What is Sustainable Airport
We Accelerate the Decarbonization to Become a “Sustainable Airport,” beyond an “Eco-Airport”

Narita International Airport marked its 43rd anniversary since its opening in 1978. In fiscal 2021, aircraft movements and passenger numbers declined significantly since the Coronavirus (COVID-19) pandemic began in 2020. The aviation industry, including Narita International Airport Corporation (NAA), continues to face a severe business environment.

Until now, we have persevered through numerous decreases in demand caused by the international situation and natural disasters. Furthermore, COVID-19 pandemic which caused such long-term restrictions on the movement of people across the globe is unprecedented experience. All the same, in times of crises, Narita International Airport has undergone strong recoveries supported by many people, such as local residents and stakeholders, and grown as the gateway to Japan. We are confident that we will overcome the present crisis, resume normal operation, and develop further.

And Narita International Airport will maintain safe and secure operation as a critical infrastructure to support the transportation of goods and movement of people.

At the same time, with an eye on the future, we must steadily proceed initiatives such as the functionality enhancement at Narita International Airport, including the construction of a new runway, In promotion of the functionality enhancement, we will seek a way to coexist with local communities, make every effort to obtain the understanding of stakeholders, and take measures to reduce our environmental impact.

At Narita International Airport, we have promoted various initiatives based on the following four pillars: Community environment initiatives, resource recycling initiatives, climate change initiatives, and environment management. For climate change in particular, more frequent and intense natural disasters caused cutting emissions to be one of the most critical issues, which resulted in calls for aviation decarbonization. Thus, NAA released “Sustainable NRT 2050” in March 2021 to promote further climate change initiatives.

To realize a sustainable society and become one of the world leading airports, we have set medium- to long-term goals that include a net-zero target, which is the first among airport operators in Japan, and countermeasures to decrease CO2 emissions with stakeholders throughout the airport.

The Eco-Airport Master Plan was terminated in fiscal 2020, but we will successively conduct our environmental measures based on the above categories under the framework of “Sustainable NRT 2050.” With stronger relationships with a wide variety of stakeholders, we strive to achieve our goals to become a sustainable airport which grows in an environmentally-friendly and ethical way.

Narita aims to be a Sustainable Airport

In the past, we promoted initiatives to become an environmentally-friendly “Eco Airport.” From now on, we aim to go beyond and evolve into a long-lasting “Sustainable Airport.”

Our Contribution to the Sustainable Development Goals

According to the targets of the United Nations Sustainable Development Goals (SDGs), we categorized our environmental activities. Icons corresponding to each goal are shown at the top of the Activity Highlights pages. Narita International Airport contributes to the achievement of the SDGs with our stakeholders*.

*Our stakeholders* refers to passengers, local residents, local government, airport-related business entities and their employees, and all other persons associated with the airport.

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Sustainable Airport Digest Map

Principal Environmental Initiatives at a Glance

1. General Waste Sorting
   Waste is sorted for recycling into six categories in terminal lobbies, and 10 categories in office areas.

2. Solar Power Panels
   Solar power panels at passenger terminal buildings and the NAA Building generate electricity for lighting in those buildings.

3. Kitchen Wastewater Treatment Facilities and Grey Water Production Facilities
   Waste water from restaurants in terminals is treated and reused as flushing water in airport toilets.

4. Fast Chargers for Electric Cars
   For the convenience of airport users driving electric vehicles (EVs), fast chargers are provided in parking lots P1 and P2.

5. Hydrogen Station
   This station supports drivers of fuel-cell vehicles, which are becoming popular in recent years.

6. Introduction of Low Emission Vehicles
   We promote the introduction of low emission vehicles such as EVs as well as fuel-efficient and low-exhaust cars.

7. Recycling Plant
   Asphalt, concrete, and other construction wastes are crushed and recycled into paving material.

8. Rainwater Treatment Facility
   Rainwater from a holding pond is treated and reused for cooling water in the Central Heating and Cooling Plant and for flushing water in the passenger terminal toilets.

9. Noise Reduction Hanger (NRH)
   A hangar-type noise reduction facility drastically decreases sound levels of aircraft engine testing.

10. Landing Charge System for International Flights Based on the Narita Aircraft Noise Index
    To encourage airlines to use quieter aircraft, we have introduced a noise-related landing charge system for international flights. These aircraft also contribute to the reduction of CO₂ emissions.

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On Taxiways

LED (Light-Emitting Diode) Lighting
Highly energy-efficient LED lights have been installed for taxiways and some parts of lighting in passenger terminal buildings.

Around the Airport

Noise Mitigation Embankments
Mitigation embankments and wooded buffer zones have been constructed to reduce aircraft noise.

Greenport Eco-Agripark
On the noise mitigation land, we maintain a hands-on nature conservation park with a rich diversity of natural life.

Environment Monitoring
To understand the environmental impacts from airport operations, we take year-round and short-term noise, air quality, and water quality measurements and disclose the results on our website.

On Aprons

Construction Waste Management
We reduce construction waste for apron pavement repair work through a technique developed by NAA called "Bonded Overlay Method."

GPU (Ground Power Units)
Quiet, zero-emission GPUs have been installed at fixed stands of passenger terminals and in cargo areas to provide electricity and air conditioning to parked aircraft.
Progress Report on the Eco Activities at Narita Airport
Review of the Eco-Airport Master Plan (FY 2016-2020)

To achieve the Eco-Airport Vision 2030, Narita International Airport has set numerical targets for five years from fiscal 2016 and promoted specific measures. Since fiscal 2020 is the final fiscal year of the targets, we hereby report the results of our initiatives.

For most numerical targets where fiscal 2015 is used as the benchmark, we transitioned toward achievement up until fiscal 2019. In fiscal 2020, however, aviation demand drastically dropped due to the COVID-19 pandemic, and items assessed in per unit such as flights and airport users ended in abnormal figures. Consequently, we evaluated our progress based on fiscal 2019 results, using fiscal 2020 figures as reference values.

*For other initiative results, please refer to pp. 15-16 of this brochure.

### Climate Change Initiatives

#### Reduce airport CO₂ emissions per flight by 7%

In order to cut airport emissions, we encouraged the introduction of fuel-efficient aircraft and use of GSEs for parked aircraft. Nevertheless, the reduction rate ended up at 4.9% (569 t CO₂ flight) in FY 2019. In FY 2020, the number of aircraft movements significantly declined and so did airport emissions. However, as the reduction of emissions from the facilities remained at a certain level, CO₂ emissions per flight increased compared to FY 2015.

**Introduction rate of quieter aircraft**

**Airport CO₂ emissions per flight**

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>93.7%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

*Including domestic flights*

### Environment Management

#### Engage in active dialogue with stakeholders

We held interactive dialogue with airport-related business entities through the Eco-Airport Development and Planning Council, and proactively implemented cleanup drives and a lights-off campaign. We also disseminated information about these initiatives on our website and other media.

### Resource Recycling Initiatives

#### Reduce potable water usage per airport user by 3%

In addition to saving water in terminals, potable water usage has been reduced by utilizing grey water that is treated rainwater and kitchen wastewater. As a result, potable water usage was reduced by 6.1% (28.1 L/airport user) in FY 2019. In FY 2020, the dramatic decrease of passenger numbers reduced potable water usage. But, potable water usage per airport user increased compared to FY 2015 as a certain amount of water is necessary for facility operations.

**Potable water usage (per airport user)**

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>9.1%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

*Including air catering and restaurant wastewater used as recycled water*

### Community Environment Initiatives

#### Reduce air pollutant (NOx) per flight by 5%

Narita has a long history of monitoring the impacts of airport and aircraft operations on air quality. In FY 2015, the reduction ended up at 3.0% (16.1 kg flight) despite our efforts. In FY 2020, the NOx output of the entire airport declined owing to significant decrease of aircraft movements. However, NOx emissions per flight increased compared to FY 2015 due to changes in aircraft fleet composition and increased number of engine tests.

**Change in general waste incinerated (per airport user)**

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>kg</td>
<td>0.04 kg</td>
<td>0.06 kg</td>
</tr>
</tbody>
</table>

*Fiscal year 2019 vs. 2020*

### Resource Recycling Initiatives

#### Reduce general waste incinerated per airport user by 5%

We have promoted our 3R initiatives (Reduce, Reuse, and Recycle) for waste generated from airport operations, such as a revamp of recycling bins before security checkpoints so passengers can pour out leftover liquid and separate plastic bottles. Nonetheless, the reduction rate of general waste incinerated per airport user ended at 4.4% (0.43 kg/airport user) in FY 2019. Moreover, we encouraged the usage of trim waste and draft waste. In FY 2020, the fall in passenger numbers decreased the volume of general waste incinerated at 4.4%. However, incinerated waste from the cargo operation that remained at the same level boosted general waste incinerated per airport user compared to FY 2015.
Establishment of “Sustainable NRT 2050”

Toward One of the World’s Leading Sustainable Airports

On March 25, 2021, NAA released “Sustainable NRT 2050.” This is the first time in Japan that an airport operator has set emissions among its stakeholders for the entire airport. To achieve our goals, we will address climate change mitigation.

FY 2030 Targets (Mid-Term)

- NAA Group will reduce its CO2 by 30% compared to fiscal 2015.
- We will aim to reduce Narita Airport’s CO2 emissions per flight by 30% compared to fiscal 2015.
- We have set out our “Next Actions” for NAA to further reduce CO2.
- Our Functionality Enhancement at Narita Airport will continue to promote initiatives to reduce environmental impact.

FY 2050 Targets (Long-Term)

- NAA Group will achieve net zero corporate CO2 emissions.
- We will aim to reduce Narita Airport’s CO2 emissions by 50% compared to fiscal 2015.

Initiatives for “Sustainable NRT 2050”

NAA Group will contribute to the realization of a sustainable society starting with a decarbonized society in cooperation with our stakeholders.

<table>
<thead>
<tr>
<th>NAA Group Initiatives</th>
<th>Under the leadership of NAA, the airport will proactively introduce advanced technology to help reduce CO2 emissions.</th>
</tr>
</thead>
</table>
| **Carbon neutral buildings** | *Continuously promote energy efficiency.*
- Newly constructed facilities and reconstructed buildings will be made carbon neutral and converted to ZEB (Net Zero Energy Building) by FY 2050.
- Use zero-carbon fuels to supply energy for air conditioning and other applications.

| **Convert 20% of purchased electricity to renewable energy** | *Introduce renewable energy sources and convert 20% of purchased electricity to renewable energy by FY 2030 and 100% by FY 2050.*

| **80% of aviation lighting to be converted into LED** | *Give the gradual conversion of aviation lights to LED, with 80% of aviation lights to be converted to LED by FY 2030 and 100% by FY 2050.

| **Convert all business vehicles other than special-purpose vehicles to low-emission vehicles** | *Convert all business vehicles to zero-carbon.
- Convert all business vehicles to zero-carbon by FY 2050.*

**Next Actions**

NAA will strive to raise awareness among its employees and achieve the following goals as soon as possible.

- **Carbon neutralization of NAA Building**
  - Carbon neutralize NAA Building (Conversion of electricity to renewable energy, offsetting CO2 emissions associated with air conditioning)

- **Zero CO2 business trip for NAA employees**
  - Reduce NAA employees’ CO2 emissions from business travel to zero through offsetting.

- **Promotion of low-carbon commuting for NAA employees**
  - Promotion of teleworking and switching to low carbon transport to reduce CO2 emissions from NAA employees commuting by 50%.

**Functionality Enhancement at Narita Airport**

We will promote initiatives for reducing the impact on the environment of our Functionality Enhancement at Narita Airport.

- **Reduced taxing distance**
  - Reduce aircraft taxing distance by 10% by improving facilities.

- **Reduced environmental impact during construction**
  - Reduce the environmental impact during construction.

- **Effective use of logged timber**
  - Recycle logged timber by construction.

**Joint Initiatives with Our Stakeholders**

In collaboration with our stakeholders, we will undertake multilateral studies and encourage measures to promote the reduction of CO2 emissions.

**2030**

- **Development of a framework for accepting SAF**
  - Work with stakeholders to provide the necessary acceptance framework and encourage the introduction of SAF.

- **Convert forklifts to low-emission**
  - Convert SAFe vehicles to zero-carbon.

- **Introduction of measures to encourage lower stakeholder CO2 emissions**
  - Consider various measures to contribute to the reduction of CO2 emissions of stakeholders, e.g., discounted parking fees for “inattentive” (fuel cell vehicle) certification cards.

**2050**

- **Development of a framework for accepting next generation aircraft**
  - SAF: Sustainable Aviation Fuel. A jet fuel produced from sustainable sources with low CO2 emissions in the process from production and collection of raw materials to combustion.

- **Convert SAFe vehicles to zero-carbon**
  - 15% of forklifts to be low-emission by FY 2030.
  - Improve the efficiency and decarbonization of the entire GSE fleet by promoting the sharing and zero-carbonization of GSE vehicles used for ground handling operations.

- **Consider various measures to contribute to the reduction of CO2 emissions of stakeholders, e.g., discounted parking fees for “inattentive” (fuel cell vehicle) certification cards.**

**COLUMNS**

.Hosting the “Sustainable NRT 2050” Explanatory Meeting

In April 2021, we held “Sustainable NRT 2050” explanatory meetings in Narita City and Sapporo City to introduce our various initiatives to reduce the environmental impact at Narita International Airport.

At FJ, Oberlin University, we gave a lecture on our airport management and environmental initiatives starting with Sustainable NRT 2050, then our past environmental initiatives and future outlook in Narita International Airport.

A WORD FROM OUR STAFF

Addressing the reduction of environmental impact together with our stakeholders

KATAOKA Sho
Airport Sustainability Officer
Planning Department, NAA

Regarding the explanatory meetings, one of the objectives was to strengthen cooperation with stakeholders. We hope to address the reduction of our environmental impact with all the stakeholders involved.
Sustainable Airport

Activity Highlights

Based on the Eco-Airport Master Plan, Narita International Airport engages in initiatives to combat global warming, contribute to the local environment, and implement resource recycling. Here are some of our activities to reduce the environmental impact of airport operations.

**Reduce Energy Consumption with LEDs**

At Narita International Airport, many types of lighting are used including taxiway lights and lighting in passenger terminals. Currently, in consideration of convenience, running costs, and the environmental aspect, we are switching to light-emitting diode (LED) light bulbs.

**On Taxiways**

The taxiway lights that navigate aircraft have been replaced from halogen bulbs to LEDs, which have longer lifespans and consume one tenth of the electricity of conventional lamps. As of the end of fiscal 2020, LEDs accounted for 70.8% of Taxiway edge lights and Taxiway center line lights.

**In Passenger Terminals**

In Passenger Terminals 1 and 2, lighting such as ceiling lights, signs outside of buildings, advertising boards, and information signs have been switched to LEDs. Seven thousand units are to be replaced with LED lighting in September 2022.

**SAF Dramatically Lowers CO₂ Emissions**

At Narita, where aircraft emissions account for 70% of the airport's total carbon emissions, industry-wide initiatives are required. We proactively carry out measures to reduce CO₂ emissions and become a sustainable airport.

**Introduction of Sustainable Aviation Fuel (SAF)**

Sustainable Aviation Fuel (SAF)*; which is expected to reduce CO₂ emissions, was first introduced in Narita International Airport by All Nippon Airways Co., Ltd. in October 2020. Certified as having the equivalent quality to fossil-based fuel, the supply of SAF is now realized at Narita via the airport’s hydrant system.

Narita is the first Japanese airport to supply SAF through its hydrant system. SAF will be used for scheduled flights.

**GPU Usage Cuts Carbon Emissions to 1/15**

We encourage airlines to use Ground Power Units (GPUs) for providing electricity and air conditioning to parked aircraft. GPU usage produces only one fifteenth of the emissions generated from APU (Auxiliary Power Units) operation, and reduces noise as well.

**Free Distribution of Wood Chips**

NAA held an event to distribute free wood chips made from felled cedar, cypress, and mountain trees, which attracted many residents. Wood chips were also used for walkways in Narita Sadano no Yama (Cherry blossom mountain) and at the castle ruins in Tako Town. We have realized both effective resource utilization and coexistence with local communities.

**Effective Use of Cut Trees**

The functionality enhancement at Narita Airport is estimated to require the clearing of 150,000 tonnes of trees. Instead of just disposing of the trees as waste, we recycled some of those cut down during the preliminary survey into wood chips and SDG lapel pins.

**Recycled SDG Lapel Pins**

Waste recycling is one of our initiatives to create a sustainable society. We created SDG lapel pins from cut trees to raise awareness of employees as a reminder of our purpose.
Sustainable Airport

Activity Highlights

**Task** Address the plastic waste problem

**Eliminate Disposable Plastic Products for 100% Sustainability**

Since the announcement of the "Plastic Smart" initiative at Narita Airport, we aim to replace materials used in disposable plastic products distributed at NAA-managed stores and lounges to recyclable or reusable materials by fiscal 2025.

**Paper and Wooden Straws**

Since September 2019, all five NAA-managed restaurants and lounges have replaced their plastic straws with paper ones.

**Reusable Shopping Bags and Sustainable Packaging Materials**

As charging for plastic bags began on July 1, 2020, we produced Narita Airport original reusable shopping bags (eco-bags). A wrapping material for NAA calendars was switched to paper from plastic. And some take-out lunch boxes sold to employees are made of an eco-friendly material called "Bio Delica".

**Task** Introduce sustainable beverage containers

**Eliminate Petroleum-Based Plastic Bottles by 2025**

As a part of our “Plastic Smart” initiatives, we are reducing petroleum-based plastic bottles at the NAA Building.

**Sustainable Beverage Containers**

At the NAA Building, beverages sold in vending machines were completely switched to eco plastic bottles, cans, and bottles. Petroleum-based plastic bottles sold at the kiosk were decreased by 50%. Those sold in airport vending machines will follow suit gradually. Fossil-based plastic bottles sold at the kiosk in the NAA building were also cut by 50%. We set a target to eliminate petroleum-based plastic bottles by the end of March 2023.

**Sustainable Packaging Innovation**

*Kusui (sky water)* is an original natural mineral water available at Narita Airport. The 30% bioplastic PET bottle and cap together with thinner labels printed in biomass ink have cut the use of fossil-based plastic by 20%. Kusui in a label-free two-liter bottle (sold by carton only) was also launched.

**Task** Resource recycling

**3Rs of Waste**

To reduce the environmental impact, the 3Rs (Reduce, Reuse, and Recycle) are encouraged when handling waste produced by airport operation.

**General Waste Sorting**

The greatest volume of general waste produced at Narita International Airport is aircraft cabin waste*. Waste such as inflight magazines, bottles, cans, and plastic bottles are sorted and recycled by some airlines in spite of limited onboard sorting space and time available for cabin cleaning.

Meanwhile, general waste from passenger terminals and the cargo and office areas is sorted for recycling. To reduce general waste and increase the recycling rate of plastic bottles, waste receptacles for leftover beverages have been installed before security checkpoints, where many plastic bottles with leftover are thrown away, since fiscal 2015. We also recycle paper that is shredded at the airport, 170 tonnes in fiscal 2020.

*Except catering waste that must be incinerated under quarantine laws

**Task** Reduce waste by recycling

**Construction Waste Recycling at the Airport**

Concrete and asphalt rubble produced by upgrading aprons and runways is crushed at the on-site recycling plant and used as aggregate in airport projects. Seventy-seven thousand tonnes of construction waste were processed in fiscal 2020.

**Task** Utilize grass cuttings from green spaces around the runways

**Use the Grass Cuttings as Feed**

The green spaces around the runways are mowed several times a year, generating 3,400 tonnes of grass cuttings in fiscal 2020. The grass cuttings are given to farmers around the airport, and some of them are used effectively as feed.

**A WORD FROM OUR STAFF**

**Repackaging of Kusui to be more eco-friendly**

TOYONAGA Hideyuki
Vender Business, Beverage Sales Division
Greensport Agency Co., Ltd.

In the repackaging of Kusui, we shared information and consulted with manufacturers, aiming for the lowest possible carbon footprint. Consequently, innovations such as using biomasses and lightweight packaging solutions for the bottle were adopted.

**A WORD FROM OUR STAFF**

**Separate collection of waste for the 3Rs**

ITO Chiyomi
Narita Kuko Biseisha Co., Ltd.

To promote the 3R initiative, we ensure the sorting of office waste into burnable, recyclable, and industrial waste. At the terminals, I am encouraged when I see some small children sorting their waste.
Cleanup Drives in and around the Airport

In fiscal 2004, we began a roadside beautification and cleanup drive in the southern area of the airport, taking place each summer and winter. The event has been scaled down due to COVID-19 since the 41st drive held in December 2020. The 41st drive gathered 150 staff from 53 companies while 180 participants from 60 business entities took part in the 42nd drive.

Community Contribution Activities

Many community events, in which NAA has been involved for years, were cancelled or postponed due to the COVID-19 pandemic. Instead, we took part in nursery school cleanups and hydrangea pruning hosted by local municipalities. Interacting with local residents was a precious opportunity for us to recognize the role of Narita Airport as a member of the community.

Selection of 361 Works from 124 Participants

Eco-Photo Gallery, a photo contest on themes such as nature around Narita Airport and aircraft, marked its ninth year. Selected works can be viewable on the Eco-Airport Development and Planning Council’s website (Japanese only) and are displayed in passenger terminals and the Soranouy Spa Resort.

*The Eco-Photo Gallery 2021 Chairman’s Prize-winning photograph can be found on page 2.

A WORD FROM OUR STAFF

Relax and enjoy! Eco-Photo Gallery at the Soranouy Spa Resort

MANABE Shingo
Marketing and Promotion Group, SAM Corporation

At Soranouy Spa Resort, we display selected works from the Eco-Photo Gallery on large screens. Admiring the scenery makes me realize what spectacular views exist around the spa. These works are perfect for relaxation, and we will continue to display them.

According to the Greening Master Plan for Narita Airport and Environms, we develop green areas in consideration of vegetation, aesthetic value, and unique topographical features.

Greening Projects

1. 
Sakoyana (Countryside Forest) Development

2. 
Development of Drainage Ways and Waterside Environments

3. 
Narita Sakura no Yama (Cherry Blossom Mountain)

4. 
Shibayama Mizube no Sato (Waterside Park)

5. 
Asakura Yosugai no Mori (Tranquil Forest)

6. 
Greenport Eco-Agricarp

7. 
Sanrizuka Sakura no Oka (Cherry Blossom Hill)

8. 
Minami Sanrizuka Nature Trail

9. 
Toyami Shironome no Oka (Hill of Dawn)

COLUMN

Natural Environmental Conservation for Our Precious Flora and Fauna

Regarding the environmental impact on functionality enhancement at Narita Airport, we conducted an assessment based on the Environmental Impact Assessment Law. Our Environmental Impact Statement was published with its results and protection measures to remedy the effects included. According to the statement, we launched a series of conservation measures such as precious wildlife relocation and transplanting, and other compensatory measures. The capture and ex-situ conservation of Japanese pond turtles and Japanese fire belly newts has been conducted since the last fiscal year.
Eco-Airport Master Plan (FY 2016-2020) and Evaluation Results

Community Environment Initiatives

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Description</th>
<th>Targets (FY 2020)</th>
<th>Results (FY 2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce environmental impact from aircraft noise</td>
<td><img src="image1.png" alt="Image" /></td>
<td>Reduce environmental impact from aircraft noise</td>
<td>The introduction rate of quieter aircraft was 91.5%, a decrease of 2.2 points from FY 2019</td>
</tr>
<tr>
<td>Conserve air quality</td>
<td><img src="image2.png" alt="Image" /></td>
<td>Reduce air pollutant (NOx) per flight 5% compared to the benchmark year (FY 2015) FY 2015: 16.6 kg/flight</td>
<td>Air pollutant (NOx) output Increased by 17.5% compared to FY 2015 levels (19.5 kg/flight)</td>
</tr>
<tr>
<td>Maintain water quality of rainwater runoff</td>
<td><img src="image3.png" alt="Image" /></td>
<td>Maintain water quality of rainwater runoff</td>
<td>Some fluctuation, but maintaining water quality of an average year</td>
</tr>
<tr>
<td>Conserve natural environments that nurture biodiversity</td>
<td><img src="image4.png" alt="Image" /></td>
<td>Conserve natural environments that nurture biodiversity</td>
<td>Suitable management of greening projects in the airport area Greenpoint Eco-Agritark preservation and use</td>
</tr>
<tr>
<td>Implement and reinforce environmental initiatives in collaboration with local communities</td>
<td><img src="image5.png" alt="Image" /></td>
<td>Implement and reinforce environmental initiatives in collaboration with local communities</td>
<td>Suitable management of land vacated by relocation and leasing of agricultural land</td>
</tr>
</tbody>
</table>

Resource Recycling Initiatives

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Description</th>
<th>Targets (FY 2020)</th>
<th>Results (FY 2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycle resources</td>
<td><img src="image6.png" alt="Image" /></td>
<td>Recycle resources Reduce general waste incinerated per airport user by 5% compared to the benchmark year (FY 2015) FY 2015: 0.45 kg/airport user</td>
<td>General waste incinerated Increased by 2.2% compared to FY 2015 levels (0.46 kg/airport user)</td>
</tr>
<tr>
<td>Recycle water resources</td>
<td><img src="image7.png" alt="Image" /></td>
<td>Recycle water resources Reduce potable water usage per airport user by 3% compared to the benchmark year (FY 2015) FY 2015: 30.9 L/airport user</td>
<td>Potable water usage Increased by 104.5% compared to FY 2015 levels (63.2 L/airport user)</td>
</tr>
</tbody>
</table>

For most numerical targets where fiscal 2015 is used as the benchmark, we transitioned toward achievement up until fiscal 2019. However, as aviation demand decreased significantly due to the outbreak of COVID-19, items assessed in individual units such as flights and airport users ended in abnormal figures. Thus, we will use fiscal 2020 figures as reference values.
Eco-Airport Master Plan (FY 2016-2020) and Evaluation Results

Climate Change Initiatives

**Action Items**

- **Reduce CO₂ emissions from the airport**
  - Encourage the introduction of low-emission aircraft
  - Implement measures to reduce aircraft taxing times
  - Limit the use of auxiliary power units (APUs)
  - Take measures toward the introduction of next-generation aviation fuels
  - Encourage travel to the airport in low-emission vehicles (Install EV charging stations, natural gas and hydrogen stations)
  - Encourage the introduction of low-emission vehicles and eco-driving
  - Generate electricity when incinerating waste through thermal recycling (thermal recovery)
  - Select low-carbon electric power sources when purchasing electric power
  - Encourage the introduction of renewable energy

- **Reduce energy consumption**
  - Increase installation of LED lights on taxiways
  - Encourage energy-saving measures through energy management
  - Conduct energy conservation programs (raise awareness of energy conservation, “COOL BIZ” and “WARM BIZ”)
  - Encourage installation of energy-saving equipment when constructing new facilities and renovating existing facilities

- **Countermeasures to adapt to climate change in conjunction with global warming**
  - Take appropriate preventive measures to address storms and other abnormal natural events

**Description**

- **Reduce CO₂ emissions from the airport**
  - Encourage the introduction of low-emission aircraft
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  - Encourage the introduction of renewable energy

- **Reduce energy consumption**
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  - Encourage installation of energy-saving equipment when constructing new facilities and renovating existing facilities

- **Countermeasures to adapt to climate change in conjunction with global warming**
  - Take appropriate preventive measures to address storms and other abnormal natural events

**Targets (FY 2020)**

- **Reduce airport CO₂ emissions per flight by 7% compared to the benchmark year (FY 2015)**
  - FY 2015: 4.30 t/flight

**Results (FY 2020)**

- **Reduce airport CO₂ emissions per flight by 7% compared to the benchmark year (FY 2015)**
  - FY 2015: 4.00 t/flight
  - Increase by 20.7% compared to FY 2015 levels (5.19 t/flight)

- **Reduce energy consumption**
  - Reduce energy consumption by NAA-managed airport facilities per flight by 5% compared to the benchmark year (FY 2015)
  - FY 2015: 15.1 GJ/flight

**Results (FY 2020)**

- **Reduce energy consumption**
  - Reduce energy consumption by NAA-managed airport facilities per flight by 5% compared to the benchmark year (FY 2015)
  - FY 2015: 15.1 GJ/flight
  - Increase by 80.1% compared to FY 2015 levels (27.2 GJ/flight)

**Countermeasures to adapt to climate change caused by global warming**

- Take countermeasures to adapt to climate change caused by global warming

Environment Management

**Action Items**

- **Engage in dialogue with stakeholders**
  - Promote dialogue with stakeholders
  - Implement environmental conservation programs centered on the Eco-Airport Development and Planning Council
  - Conduct environmental education and awareness activities for airport staff
  - Publicly release environmental information such as noise, air quality, and water quality measurement results and flight routes
  - Give presentations at environment-related conferences on noise, air quality, and other topics
  - Conduct Eco-Kids Club programs, participate in environmental exhibitions, and conduct Touring Environmental Classrooms

- **Pursue the creation of value by taking measures with stakeholders to reduce the environmental impact of airport activities throughout society as a whole**
  - Encourage activities to reduce environmental impact in collaboration with stakeholders
  - Encourage procurement that takes the environment into consideration

- **Reduce environmental impact in collaboration with airports in Japan and abroad**
  - Encourage information exchanges and joint environmental conservation activities through liaison conferences with other leading airports in Japan
  - Exchange information with and express opinions to the Airports Council International (ACI)
  - Exchange information with and provide technology to overseas airports

- **Conduct environment management using environmental certification programs**
  - Encourage environment management using environmental certification programs

- **In the lead up to the 2020 Tokyo Olympic and Paralympic Games, trial and introduce various measures and new technologies, and present our vision of an eco-airport to the world**
  - Promote environmental measures to support low-carbon, good air quality, and the 3Rs (Reduce, Reuse, and Recycle)
  - Take measures toward the use of hydrogen energy at Narita Airport
  - Take measures toward the introduction of next-generation aviation fuels
  - Disseminate information on the eco-airport

**Description**

- **Engage in dialogue with stakeholders**
  - Promote dialogue with stakeholders
  - Implement environmental conservation programs centered on the Eco-Airport Development and Planning Council
  - Conduct environmental education and awareness activities for airport staff
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**Targets (FY 2020)**

- **Engage in active dialogue with stakeholders**

**Results (FY 2020)**

- **Engage in active dialogue with stakeholders**
  - Held interactive dialogue with airport-related business entities through the Eco-Airport Development and Planning Council
  - Conducted activities to raise awareness among passengers, employees, and other airport users through various events organized by the Council
  - Held interactive dialogue with stakeholders through the implementation of community contribution activities despite not being able to hold various events due to the impact from COVID-19

- **Pursue the creation of value by taking measures with stakeholders to reduce the environmental impact of airport activities throughout society as a whole**
  - Contribute to reducing the environmental impact in cooperation with airports in Japan and abroad

- **Reduce environmental impact in collaboration with airports in Japan and abroad**
  - Exchanged information through ACI activities

- **Conduct environment management using environmental certification programs**
  - Conserve the environment by conducting environmental assessments and inspections
  - Conduction of voluntary environmental assessment monitoring

- **In the lead up to the 2020 Tokyo Olympic and Paralympic Games, trial and introduce various measures and new technologies, and present our vision of an eco-airport to the world**
  - Maintained Airport Carbon Accreditation Level 3 and promoted environment management using the program's methods
  - Used low-emission vehicles such as fuel cell vehicles and electric vehicles as business vehicles for NAA

* COOL BIZ and WARM BIZ: a way of living in comfort while keeping room temperature at 28°C in summer and 20°C in winter.
We aim to be an environmentally friendly airport that realizes a sustainable society. Field mustard, the prefectural flower of Chiba, in full bloom represent the rich nature of the location where Narita International Airport is situated and the integration of the airport with the surrounding environment.

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Data are actual figures from fiscal 2020 (April 2020 to March 2021) while activity details are, in principle, current as of September 30, 2021.