

Environmental Impact



The Nichirei Group established a Group Environmental Policy focused on three priority issues: prevention of global warming, promoting sustainable recycling and living in harmony with nature.

Nichirei Group activities span the entire supply chain; it is involved in food factories, logistics centers and other worksites. We thus play a part in the environmental impact resulting from the activities of our customers and business partners.

At the same time, since Group business activities that support food-related infrastructure depend on natural ecosystems for raw materials, our business is greatly affected by climate change. With its business interests in mind, the Group is engaged in the following activities together with its business partners.

- Efficient energy use in the production of food products
- Reduction of greenhouse gases through increased efficiency in temperature-controlled storage and transportation
- Reduced impact of business activities on climate change through promoting the use of renewable energy, from procurement and production, through to storage, logistics and sales

- The Nichirei Group's Environmental Policy <https://www.nichirei.co.jp/english/csr/environment/concept.html>
- The Nichirei Group's Biodiversity-related Policy
- Environmental management system <https://www.nichirei.co.jp/english/csr/environment/system.html>

» Reducing Environmental Impacts

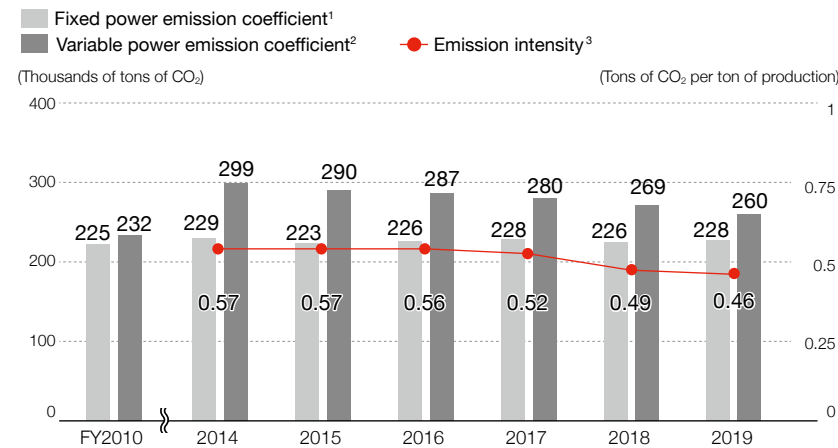
■ Group's medium-term environmental plan

* Fiscal years (FY) indicate years ended March 31.

Group medium-term environmental plan targets (FY2020–FY2022)		Applicable worksites
Reduction of CO ₂ emissions	Maintain FY2014 CO ₂ emission levels in FY2022 * Power coefficient: Fixed to the FY2014 coefficient	Worksites in Japan
Maintaining waste recycling rate and controlling waste discharging	Keep a recycling rate of 99% or higher	Worksites in Japan
	Reduce residue of material derived from animal and plant	Food plants in Japan
Water resource conservation	In consideration of the environmental conditions surrounding water in each community, the Group engages in water resource conservation through efficient water usage aimed at sustainable water usage	Food plants in Japan

Engaged in collecting data regarding the environment at overseas worksites

■ Nichirei Group CO₂ Emission Trends



- Notes:
1. Fixed power emission coefficient: The CO₂ emission intensity unit of 0.412 [t-CO₂/MWh] announced by the Federation of Electric Power Companies of Japan in FY2010, used nationwide.
 2. Variable power emission coefficient: Power conversion coefficient used by power companies in fiscal year utilized at each worksite.
 3. Scope of power emission intensity: Nichirei Foods (Nichirei Foods-operated factories and affiliated factories in Japan) and Nichirei Fresh (affiliated factories in Japan). Excluding the following factories: Nichirei Foods: Nichirei Ice Inc., Nichirei Fresh: Nichirei Fresh Farm Inc., Fresh Chicken Karumai Inc., Fresh Meat Sakudaira Inc.

» Climate Change Initiatives

Eliminating CO₂ Emissions from Transportation

<https://www.nichirei.co.jp/sites/default/files/inline-images/english/csr/pdf/csr2018.pdf#page=24>

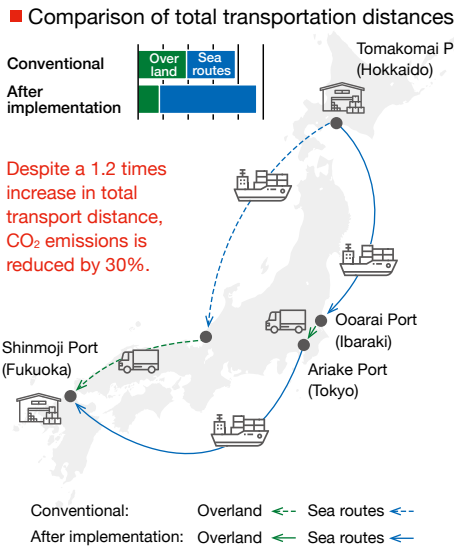
Promoting a modal shift¹

Since 2003, in a bid to reduce its environmental footprint, the Nichirei Logistics Group has been switching the means of transportation it uses from haulage by road to that by rail and sea. And, in 2009, the ferry transportation route from Hokkaido to Kyushu was extended, resulting in a 30% reduction² in CO₂ emissions.

It should be noted that Nichirei Foods has been certified under the Eco-Ship mark³ system.

Then, to further reduce its CO₂ emissions, the Nichirei Logistics Group's Netherlands subsidiary, Hiwa Rotterdam Port Cold Stores, uses barges⁴ rather than trucks. Since the company's warehouse is adjacent to the quay, freight is moved from the container yard to the warehouse by barge, minimizing the use of trucks.

- Notes:
1. The conversion of road and air transportation by that by rail and sea.
 2. The 30% reduction in CO₂ emissions due to modal shifts in Japan is based on per-route calculations.
 3. This is a logo used to indicate those companies that contribute to environmental countermeasures. They include shippers and logistics companies that make extensive use of sea transportation.
 4. A barge is a cargo ship able to navigate rivers.



Chlorofluorocarbon (CFC) Initiatives

Natural refrigerants and leakage prevention

The Nichirei Logistics Group uses natural refrigerants in both new refrigerated warehouses and facilities that it enlarges, while encouraging the replacement of equipment that uses CFC refrigerant with that which uses natural refrigerant.

In addition, since fiscal 2014, we have stepped up inspections at distribution centers nationwide to reduce refrigerant leakage from refrigerators and introduced highly sensitive detectors that are 10 times more accurate than conventional sensors.

Since September 2018, in collaboration with Hitachi, Ltd., we have been testing methods of predicting and diagnosing refrigeration equipment failure. We have done this at our Funabashi Logistics Center, using cutting-edge IoT technology to enhance the operation of equipment and maintenance efficiency. By visualizing energy consumption data and analyzing operational improvements, refrigeration equipment can be more efficiently operated.

Reducing Container and Packaging CO₂ Emissions

Elimination of plastic

In a bid to reduce the discharge of CO₂, Nichirei is working to reduce the amount of plastic in the packaging and containers it uses.

- *Yaki-Onigiri* (grilled rice ball) 10-pack and *Imagawa-Yaki* (Japanese waffle) trays eliminated
- *Honkaku-Itame Cha-Han* (fried rice) package film thinned
- *Ebi-to-Cheese-no Gratin* (shrimp gratin) and *Ebi-to-Cheese-no Doria* (shrimp rice gratin) package thickness reduced



» Biodiversity Initiatives

Protecting endangered orchids, biodiversity conservation

<https://www.nichirei.co.jp/english/csr/environment/action/office>

Since fiscal 2004, the Nichirei Group has helped in the conservation and regeneration of the endangered orchid *Cypripedium macranthos* var. *Kamanashi hotei* and other species through research on and the breeding of, orchids and other plants in Fujimi-machi, Nagano Prefecture.

In fiscal 2015, some orchids of the genus *Cypripedium macranthos* var. *Kamanashi hotei* bore flowers by artificial propagation and, in fiscal 2019, they produced 103 blooms. As a result, Nichirei entered into a biodiversity conservation partnership with the Fujimi-machi *Cypripedium Macranthos* Regeneration Council in February 2019.

Under the three-year (April 1, 2019 to March 31, 2022) agreement, the Group will provide the technologies necessary for the conservation and regeneration of *Cypripedium macranthos* orchids and cover a portion of the costs.

