initiated various efforts to reduce clean water consumption at three airports.

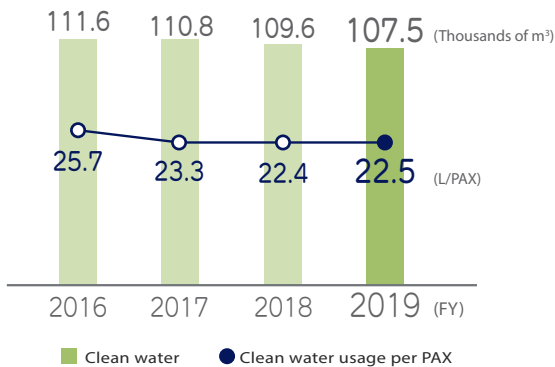
In fiscal 2019, the total consumption figures for these three airports were 757,000, 286,000 and 33,000 m³ respectively, marking a total reduction in consumption per passenger of **12.5%** compared to the fiscal 2016 result.

Clean water usage

A total emissions from all the three airports

Clean water

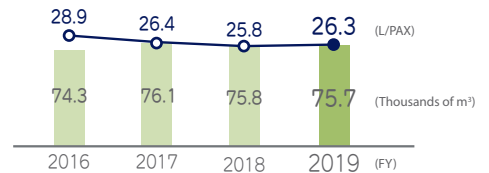
1,075,000 m³



KIX

Clean water

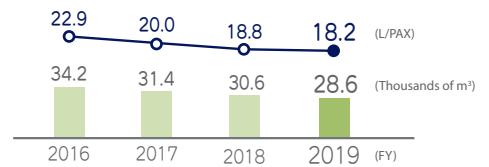
757,000 m³



ITAMI

Clean water

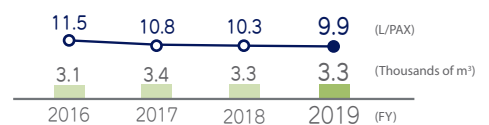
286,000 m³



KOBE

Clean water

33,000 m³

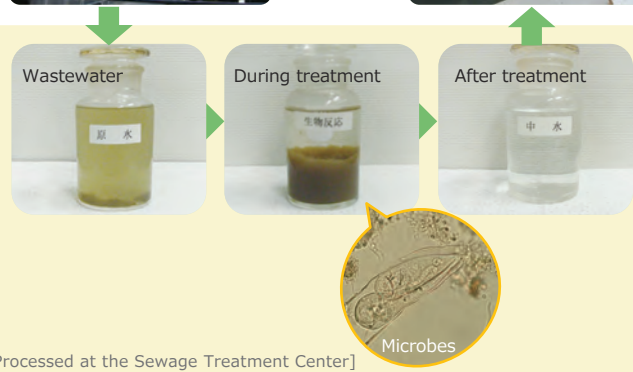


Utilize rainwater/reclaimed water

KIX

Water resources are effectively utilized by reclaiming and reusing water treated at the Sewage Treatment Center on the airport island within public restrooms.

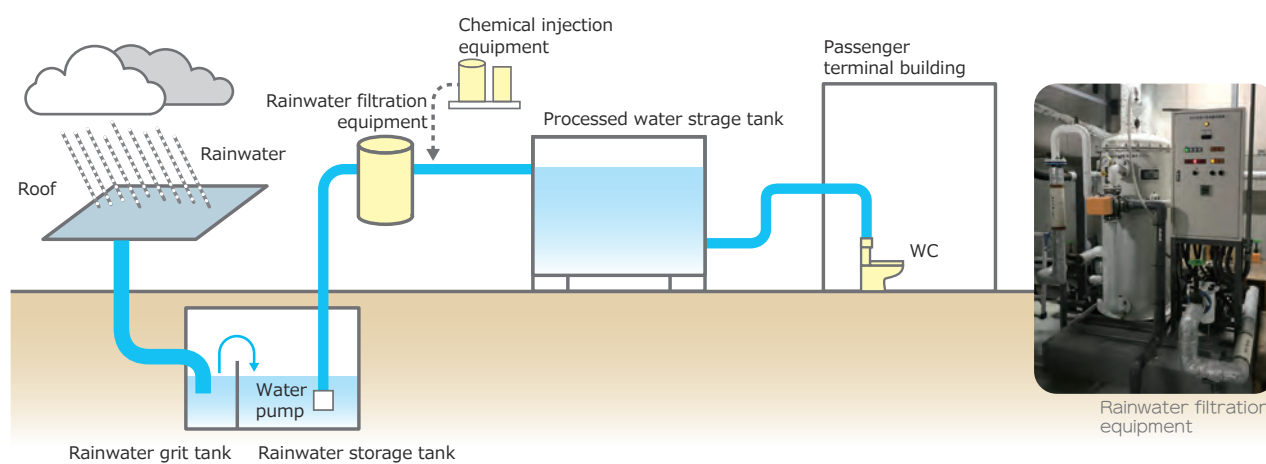
* Reclaimed water is also referred to as recycled water.



KOBE

KOBE utilizes resources effectively by using filtered rainwater and water that has been processed at a sewage treatment plant in restrooms and to water plants.

Rainwater utilization



Water Conservation Initiatives

Kansai Airports is carrying out a number of initiatives to conserve water, including installing low-flow toilets when remodeling terminal buildings. Businesses operating at the airport are also reducing their water consumption by installing water-saving equipment and sharing good practices of other initiatives.

Initiatives by Businesses Operating at Airport

The Nankai Bus Co., Ltd. has installed water-saving bus washing equipment at its facilities on the airport island. Also, the company has installed wastewater filtering and recirculation system to reuse wastewater, which is reducing the consumption of clean water.



Hotel Nikko Kansai Airport has initiated various water-saving efforts such as introducing water-saving shower heads and automatic water faucets. In introducing water-conserving devices, the work efficiency at their location was verified and the installation result checked by measuring the water flow prior to the installation to confirm that clean water consumption has been reduced.



2 Resource Usage

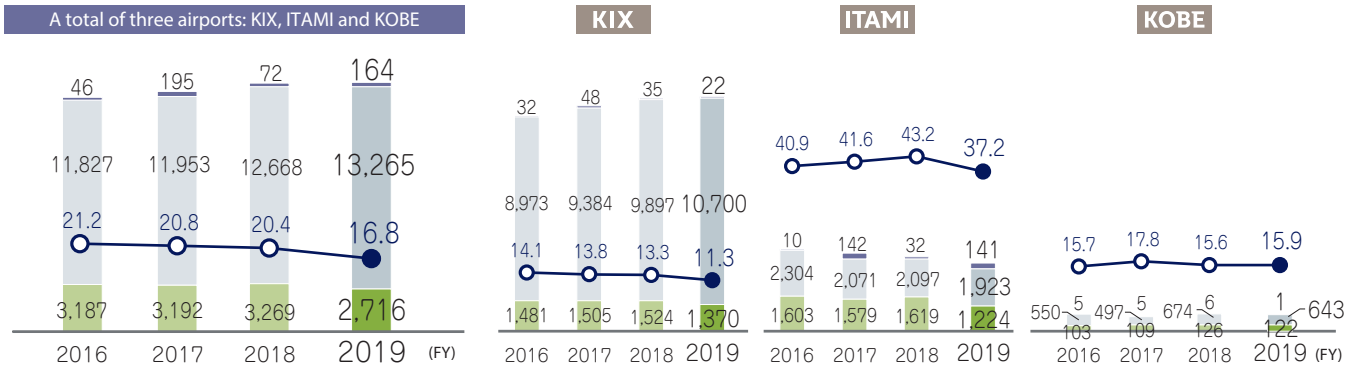


Waste Recycling



Waste Emissions and Recycling Rate

■ Recyclable waste(t) ■ Burnable waste(t) ■ Non-burnable waste(t) ● Recycling rate(%)



Reducing Waste and Recycling

To promote efforts to reduce and recycle general waste, we strive to reduce waste and boost our recycling rate by carefully sorting and separating waste and collecting the portion that is recyclable.

KIX

Annual amount of general waste generated **12,092 t** Recycling rate for general waste **11.3 %**

To incinerate general waste at the airport island, KIX has established waste separation rules in its "Regulations Governing the Use of Waste Processing Facilities" and encourages all businesses operating at the airport to sort their waste. Alongside the increased volume of airline catering in KIX, the amount of waste per passenger has declined, despite a somewhat higher amount of waste generated at the airport in fiscal 2019 with **11.3%** of the airport's **recycling rate** for general waste. As for industrial waste, we have been encouraging businesses operating at the airport to manage waste properly, avoid creating waste, and recycle, in accordance with the relevant laws and ordinances.



Waste Reduction Initiatives by Businesses Operating on Airport Island

About 15% of all waste generated at KIX comes from aircraft and we acknowledge the need to , recognizing the need to reduce such waste by sorting and compacting it the same.

The Airport Environmental Promotion Council is working to raise awareness of waste reduction as well as planning to recommend initiatives to the Airline Operators Committee (AOC) for to help airlines to mitigate their environmental impacts.

ITAMI

Annual amount of general waste generated **3,167 t** Recycling rate for general waste **37.2 %**

The amount of waste generated, both in the airport and per passenger, is decreasing in ITAMI. The airport's **recycling rate** for general waste was **37.2%** thanks to a reduction in the volume of recyclable waste. Toyonaka City has accredited shops promoting eco-friendly activities as Toyonaka Eco Shops. To facilitate certification on the part of airport restaurants and retail stores, we cooperate with Toyonaka City in encouraging them to promote eco-friendly activities. Currently, two airport shops are certified and we will strive to boost the number of certified shops. Through its Airport Environmental Promotion Council, ITAMI is also sharing best practices and working to raise awareness of waste.

KOBE

Annual amount of general waste generated **766 t** Recycling rate for general waste **15.9 %**

The **recycling rate** for general waste in KOBE was **15.9%**. KOBE is also sharing best practices and working to raise awareness of waste through its Airport Environmental Promotion Council.

KIX : Kansai International Airport **ITAMI** : Osaka International Airport **KOBE** : Kobe Airport

Toward Plastic Free Airports

Kansai Airports Group proactively promotes plastic-smart activities throughout all three of its airports, aiming to become a Plastic-Free, eco-friendly and smart airport. We also reiterate the purpose of the Osaka Declaration toward Zero Plastic Waste and the Plastic-Smart Campaign and will promote the 3Rs (Reduce, Reuse and Recycle). We will also push forward our plastic waste-reducing activities within all three airports via the Airport Environmental Promotion Council, which comprises representatives of airport businesses.

Major initiatives



Reusing umbrellas

We prepare a space for reusing umbrellas that customers visiting the airport have discarded. Passengers can reuse collected umbrellas freely when departing from the airport, if need be.

* As measures to prevent COVID-19 infection, the space is temporary unavailable as of November 2020.



From plastic bags to paper bags

Plastic shopping bags used at shops directly operated by the Kansai Airport Group have been replaced with (FSC® certified) paper bags. For watery goods requiring plastic bags, we introduce plastic bags including 30% biological materials used to reduce the amount of single-use plastic.



Reusing suitcases

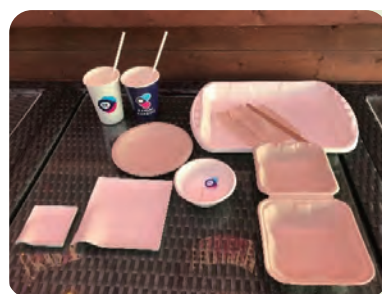
We receive disused suitcases from our passengers and reuse them after checking.



Plastic reduction in the lounge

Introducing paper/wood straws and cups used at the lounge

We have striven to reduce single-use plastics by using paper cups and straws and wooden cocktail stirrers at the lounge directly operated by the Kansai Airport Group.



Replacing plastic containers used at events with those made from paper/wood

During the Friendship Dragon Boat Festival held in KIX, we used paper straws, paper cups and wooden spoons, rather than plastic implements, to ensure the event was organized in an eco-friendly manner.



Original eco-bags and badges

We produce original eco-bags and badges used to boost environmental awareness among Kansai Airports Group employees as well as reducing the use of plastic bags at the airport.



Wooden cup holder

We serve drinks with paper cups to visitors or at meetings, also using original wooden cup holders we produced.



Encouraging the use of personal bottles

Water supply machines in airports are registered with "mymizu", a groundbreaking Japanese application allowing people to easily search for places where water is supplied free of charge. By using this, people from all over the world can feel free to fill up their own personal bottles with water, without having to buy any more plastic bottled beverages.



"No PET bottle day" Campaign movie

Using one's own bottle

This activity is also promoted by the Environmental Ambassador, who is selected from KAP Group employees. Every Friday, we carry out the "No PET bottle day" campaign to stop drinking PET bottle.

Starting "No PET Bottle Day"

"No PET Bottles Every Friday"
We started the "No PET Bottle Day" campaign, by which we stop using plastic bottles in the office of Kansai Airports Group every Friday. The Environment Ambassador, comprising Kansai Airports Group employees, promotes this campaign and encourages the use of personal bottles in the office.

3

Environmental Harmony



Monitor the Local Environment



KIX

Measuring and monitoring aircraft noise

Environmental assessments based on flight paths and flight procedures established to minimize aircraft noise found that only areas over water were affected by noise levels exceeding environmental quality standards.

KIX conducts both continuous and periodic monitoring of aircraft noise, and publishes the findings. For fiscal 2019, as in the prior year, noise levels complied with environmental standards (maximum Lden 57 dB) at all land-based continuous monitoring stations and periodic monitoring sites.



KIX was built on an artificial island in Senshu Bay 5km from the coast to enable 24-hour-a-day operations as an airport that is pollution free and co-exists with surrounding communities. Since the new overland flight path was established in December 1998, the airport measures aircraft flight path and altitude as part of its noise monitoring efforts.

Currently, KIX examines flight path and altitude data for eight observational cross-sections and publishes the results.

Reducing aircraft noise

To reduce aircraft noise, we encourage airlines to switch to quieter aircraft and closely monitor established flight paths and altitude. We ask the KIX Airline Operators Committee to take steps to ensure compliance with flight paths and to find ways to reduce aircraft noise.

• Noise abatement flight procedures

- Aircraft are expected to fly over land only after gaining sufficient altitude over Osaka Bay after takeoff from the runway.
- Aircraft arriving or departing late at night or in early morning are restricted to flight paths in airspace over Akashi Strait and Kitan Strait.
- Quieter flight procedures*¹ and continuous descent flight procedures*² have been adopted to minimize noise from aircraft approaching the airport from Kitan Strait.

*¹ Quieter flight procedures
Noise-reducing flight procedures for aircraft, including delayed use of flaps and delayed deployment of landing gear on approach to the runway.

*² Continuous descent operations (CDO)
A method of aircraft flight during descent, maintaining the minimum engine thrust for optimal descent (not horizontal flight) until the aircraft reaches the starting point for instrument landing. KIX uses CDO during certain hours. Benefits of the method include reduced fuel consumption and reduced CO₂ emissions.

Complaints, inquiries, and responses

The annual number of complaints and inquiries peaked at 263 in fiscal 1998 when new flight paths were introduced in airspace over the Osaka Prefecture region, and since then have been on a declining trend. In fiscal 2019, the airport received a total of 19 complaints and inquiries.

The majority of complaints and inquiries were about individual aircraft being too loud or flying too low, or queries about whether aircraft were staying on their regular flight paths. In response, we study these issues in cooperation with the Civil Aviation Bureau (under the Japanese Ministry of Land, Infrastructure, Transport and Tourism) and publish our findings.

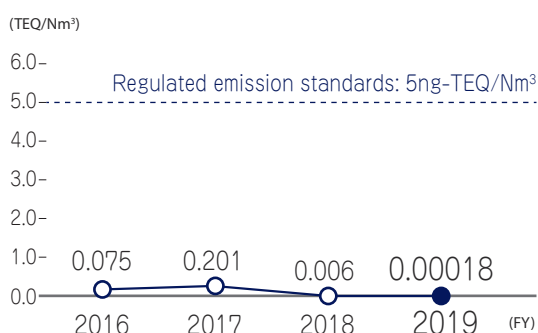


KIX : Kansai International Airport ITAMI : Osaka International Airport KOBE : Kobe Airport

KIX

Measures to reduce emissions from Incineration Plant (Clean Center)

Emission gas measurements (dioxins)



We separate general waste from the airport island into combustibles and recyclables, with combustible waste incinerated at the airport's Incineration Plant (Clean Center)*.

Emissions from incineration go through a filter-type precipitator. As a result, air pollutant levels such as nitrogen oxides are fully below regulated emission standards. Dioxin emissions are also well below regulated standards. Waste heat from incineration is being used as a source of heat for the incinerator, and for hot water and air conditioning at the Incineration Plant (Clean Center).

* Incineration Plant (Clean Center)



Incineration Plant (Clean Center)



Advanced treatment of general wastewater

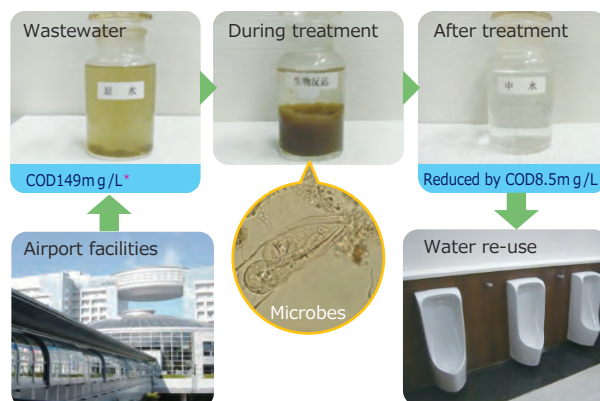
This plant features a fluidized bed furnace. It also uses a filter-type precipitator that utilizes catalysts to remove nitrogen oxides, as well as humidity-regulated fly ash stabilizing equipment. The plant was designed with careful consideration of the local environment. Emissions at about 850 °C from the incinerator's furnace are directed into a cooling chamber, through heat exchangers designed with heaters to prevent white smoke, and then to a reactor. Dust and hazardous gases are then removed by a filter-type precipitator, and exhaust gases are released into the atmosphere via an induced-draft fan and an exhaust stack. We operate with strict voluntary standards at the stack outlets for dust, sulfur oxides, hydrogen chlorides, and nitrogen oxides, with maximums of 0.02 g/Nm³, 20 ppm, 30 ppm and 70 ppm, respectively.

Advanced treatment of general wastewater

Processing capacity in fiscal 2019 (daily average)

General wastewater 2,079 m³ Special wastewater 240 m³

Gray water generated from each facility undergoes sophisticated treatment at the airport's Wastewater treatment plant (Sewage Treatment Center)*. Water quality is carefully managed during each treatment process and water is discharged only after fully meeting regulated emission standards. We also strive to maximize the effective use of water resources and to consider the local environment, such as by using some of the advanced-treatment water for flush toilets and the watering of plants.



* Monthly average in August 2019

* Wastewater treatment plant (Sewage Treatment Center)



Sewage Treatment Center



Sand filtration

Wastewater from the passenger terminal buildings and other airport facilities is considered to be general wastewater, and undergoes advanced treatment such as activated-sludge circulation nitrification/denitrification, chemical clarification, and rapid sand filtration. Special wastewater from industrial sources first undergoes onsite pre-processing to remove hazardous substances, and then undergoes advanced treatment at the Sewage Treatment Center, through chemical coagulation/sedimentation and rapid sand filtration processes, etc. After advanced treatment, the treated water some of the treated water is reused as reclaimed water for airport flush toilets.

3 Environmental Harmony

ITAMI

Measuring and monitoring of aircraft noise

To monitor aircraft noise, ITAMI conducts continuous monitoring of noise levels at 10 locations in the airport region, and releases the results publicly.

The noise level exceeds the legal limit (Lden 57) in certain communities around the airport. To reduce the impacts of aircraft noise on these communities, the airport is working on measures at noise sources, improving airport layout, and measures in the vicinity of the airport.



Reducing aircraft noise

Measures at noise sources

- Restricting flight movements and hours of operation

Considering the impacts of noise on local communities, the airport has established a limit on aircraft movements for regularly scheduled flights of 370 movements per day (200 for jets and 170 for quieter aircraft).

In addition, airport operations are restricted to the 14 hours between 7:00 am and 9:00 pm.

- Encouraging the use of quieter aircraft

ITAMI promotes the introduction of low-noise aircraft through a unique landing fee system, with discounts for low-noise aircraft and surcharges for high-noise aircraft, based on actual noise levels measured around the airport.

- Noise abatement flight procedures

The airport employs the following noise abatement flight procedures in order to reduce the impacts of aircraft noise.

Rapid ascent (take-offs/departures)

To reduce aircraft noise on communities next to the airport, the airport has established flight procedures that require departing aircraft to rapidly ascend to 3,000 feet (about 1,000 meters).

Delayed-flap approach and landings with low flap angle (landings)

The airport has established flight procedures that reduce engine noise and wind noise due to air resistance by controlling the necessary engine thrust and air resistance by having aircraft on approach delay the lowering of flaps and gear down use the lowest flap angle possible when landing.

Preferential flight paths

To minimize the range of aircraft noise impacts, aircraft taking off to the north are required to fly inside the area of (1) Chugoku Expressway Connector to the north, (2) Zuga Pond and Koya Pond to the south, and (3) Muko River to the west (see figure below).



* The above map is a conceptual diagram of flight paths. Not all aircraft fly along this line.



KIX : Kansai International Airport ITAMI : Osaka International Airport KOBE : Kobe Airport

ITAMI

Reducing aircraft noise from within the airport

Curtailing the use of reverse thrust at night

Jet aircraft landing on runway B between 7:00 pm and 9:00 pm are required to minimize the use of reverse thrust within the safe operation parameters of the aircraft, in order to reduce aircraft noise at night for communities near the runway.

* Reverse thrust is when jet engine thrust is diverted to decelerate an aircraft.

Noise reduction measures during aircraft engine testing

The airport has erected a large noise barrier at the engine testing site in order to reduce noise during aircraft engine testing.



Promoting use of GPUs and limiting use of APUs

In order to reduce noise impacts from auxiliary power units (APUs) while aircraft are parked, we are promoting the use of ground power units (GPUs).

Improving airport design

Noise barriers, noise protection embankments, and noise protection forests have been set up around the airport to reduce the impacts of noise from aircraft takeoffs and landings and use of the taxiways.



Noise barrier



Noise protection embankments

Measures in the vicinity of the airport

ITAMI carries out the following measures in the vicinity of the airport based on the extent of noise impacts on local communities.

General: Lden 57 or higher

- Financial assistance for soundproofing of schools, hospitals, common-use facilities, etc.
- Financial assistance for park improvements
- Financial assistance to make common-use and other facilities barrier-free
- Financial assistance for local events
- Financial assistance to purchase materials for schools, common-use facilities.
- Mobile health checkups

Class 1 Areas Lden 62 or higher

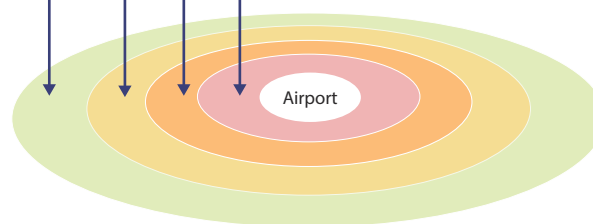
- Financial assistance for soundproofing of housing

Class 2 Areas Lden 73 or higher

- Relocation compensation program

Class 3 Areas Lden 76 or higher

- Creation/improvement of green buffer zones, etc



Relocation compensation programs

In areas around the airport significantly affected by aircraft noise, the airport provides relocation compensation or purchases the land of buildings located in designated areas.

3 Environmental Harmony

ITAMI

● Utilization of land acquired by relocation compensation program

The airport clears and plants trees on land purchased through the relocation compensation program located in Class 3 areas around the airport. As a result, a greenbelt (see photo below) that serves as a buffer zone between the airport and surrounding communities is taking shape. With the progress of the relocation compensation program in Class 2 and 3 areas, there has been an increase in vacant sites (after residents have relocated) in the area. Responding to community concerns about losing local cohesiveness, the airport has been working to develop green space integrally in a planned way, by having Class 2 and 3 areas and surrounding areas designated as green space, as defined under the nation's City Planning Act. Examples include the Itami Sky Park on the Hyogo Prefecture side and Fureai Ryokuchi (public green space) on the Osaka Prefecture side of the airport.

Also, the airport developed Air Front Oasis Shimogawara using land acquired in the Class 2 area as part of the relocation compensation program. This area aims to familiarize local residents with the airport through greenery and it also serves to improve the disaster prevention functions of the surrounding communities. As a result, the area improves the living environment of people in the surrounding communities along with disaster preparedness.

Green buffer zones

Green buffer zones created on sites after residents have relocated out of Class 3 areas near airport



Fureai Ryokuchi (Friendship Green Square)

This area was developed as a green space for local residents and, based on their feedback, it features a multipurpose open space, tennis court, heated swimming pool, grass lawn, play equipment, and biotope, among other amenities.



Itami Sky Park

This green space was developed as a place of relaxation for the local community and is also designed to serve as a refuge area in time of disaster.



Air Front Oasis Shimogawara and Shimogawara Green Area

Air Front Oasis Shimogawara is well-located with a view of ITAMI. Its main feature is an observation deck with a commanding view of the daily activities at the airport, but it also includes a monument to the wind and other items with an aeronautical motif. Together with the Shimogawara Green Area provided by Itami City, it is a place for locals to relax and enjoy the play and athletic equipment, and rest area.





KIX : Kansai International Airport **ITAMI** : Osaka International Airport **KOBE** : Kobe Airport

ITAMI

• Soundproofing for communities surrounding the airport

In accordance with laws, ITAMI subsidizes part of the costs for soundproofing work of homes and educational facilities in communities that are significantly impacted by aircraft noise.

Category		Outline
Soundproofing of public facilities	Soundproofing of schools, etc.	If the aircraft noise exceeds intensity and frequency limits specified by legislation* related to aircraft noise prevention, a subsidy is provided to local governments and other bodies to defray part or the entire cost for work (soundproofing, installation of upgraded air conditioning) to prevent or reduce aircraft noise in facilities including schools, child care centers, and hospitals.
	Improvement of shared or common-use facilities	Based on legislation, a subsidy is provided to local governments where noise reaches Lden 57, to defray the partial cost for improvements of shared or common-use facilities used by local residents for learning and other purposes. Eligible work includes new construction, renovation, installation of upgraded air conditioning.
Soundproofing of housing	Soundproofing of housing	Based on legislation, a subsidy is provided to defray the partial cost for work to prevent or mitigate aircraft noise (soundproofing, installation of upgraded air conditioning) on housing that was located in Class 1 areas when the national government made the designation.

* Act on Prevention of Damage caused by Aircraft Noise in Areas around Public

• Other programs

In addition to legally mandated programs, ITAMI provides mobile health checkups and subsidizes part of the costs of community events and park development by local governments in communities that are significantly impacted by aircraft noise.

Category		Outline
Others	Mobile health checkups	To promote the good health of residents living near the airport, mobile health checkups are offered, particularly for people who live in areas with greater amounts of aircraft noise.
	Environmental improvements in surrounding areas	In order to improve the living environment around the airport, this program offers subsidies for efforts of local governments, to improve noise-measuring equipment, develop parks, make public facilities more accessible, support equipment purchases by schools and public facilities, revitalize the area, and other activities.

Complaints, inquiries, and responses

The airport responds to complaints and inquiries appropriately, sharing this information between relevant parties in a timely manner.

Complaints and inquiries likely increase at ITAMI when aircraft take off and land in a direction different to the norm (taking off toward the south and landing on the north side). The airport received 536 complaints/inquiries about aircraft noise and flight paths in fiscal 2019.

KOBE

Measuring and monitoring aircraft noise

KOBE monitors aircraft noise at four and six locations respectively on an ongoing and periodic basis and publishes the findings. For fiscal 2018, as in the prior year, noise levels were confirmed as complying with environmental standards (maximum Lden 57 dB) at all land-based continuous and periodic monitoring sites.



Reducing aircraft noise

Measures at noise sources

• Restricting flight movements and hours of operation

Although the airport established a daily limit on aircraft movements for regularly scheduled flights of 60 movements considering the impacts of noise on local communities, the limit was extended to 80 movements after confirming the environmental impact, following discussions at the Kansai Airports Round Table Meeting held in May 2019.

Airport operations were also restricted to a 15-hour window between 7:00 am and 10:00 pm while operations were extended an hour from summer 2020 to include 16-hour operation until 11:00 pm.

Quieter flight procedures

At KOBE, aircraft take off and land while using a flight path over the Akashi Strait to reduce the impact of aircraft noise.

Complaints, inquiries and responses

The airport responds to complaints and inquiries appropriately and shares information between relevant parties where appropriate.

KOBE received 22 complaints and inquiries about aircraft noise and flight paths in fiscal 2019.

3 Environmental Harmony



Preserve Biodiversity

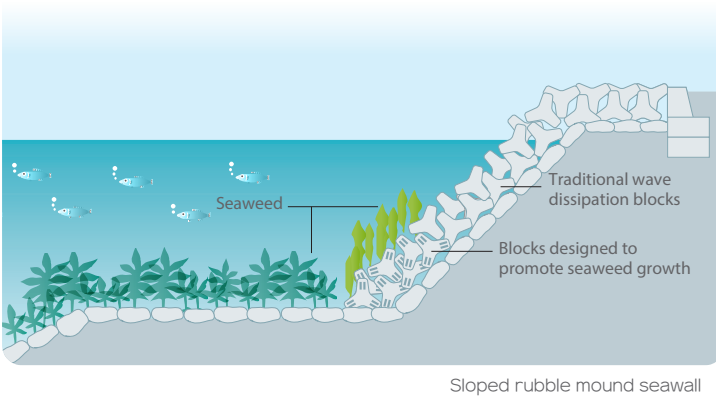
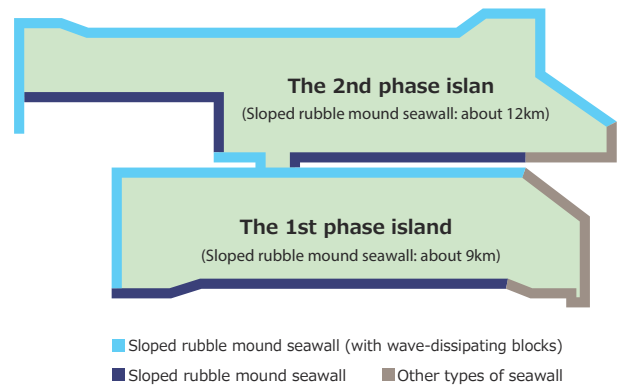


Establishing Seaweed Beds

KIX

At Kansai International Airport, we take an active approach to establishing vibrant seaweed beds surrounding the airport island to provide additional habitat for marine life in Osaka Bay. At the time of the airport island construction, sloping rock-fill seawalls were primarily used and efforts were put into developing the reclaimed shallow areas. As a result, there is rich growth of seaweed around the airport island which serves as habitat for various species of fish and shellfish. At present, the airport aims to maintain as well as expand the growth of high-quality seaweed beds by conducting various surveys and experiments including monitoring their condition.

In the monitoring survey conducted in March 2019, we observed **59 hectares of seaweed bed areas** which is equivalent to about 20% of seaweed bed areas in the Osaka Bay. To conserve preferable seaweed beds, we consider it important to consider/carry out measures taken in accordance with changes in the surrounding environment and circumstances, as well as regular monitoring.



Juvenile rockfish gathered in the Garamo field

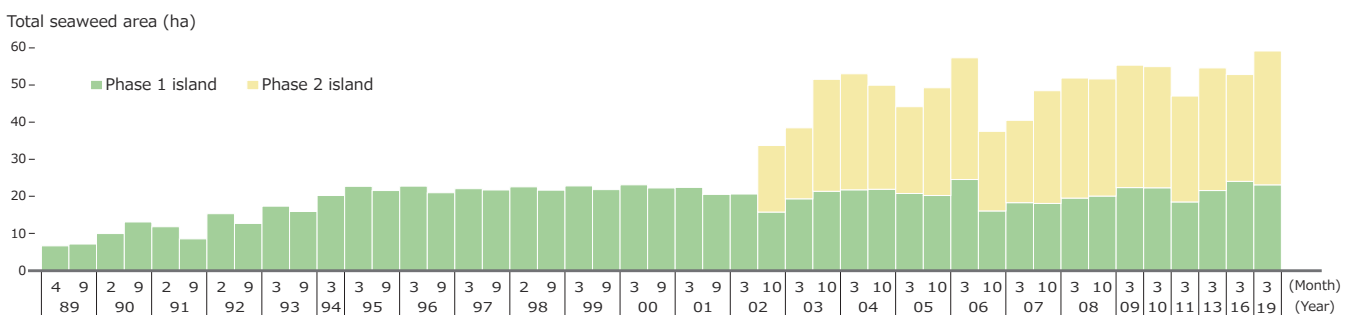


Sargassum filicinum etc



Eisenia bicyclis

Extent of seaweed bed



Note: a temporary decrease in 2011 attributes to the fact that the water areas between the airport islands were under construction which did not allow us to conduct the survey.

KIX : Kansai International Airport

ITAMI : Osaka International Airport

KOBE : Kobe Airport

KIX

Conservation of seaweed beds and boosting disaster-prevention functions

Between September and October 2019, we collected donor algae of *Ecklonia cava* (a brown seaweed native to Japan) inhabiting seawalls on the south and east sides of the 1st phase airport island and transplanted them to the 2nd phase airport island. This is part of a project for upcoming years to recover rich seaweed beds on the wave dissipation blocks installed in the 1st phase airport island as early as possible as part of measures to improve disaster-prevention functions. We have commenced the project taking such measures into consideration. We use all-natural materials for transplanting the donor algae to promote an eco-friendly project.



Island Greening and Scenic Improvement Projects

KIX

Aiming to preserve landscapes and create spaces for rest and relaxation on the airport island, we are working to improve the flower spots.

Moreover, on the Phase 2 airport island, we have created areas for plants such as seashore pink, coastal moneywort, shore bindweed and beach vitex to restore and protect the shoreline vegetation of the Osaka Bay area. The airport has also created a large-scale green space over approximately four hectares called KIX Sky Park that is open to the public to allow visitors enjoy watching aircraft taxi, take off and land.



KIX Sky Park

ITAMI

At ITAMI, we are committed to improving landscaping and creating a comfortable environment through rooftop greening along with a rooftop observation deck and planters within the passenger terminal building. The rooftop observation deck is a wide-open wooden structure, 400 meters long with total floor space of 8,200 square meters, which allows visitors to watch aircraft up close in an open space.



Rooftop greenery



Rooftop observation deck

KOBE

We are also working to improve landscaping and the internal environment at KOBE through wide-ranging seasonal planters set up inside the passenger terminal building.

From the rooftop deck, visitors can enjoy urban panoramas on the north side as well as aircraft operating up close. A visual feast for visitors, with views and greening alike.



4

Environmental Management



Utilize Evaluation Programs



Airport Carbon Accreditation

In December 2016, our efforts to reduce CO₂ emissions were recognized by the Airports Council International (ACI) when KIX and ITAMI received Airport Carbon Accreditation (ACA) Level 2*. In December 2018, the ACA of KIX and ITAMI were upgraded to Level 3 while KOBE also newly received ACA Level 2.

In December 2019, each airport updated their certification at an equivalent level.

We continue to promote efforts to reduce CO₂ emissions in collaboration with airport businesses.

* Airport Carbon Accreditation is an international evaluation and accreditation program/system to manage and reduce CO₂ emissions from airports. It is the only environmental accreditation program designed specifically for airports. ACA has four levels for carbon management: Mapping (Level 1), Reduction (Level 2), Optimisation (Level 3), and Neutrality (Level 3+).



KIX Level 3



ITAMI Level 3



KOBE Level 2

Outline of each level



Level 1 (Mapping)

Publicly make an environmental declaration for carbon emissions reduction and calculate the amount of CO₂ emitted by the airport company



Level 2 (Reduction)

Define the CO₂ reduction target and demonstrate the actual reduction achieved by implementing the plan developed



Level 3 (Optimisation)

Widen the scope of carbon footprint to include other airport-related operators and develop a plan to reduce CO₂ emissions of the entire airport



Level 3+ (Neutrality)

Offset CO₂ emissions over which the airport company has control in order to achieve carbon neutrality



ACA Accreditation Ceremony

KIX : Kansai International Airport

ITAMI : Osaka International Airport

KOBE : Kobe Airport



Cooperation and Education



Dissemination of Environmental Information

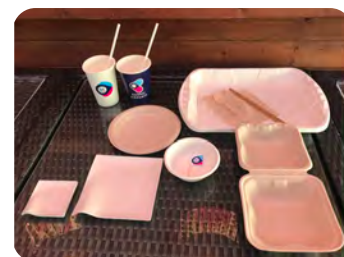
We established a webpage containing environmental information on our website that includes details of environmental monitoring, reports and events. ITAMI's website provides information about its environmental programs, including noise abatement subsidies offered to businesses and residents near the airport.

KIX has installed monitors in the terminal buildings and Observation Hall to display the status of electricity generation (KIX Megasolar) and provided an environment area in the Observation Hall to broadly share our environmental initiatives.



Awareness raising efforts in an airport event

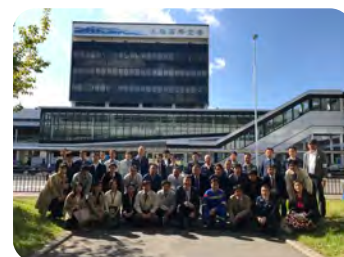
In September 2019, we organized the Friendship Dragon Boat Festival, an annual race event in the water area between the two airport islands of KIX and using paper straws and cups and wooden spoons on this occasion rather than plastic with the environment in mind.



Cooperation with businesses at the airport

Airport Council initiatives

We have set up councils comprising representatives from airport-related businesses at each of our airports to share best business practices and engage in various efforts together with these businesses as part of efforts to mitigate the environmental impacts. These efforts include energy conservation, reducing CO₂ emissions, reducing and recycling waste and encouraging the use of eco-friendly vehicles. We also conduct a clean-up campaign annually to make our airports cleaner for passengers.



Participation in Airports Council International (ACI)

Kansai Airports is a member of Airports Council International, an organization representing 646 organizations that manage 1,960 airports in 176 countries and regions worldwide (as of January 2019) and a member of the ACI Asia-Pacific Regional Environment Committee.

This committee met for the 11th time in April 2019 and the attendees actively discussed airport environmental initiatives.



4 Environmental Management

KIX : Kansai International Airport ITAMI : Osaka International Airport KOBE : Kobe Airport

In-house environmental education

Kansai Airports Group has introduced Environment Ambassador Initiatives to raise the environmental awareness of all employees, Environmental Ambassadors are members assigned by the individual sections of each group company who oversee the task of sharing the knowledge and insights they have obtained through initiatives with all other employees.

The Environmental Ambassadors activity includes participating in and promoting environment-related events such as integrating environment-related activities within each section of each company.

Moreover, four Environmental Ambassadors meetings take place annually, aiming to educate the Ambassadors on environment-related matters and encourage them to share information. The meeting centers on a group discussion, which involves each Ambassador engaging in a heated discussion with the idea they bring to the table.



● Major FY 2019 initiatives

Our major activities in fiscal 2019 include promoting “Idea vs. Plastics”, a competition of ideas to reduce the use of plastics in which airports worldwide participate, carrying out “NO! PET Bottle day” campaign to encourage the use of personal over plastic bottles every Friday and creating an educational movie on plastic reduction for internal use.



Helping Achieve Sustainable Society

To develop as an airport holistically alongside local communities and society and also minimizing environmental impacts, we established the One Eco-Airport Plan, under which the three airports collectively address the task of reducing their environmental impacts.

Although such integrated efforts will further boost our activities, our initiatives as Kansai Airports Group to build a sustainable society have become more important, given the growing impact on the environment and international community we expect. Moreover, actions to achieve the Sustainable Development Goals (SDGs) to resolve environmental, economic and social issues are already underway worldwide.

With this in mind, Kansai Airports Group will strive to help achieve a sound global environment and sustainable society through our business operations.



Sustainable Development Goals (SDGs)

Global goals are set in the 2030 Agenda for Sustainable Development adopted at the United Nations Summit in 2015 to realize a sustainable future. SDGs comprise 17 goals and 169 targets.

Initiatives in the One Eco-Airport Plan and SDGs

Four pillars of One Eco-Airport Plan	Eight items in Environmental Goals	Major initiatives	Corresponding SDGs * The Goal descriptions are summarized for the use of this report.
1 Response to Climate Change	Promote Energy Conservation 	<ul style="list-style-type: none"> Promote energy-saving operations Introduce high-efficiency equipment along with thermal insulation and measures against sunlight in buildings Introduce energy management system 	
	Reducing GHG Emissions 	<ul style="list-style-type: none"> Promote carbon-free operations Encourage GPU utilization 	
2 Resource Usage	Reduction of Clean Water Consumption 	<ul style="list-style-type: none"> Utilize rainwater/reclaimed water Promote water-saving operations 	
	Waste Recycling 	<ul style="list-style-type: none"> Promote thorough sorted collection and recycling of waste Promote green procurement Minimize and recycle construction waste 	
3 Environmental Hoarmony	Monitor the Local Environment 	<ul style="list-style-type: none"> Monitor aircraft noise Ensure air and water quality 	
	Preserve Biodiversity 	<ul style="list-style-type: none"> Protect wildlife habitat 	
4 Environmental Management	Utilize Evaluation Programs 	<ul style="list-style-type: none"> Utilize national and local government assessment systems Utilize environmental certification systems 	
	Cooperation and Education 	<ul style="list-style-type: none"> Disseminate environmental information and provide environmental education Alliances with airport-related businesses Alliances with airports throughout Japan and overseas 	

Environmental Chronology

KIX : Kansai International Airport (1/3)

Year	Mo.	Event
1968	4	Ministry of Transport (MOT) launches basic study for airport siting
1971	10	Minister of Transport asks Council for Civil Aviation for advice on scale/siting for Kansai International Airport
	11	MOT conducts trial flights to study noise levels at 3 candidate sites (Senshu, Kobe, Akashi)
1972	8	Council for Civil Aviation (Kansai International Airport committee) conducts hearings with local communities
1973	8	MOT surveys 3 candidate sites commercial aircraft air pollution
1974	8	Council for Civil Aviation reports initial findings to Minister of Transport: Optimal airport location is off coast of Senshu
1975	9	MOT convenes series of briefings in communities
1976	9	MOT announces Survey Implementation Guidelines
1977	10	Marine observation facilities completed
1978	2	MOT announces plans for noise, vibration, and air pollution studies, starts site studies
	3	MOT begins bore studies near candidate sites
1979	5	MOT conducts flight studies with aircraft
1981	5	MOT presents three reports: Airport Proposal, Environmental Impact Assessment, and Approaches to Regional Infrastructure
1983	12	MOT begins ground improvement testing off the coast of Senshu
1984	10	Kansai International Airport Co. (KIAC) established
1986	2	Kansai Int'l Airport Env. Monitoring Org. established (Osaka Pref. Governor, mayors of 9 cities, 4 towns currently)
	6	Environmental Impact Assessment submitted to governor of Osaka Prefecture
	12	Environmental Monitoring Plan adopted environmental monitoring begins
1987	1	Permit obtained for land reclamation on public waters for Phase 1 construction. Phase 1 construction begins
	6	Construction begins on bridge linking mainland to airport begins, KIX Environmental General Center opens
1989	6	Phase 1 airport island seawall construction completed
1994	1	Phase 1 airport island construction areas completed
	3	Plan for Environmental Monitoring of KIX Construction/Operation adopted
	7	Kansai International Airport Environmental Center opens
	9	Kansai International Airport (KIX) opens for service (Sep 4). Monitoring begins: Aircraft noise, low-freq. air vibration
1995	8	Council for Civil Aviation releases Basic Approach to 7th Airport Preparatory 5-Year Plan (mid-term report)
1996	6	Kansai International Airport Land Development Co. (KALD) est., designated by Min. Transport as official land developer
1997	6	MOT releases "Comprehensive Initiatives relating to Flight Path Issues at KIX" paper
1998	10	Environmental Impact Assessment on Phase 2 Construction submitted
	12	New flight paths introduced. Environmental Monitoring Plan for aircraft noise, etc., reviewed, monitoring enhanced
1999	6	Environmental Monitoring Plan for Phase 2 Construction Project adopted
	7	Permit obtained for land reclamation on public waters, Phase 2 construction (start Jul 14. Silt protection sheets deployed
	11	KIX International Symposium marks fifth anniversary of opening
	12	KALD acquires ISO 14001 certification for environmental management system
2001	1	KIAC establishes Environmental Management Committee
	4	KIX receives "Monument of the Millennium" award from American Society of Civil Engineers, as offshore airport
	6	KIAC adopts Environmental Management Plan (Eco-Island Plan)
	9	Placement begins for wave-dissipating blocks to support seaweed bed growth along Phase 2 seawall
	11	International Airport Symposium 2001 hosted, Phase 2 airport island seawall completed
2002	10	KIAC adopts Regulations Governing the Use of Waste Processing Facilities
	12	<ul style="list-style-type: none"> • KIAC establishes Energy Conservation Committee • KIAC releases first Eco-Island Report (2002 edition)
2003	12	KIAC establishes KIX Customer Satisfaction Council
2004	9	International Airport Symposium 2004 hosted
	12	KIAC, KALD mount their first exhibit at "Eco-Products 2004" exhibition
2005	7	Kansai International Airport Environmental Center relocated to Kanku Observation Hall
2006	8	Kansai International Airport & Rinku Town designated by government as CNG vehicle model project areas
2007	1	KIAC awarded MITI Award at FY2006 Nat'l Energy-Efficiency Best Practices Conf., for IT-based air con system in passenger terminal
	5	JHFC hydrogen charging station for vehicles opens at KIX
2008	3	KIX Eco-Island Promotion Council launched KIX Environmental Plan adopted
	4	Windbreak fence completed for KIX rail system access bridge, use of pro-beam low-location lights begins

KIX : Kansai International Airport (2/3)

Year	Mo.	Event
2008	5	Kanku Environmental Exhibition features KIX Environmental Plan
	6	First idling-prevention awareness campaign launched
	7	First conference held to report on KIX Eco-Island Promotion Council environmental initiatives
	10	Study tour organized by KIX Eco-Island Promotion Council
2009	7	Full-scale use of truck-mounted ground power units (GPUs) begins
	11	KIX Science Classes held
2010	1	Partial changes to aircraft auxiliary power unit (APU) usage restrictions (use reduced from 30 to 15 min. before departure)
	9	Photovoltaic system installed for temperature-controlled building for medical products
2011	1	IATA Environment Stand display installed at KIX
	3	Rapid charger installed at KIX for electric vehicles
	7	Japan fully adopts digital terrestrial broadcasting; measures targeting signal interference
	9	Electricity-powered commercial shuttle vehicles introduced (two vehicles by fiscal year end)
2012	4	<ul style="list-style-type: none"> • New Kansai International Airport Company (NKIAC) established • Professor KIXeco quiz system launches at Environmental Center
	5	KIX wins judges' special award, Airports Council Int'l (ACI) Asia-Pacific 2011 Green Airports Recognition Awards
	6	Phase 2 airport island construction almost completed, land development work by KALD is completed
	7	Kansai International Airport and Osaka International Airport are merged
	8	KIX earns runner-up award in 2012 Osaka Environmental Awards for efforts to grow seaweed beds
	10	KIX Sky Park opens adjacent to Phase 2 Terminal Building, trial begins for hydrogen fuel cell buses
	11	Olive tree planting ceremony along walking path for Phase 2, decision made to do KIX Megasolar project
12	Exhibit at Eco-Products 2012 exhibition. Four regular chargers for electric vehicles installed in parkade.	
2013	2	Int'l Strategy Comprehensive Special Area expanded by Kansai Innovation to include KIX (green innovation theme)
	3	<ul style="list-style-type: none"> • Smart Eco Logi Council holds ceremony for launch of 20 large CNG trucks in international freight zone • KIX Eco-Island Promotion Council changes name to KIX Smart Island Council
	4	KIX Smart Island Plan adopted
	8	Summer Vacation Family Eco Classes held
	10	East Asia Airport Alliance (EAAA) annual general meeting held. "Environmental Relay Declaration" adopted
	12	Exhibit at Eco-Products 2013 exhibition. Winter Vacation Family Eco Classes held.
2014	1	KIX announces event for EAAA Environmental Relay
	2	KIX Megasolar starts generating electricity (largest photovoltaic system of any Asian airport)
	5	Hydrogen Grid Project launched
	6	Rapid charger installed for electric vehicles at open parking lot No.5, with 24-hour operations
	7	<ul style="list-style-type: none"> • "Megasolar Observatory" and "Visualization Monitor" start operating • Small wind turbine power generator installed—a first for any Japanese airport
2015	2	Trial operations launched for first fuel cell-powered forklift at any airport in Asia, plus demonstration trial of hydrogen grid
	8	"Hydrogen and Fuel Cell" Family Eco Classes held
	9	Megasolar system starts operating on roof of air freight warehouse in international freight zone
	10	Exhibit at Biwako Environmental Business Exhibition 2015
	12	<ul style="list-style-type: none"> • Awarded the FY2015 Environment Minister's Award for Global Warming Prevention Activities • Exhibit at Eco-Products 2015 exhibition
2016	1	Largest hydrogen station at an airport in Asia opens
	3	<ul style="list-style-type: none"> • Awarded 2015 Kansai Eco Office Grand Prize from Union of Kansai Governments • Two new model fuel cell forklifts added for demonstration trials
	4	<ul style="list-style-type: none"> • Kansai Airports starts operating • Four more regular chargers installed for electric vehicles in parkade
	6	<ul style="list-style-type: none"> • Environmental initiatives introduced at Fifth Fukeko Festival • Potato harvest event at KIX Sora Farm promotes environmental education • KIX Smart Island Exhibit in passenger terminal
	8	KIX Family Eco-Classes: Hydrogen/Magnesium Air Fuel Cells
	12	<ul style="list-style-type: none"> • Airport Carbon Accreditation (ACA) obtained, a first for airports in Japan • Exhibit at 2016 EcoPro International Exhibition on Environment and Energy
2017	1	Terminal 2 opens (international flights)
	4	Large hydrogen filling station for industrial vehicles opens, a first in Japan
	5	Conducts trial operations of fuel cell bus at Kanku Tabihaku 2017 and to the Terminal 2 building

Environmental Chronology

KIX : Kansai International Airport (3/3)

Year	Mo.	Event
2017	6	<ul style="list-style-type: none"> • Hosts Smart Island Environmental Exhibition • Holds KIX Eco Class at KIX Sky Farm • Holds idling stop campaign
	8	Holds KIX Science Class
	12	Exhibits at 2017 EcoPro International Exhibition on Environment and Energy
2018	2	Introduces additional two fuel cell forklifts
	4	Establishes new environmental plan called One Eco-Airport Plan
	9	Keynote and exhibit at the six World Smart Energy Week Osaka Show
	10	Hosts the tenth ACI Asia-Pacific Regional Environment Committee
	12	<ul style="list-style-type: none"> • Airport Carbon Accreditation (ACA) Level 3 obtained • Exhibit at EcoPro 2018 • Holds the Fuel Cell Bus Trial Ride in KIX
2019	2	With additional four fuel cell forklifts introduced, seven fuel cell forklifts in total
	9	With additional FCV introduced, three FCV in total
2020	1	Solar panels on the rooftop of the Terminal 2 building were installed and energy generation started
	2	An additional 15 fuel cell forklifts introduced meant 22 fuel cell forklifts in total
	3	Trial operation of the electrical ground power unit (eGPU) got underway
	4	Plastic shopping bags used in shops directly managed by the Kansai Airports Group are replaced with paper bags

ITAMI : Osaka International Airport (1/2)

Year	Mo.	Event
1939	1	Opens as No. 2 Osaka Airport
1958	3	Complete return of airport from U.S. forces to Japan. Renamed "Osaka Airport" by the Ministry of Transport (runway was 1,828 m long)
1959	7	Designated a class 1 airport under Civil Airport Development Law, renamed "Osaka International Airport"
1960	4	International flights begin
1964	6	Passenger jet service begins
1969	1	Construction of terminal building completed
1970	2	Additional runway (3,000 m) opens and airport takes its present form
1975	12	Abolishes domestic line operation between 9:00 pm to 7:00 am the following morning
1976	7	Abolishes international line operation between 9:00 pm to 7:00 am the following morning
1977	10	Limit on aircraft movements for regularly scheduled flights of 370 movements per day (200 for jets)
1990	12	MOT concludes the agreement with local municipalities (11 cities) and local groups (mediation group) on the airport continuation
1994	9	International flights shift to newly opened Kansai International Airport
1997	4	Osaka Monorail starts operation
1999	7	Former international terminal building is renovated and opens as South Terminal
2002	6	Erects noise barrier at the engine testing site
2006	4	Switches from 24-hour operations to 14-hour operations (7:00am to 9:00pm)
2010	4	Begins examining ways of reducing amount of grass clippings incinerated as waste (recycling as fertilizer and feed)
	4	New Kansai International Airport Company established
2012	7	Management of Osaka International Airport and Kansai International Airport is integrated
	10	Successfully produces fertilizer made of grass clippings from the airport's landing strips
2013	3	Introduces landing fee system based on actual noise level
2014	2	Receives 7th Toyonaka Eco Citizen Award 2013 (for recycling grass clippings as fertilizer and feed)
	9	Receives the Grand Prize at the 2014 Osaka Environmental Awards (for recycling grass clippings as fertilizer and feed)
	10	Receives the Chairman's Prize at the 2014 Reduce, Reuse, Recycle Promotion Merit Awards (for recycling grass clippings as fertilizer and feed)
2015	12	Kansai Airports starts operations
2016	4	Kansai Airports begins operating Osaka International Airport and Kansai International Airport
2017	5	Constructs warehouse for storing grass clipping feed
	6	Holds idling stop campaign
	12	Exhibits at 2017 EcoPro International Exhibition on Environment and Energy
2018	3	<ul style="list-style-type: none"> • Receives Silver at ACI Asia-Pacific Green Airports Recognition 2018 (for recycling grass clippings as feed) • AIP defines the auxiliary power unit (APU) usage restrictions

ITAMI : Osaka International Airport (2/2)

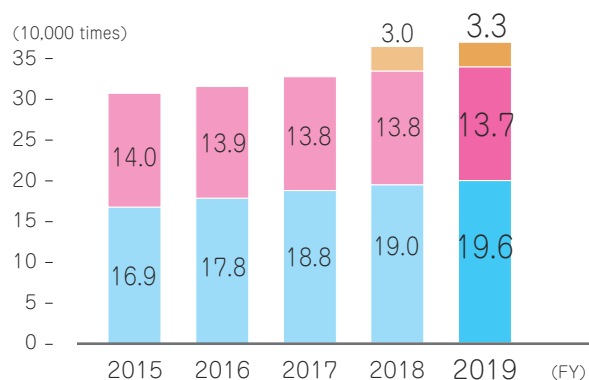
Year	Mo.	Event
2018	4	<ul style="list-style-type: none"> Terminal renovations: Central Area opens first with light-blocking panels and rooftop greenery, etc. Establishes new environmental plan called One Eco-Airport Plan
	8	Presents ITAMI environmental action in INTER-NOISE 2018
	12	<ul style="list-style-type: none"> Upgrades to Airport Carbon Accreditation (ACA) Level 3 Exhibit at EcoPro 2018
2019	3	Fuel cell vehicle introduced for the first time
	4	Iwatani Hydrogen Refueling Station in Osaka International Airport opens in the airport
	6	ITAMI environmental measures are presented in INTER-NOISE 2019
	10	One rapid charger is installed
2020	4	Plastic shopping bags used in shops directly managed by the Kansai Airports Group are replaced with paper bags

KOBE : Kobe Airport

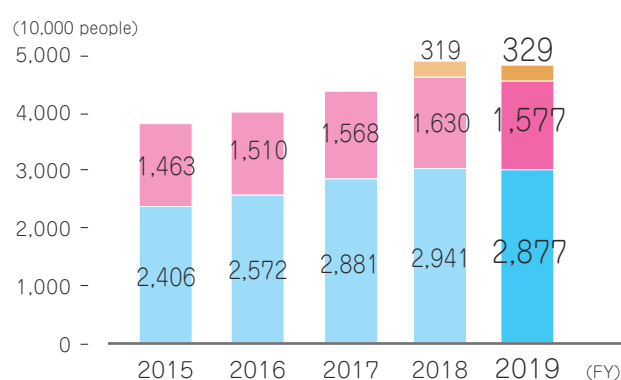
Year	Mo.	Event
2006	2	Open Kobe Airport
2018	4	<ul style="list-style-type: none"> Kansai Airports Kobe begins operating Kobe Airport Establishes new environmental plan called One Eco-Airport Plan
	12	<ul style="list-style-type: none"> Upgrades to Airport Carbon Accreditation (ACA) Level 2 Exhibit at EcoPro 2018
2019	4	AIP defines the auxiliary power unit (APU) usage restrictions
	5	The limit on aircraft movements for regularly scheduled flights is expanded to 80 movements per day
2020	3	Operating hours extended to 16 hours between 7:00 am and 11:00 pm
	4	Plastic shopping bags used in shops directly managed by the Kansai Airports Group are replaced with paper bags

● Number of passengers and flights

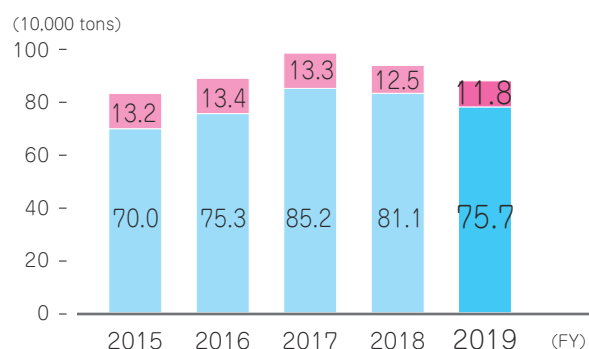
Per landing/takeoff



Annual Passenger Traffic



Annual Cargo Volume



■ KIX ■ ITAMI ■ KOBE

*On April 1, 2018, Kansai Airports Kobe commenced its business as an operator of Kobe Airport (KOBE).

[Queries]

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