One Eco-Airport Plan

Kansai International Airport
Osaka International Airport
Kobe Airport
An Environmental Plan was formulated for the three airports, Kansai International Airport, Osaka International Airport and Kobe Airport. "One" indicates that all three airports in the Kansai region will work together on environmental initiatives. As the Company operating the three airports that are the gateway to the Kansai area, we strive to minimize the impact of our activity on nearby residents, surrounding ecosystems and the climate, and to develop our airports in harmony with local communities based on this plan.
For the five-year period between fiscal 2018 and fiscal 2022, eight items under four policies have been established with the aim of reducing environmental burdens. Specific targets and measures have been established based on each item as indices for future initiatives.

Kansai Airports established an Environmental Promotion Committee to promote plans, analyze and assess the status of target achievement and improve initiatives. The Energy Conservation Committee promotes specific countermeasures 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 promote initiatives with airport-related businesses.

Environmental Plan History

2001~2007
Eco Island Plan

2008~2012
Eco Island Promotion Plan

2013~2017
Smart Island Promotion Plan

2006~2017
Osaka Airport Environment Plan

2018~2022
One Eco-Airport Plan
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.

**Promotion strategies**

- **Promote energy conservation**
- **Reduce GHG emissions**

**Strategic goals**

- 5% reduction in energy usage by fiscal 2022 (compared to fiscal 2016, per traffic unit)
- 5% reduction in CO₂ emissions by fiscal 2022 (compared to fiscal 2016, per traffic unit)

**Main Initiatives**

**Promote energy conservation**

- Thorough management of temperature and lighting
- Improve building material thermal insulation and shade
- Efficient equipment

- **Strategic measures**
  - Promoting energy-saving operations
  - Introduction of high-efficiency equipment and heat insulation and measures against sunlight in buildings
  - Introduction of energy management system

**Reduce GHG emissions**

- Thorough waste recycling
- Introduction of eco-cars
- Introduction of clean energy

- **Strategic measures**
  - Promotion of decarbonized operations
  - Promotion of GPU* utilization

*GPU is equipment that supplies parked aircraft with required electricity and air conditioning from the ground, enabling reductions in CO₂ and noise compared to that emitted when using the aircraft auxiliary power unit (APU).

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**Strategic goals**

<table>
<thead>
<tr>
<th>Amount of energy used (%)</th>
<th>5% reduction in energy usage by fiscal 2022</th>
<th>CO₂ emissions</th>
<th>5% reduction in CO₂ emissions by fiscal 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>2016 (Base year)</td>
<td>2016 (Base year)</td>
<td>2022 (Strategic goals)</td>
</tr>
</tbody>
</table>
Resource usage

In addition to minimizing waste, we separate, recycle and reuse all waste 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.

Promotion strategies

<table>
<thead>
<tr>
<th>Reduction of clean water consumption</th>
<th>Strategic goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>By fiscal 2022:</td>
<td>10% reduction in clean water (compared to fiscal 2016, per PAX)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waste recycling</th>
<th>By fiscal 2022:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste recycling rate: 35%</td>
<td>Amount of one-way plastics waste: 25% reduced</td>
</tr>
</tbody>
</table>

Main Initiatives

**Reduction of clean water consumption**

- Utilization of rainwater/recycled water
- Promotion of water-saving operations

- Thorough use of recycled water
- Examine rainwater usage
- Installation of water-saving equipment

**Waste Recycling**

- Promote thorough sorted collection and recycling of waste
- Promote green procurement
- Minimize and recycle

- Reduce amount of plastics used
- Compost kitchen waste
- Use mowed grass for fertilizer and feed

**Strategic goals**

**Amount of clean water used**

- **2016 (Base year)**
- **2022 (Strategic goals)**

**Waste recycle rate**

- **2016 (Base year)**
- **2022 (Strategic goals)**

**10% reduction in clean water usage by fiscal 2022**

**35% waste recycling rate by fiscal 2022**
Environmental Harmony

We will 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 the conducting of environmental surveys to verify species.

**Promotion strategies**

- **Monitor the local environment**
  - Measure environmental parameters
- **Preserve biodiversity**
  - Increase biodiversity

**Main Initiatives**

**Monitor the local environment**

* [Strategic measures]*
  - Monitor aircraft noise
  - Ensure air and water quality
- **Promote introduction of low-noise aircraft**
- **Air and water quality monitoring**

**Preserve biodiversity**

* [Strategic measures]*
  - Protect wildlife habitat
- **Conduct biological surveys**
- **Greenbelts inside airports**
- **Preserve seaweed beds**

### Kobe Airport

*Kobe was built offshore in harmony with the environment. We have incorporated energy-saving cogeneration energy supplies that effectively utilize waste heat to generate power in passenger terminals in an attempt to prevent air pollution.*

### Osaka International Airport

*Located near the heart of the Keihansin metropolitan area, these airports are adjacent to urban areas. We are making efforts to reduce aircraft noise through promoting introduction of low-noise aircraft and to improve the living environments in the regions of the airport through environmental countermeasures.*

### Kansai International Airport

*KIX was built five kilometers off the coast of the Senshu District to minimize the impacts of aircraft noise. Waste and wastewater generated inside the airport are treated onsite. In addition, seaweed beds have formed in the seawall surrounding the manmade airport island that create a habitat for a variety of marine life.*
Environmental management

Using environmental evaluation programs, we created a mechanism enable the understanding and assessment of environmental burdens that leads 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.

<table>
<thead>
<tr>
<th>Promotion strategies</th>
<th>Strategic goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilize evaluation programs</td>
<td>Acquire environmental certification</td>
</tr>
<tr>
<td>Cooperation and education</td>
<td>Establish management framework</td>
</tr>
</tbody>
</table>

**Main Initiatives**

**Utilize evaluation programs**

- [Strategic measures]
  - Utilization of national and local government evaluation systems
  - Utilization of environmental certification systems

- **Acquire and enhance level of ACA**
- **Acquire ISO 14001 certification**

**Cooperation and Education**

- [Strategic measures]
  - Dissemination of environmental information, provision of environmental education
  - Alliances with airport-related businesses
  - Alliances with airports throughout Japan and overseas

- **Disseminate information**
- **Host experiential classrooms**
- **Activities through conferences and other organizations**

*About Airport Carbon Accreditation (ACA)*

Airport Carbon Accreditation is an international evaluation program and accreditation system for managing and reducing CO₂ emissions from airports. It is the only environmental accreditation program designed specifically for airports. ACA has four levels of accreditation for carbon management. Both KIX and ITAMI airports were the first in Japan to acquire ACA (level 2) certification in 2016. And In 2018, the ACA of KIX and ITAMI were upgraded to Level 3 while KOBE also newly received ACA Level 2.

**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 (Optimization)**
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.
Japan’s first full-scale offshore airport, KIX, is a world-class, 24-hour facility with multiple 4,000 meter-class runways. Kansai International Airport (KIX) continues to work around the clock with enthusiasm to handle the endless flow of people and goods to earn the trust, affection and respect of our customers and contribute to the development of the Japanese economy and society.

Located near the center of the Kyoto-Osaka-Kobe area, and just 12 kilometers from downtown Osaka, Osaka International Airport (ITAMI) coexists with the local community as a convenient urban airport. Consistent with its commitment to serving as a familiar, dynamic urban airport, ITAMI provides travelers with valuable experiences imbued with convenience and hospitality.

Kobe Airport opened in 2006 in Kobe, a major city in the Kansai region, which has a population of about 1.5 million. The facility sits at the center of a network of routes that link airports throughout Japan. Situated on a manmade island designed to integrate seamlessly with the surroundings, the airport is used by three million people each year.

**KIX Kansai International Airport**
- **Location**: Izumisano City, Tajiri Town, Sennan City in Osaka
- **Scale**: Phase 1 Island: 510ha, Phase 2 Island: 549ha
- **Runways**: Runway A: 3,500m long, 60m wide, Runway B: 4,000m long, 60m wide
- **Aircraft Parking Stands**: 104
- **Annual Aircraft Movements**: approximately 190,000*
- **Annual Passengers**: approximately 29,410,000*
- **Annual Cargo Volume**: approximately 811,000t*

**ITAMIT Osaka International Airport**
- **Location**: Toyonaka City, Ikeda City in Osaka, Itami City in Hyogo
- **Scale**: 311ha
- **Runways**: Runway A: 1,828m long, 45m wide, Runway B: 3,000m long, 60m wide
- **Aircraft Parking Stands**: 52
- **Annual Aircraft Movements**: approximately 138,000*
- **Annual Passengers**: approximately 16,300,000*
- **Annual Cargo Volume**: approximately 125,000t*

**KOBE Kobe Airport**
- **Location**: 1-ban Kobe-Kuko, Chuo-ku, Hyogo
- **Scale**: 272ha
- **Runways**: Runway : 2,500m long, 60m wide
- **Aircraft Parking Stands**: 10
- **Annual Aircraft Movements**: approximately 30,000*
- **Annual Passengers**: approximately 3,190,000*
- **Annual Cargo Volume**: approximately 125,000t*

(* FY2018 operational results)

Environmental Report
http://www.kansai-airports.co.jp/efforts/environment/efforts/reports.html

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